## **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

# Monthly Environmental Monitoring and Audit Report for June 2023

(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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Our Ref.: PL-202307023

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

14 July 2023

Dear William,

Contract No.: NDO/02/2018

Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po Monthly Environmental Monitoring and Audit Report for June 2023

I refer to the email from the Environmental Team concerning the captioned. I have no adverse comment on the Monthly EM&A Report for June 2023 (Version 1.0) and verify the report according to Conditions 1.9 of the Environmental Permit with permit number EP-510/2016.

Yours faithfully,

hully

Tandy Tse

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 36<sup>th</sup> monthly Environmental Monitoring and Audit (EM&A) Report under the Work Contract (Environmental Permit No. EP-510/2016: Contract No. ND/2018/01 Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po) (the Project). This report was prepared by Wellab Limited (Wellab) under "Service Contract No. NDO 07/2019 Environmental Team for Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po" (hereinafter called the "Service Contract"). This report documents the findings of Environmental Monitoring and Audit (EM&A) work conducted from 1<sup>st</sup> to 30<sup>th</sup> June 2023.
- 2. Part of the construction site was handed over to Architectural Services Department (ArchSD) on 23<sup>rd</sup> 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. A further environmental permit (FEP) (FEP no.: FEP-01/510/2016) was issued by the Director of Environmental Protection (DEP) on 16 February 2023 to Architectural Services Department as permit holder for the construction of building works.

## Summary of Construction Works undertaken during the Reporting Month

3. The major site activities undertaken in the reporting month include:

<u>Contract No. ND/2018/01 – Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po (Environmental Permit No. EP-510/2016)</u>

- Slope Upgrading Works
- Road & Associated Works
- Bridge & Associated Works

#### **Environmental Monitoring and Audit Progress**

4. A summary of the EM&A activities in this reporting month is listed in **Table I** below:

Table I Summary Table for EM&A Activities in the Reporting Month

	1 8
EM&A Activities	Date
Air Quality Monitoring	5, 6, 9, 12, 15, 16, 20, 21, 26, 27 and 30 June 2023
Noise Monitoring	5, 6, 12, 15, 20, 21, 26 and 27 June 2023
Ecological Monitoring	23 June 2023
Environmental Site Inspection	2, 9, 16, 23 and 30 June 2023

## **Breaches of Action and Limit Levels**

5. Summary of the environmental exceedances of the reporting month is tabulated in **Table II**.

#### **Air Quality**

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

#### **Construction Noise**

7. All construction noise monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

Table II Summary Table for Events Recorded in the Reporting Month

Environmental Parameter		No. of Non-Project related Exceedances		No. of Exceedance related to the Construction Works		Action
Monitoring		Action Level	Limit Level	Action Level	Limit Level	Taken
Air Quality	1-hr TSP	0	0	0	0	N/A
Noise	L <sub>eq(30min)</sub>	0	0	0	0	N/A

#### **Ecological Monitoring**

8. All ecological monitoring was conducted as scheduled in the reporting month. The ecological monitoring result in the reporting month is shown in **Appendix H**.

## **Environmental Non-Compliance**

9. No environmental non-compliance was recorded in the reporting month

## **Environmental Complaint**

10. One environmental complaint related to water quality was received in the reporting month.

#### **Notification of Summons and Successful Prosecutions**

11. No notification of summons or successful prosecutions was received in the reporting month.

#### **Reporting Changes**

12. No reporting change was made in the reporting month.

#### **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

- Slope Upgrading Works
- Road & Associated Works
- Bridge & Associated Works
- 14. Potential environmental impacts arising from the above construction activities are mainly associated with construction dust, noise, water quality and waste management. For the details, please refer to **Appendix A** regarding the anticipated major impacts from the construction works and corresponding recommended mitigation measures.

#### 1 INTRODUCTION

- 1.1 Wellab Limited was commissioned by the Civil Engineering Development Department (CEDD) as the Environmental Team to undertake the Environmental Monitoring and Audit (EM&A) works for the Work Contract (Environmental Permit No. EP-510/2016: Contract No. ND/2018/01 Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po) to ensure that the environmental performance of the Works Contracts comply with the requirements specified in the Environmental Permits (EPs), Environmental Impact Assessment (EIA) Report and Environmental Monitoring & Audit (EM&A) Manual of the Police Facilities in Kong Nga Po Project and other relevant statutory requirements.
- 1.2 The major construction works for the Project commenced on 3<sup>rd</sup> July 2020 and the main site in Kong Nga Po was handed over to Architectural Services Department (ASD) on 23<sup>rd</sup> 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.

## **Purpose of the report**

1.3 This is the 36<sup>th</sup> EM&A Report which summarises the impact monitoring results and audit findings for the EM&A programme during the reporting period from 1<sup>st</sup> to 30<sup>th</sup> June 2023.

#### Structure of the report

- 1.4 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 month.
  - Section 3: **Air Quality Monitoring** summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequencies, monitoring locations, Action and Limit Levels, monitoring results and Event /Action Plans.
  - Section 4: **Noise Monitoring** summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequencies, monitoring locations, Action and Limit Levels, monitoring results and Event/Action Plans.
  - Section 5: **Ecological Monitoring** summarises the monitoring results of the monthly ecological monitoring undertaken within the reporting month.
  - Section 6: Landscape and Visual Monitoring summarises the audit results of the site inspection undertaken within the reporting month.
  - Section 7: **Environmental Site Inspection** summarises the audit findings of the weekly site inspections undertaken within the reporting month.
  - Section 8: **Environmental Non-conformance** summarises any monitoring exceedance, environmental complaints, environmental summons and successful prosecutions within the reporting month.
  - Section 9: **Future Key Issues** summarises the impact forecast for the next three months and monitoring schedule in the next month.
  - Section 10: Conclusions and Recommendations

#### 2 PROJECT INFORMATION

#### **Background**

- 2.1 The Project consists of site formation works and building works for the co-location of various police facilities in the Project site at Kong Nga Po as well as road improvement works to a section of the existing Kong Nga Po Road between the police facilities and Man Kam To Road. The police facilities include:
  - Lo Wu Firing Range (LWFR) to be relocated from Lo Wu;
  - Ma Tso Lung Firing Range (MTLFR) to be relocated from Ma Tso Lung;
  - Weapons Training Facilities (WTF) and Police Driving and Traffic Training Facilities (PD&TTF) to be relocated from Fan Garden;
  - Helipad to be relocated from Lo Wu;
  - A Proposed Police Training Facility (PTF); and
  - A new internal access road network with underpass within the Project site.
- 2.2 The improvement works to Kong Nga Po Road between the police facilities and Man Kam To Road includes roadworks, viaduct of less than 100m between abutments, and associated works such as slopeworks and retaining walls.
- 2.3 In addition to the above, associated supporting infrastructure and utilities including an underground stormwater storage tank, sewage pumping station, petrol / diesel filling station, a multi-storey training complex associated with the PD&TFF, and other ancillary facilities will also be provided.
- 2.4 The Project is a Designated Project under the Environmental Impact Assessment Ordinance (EIAO). An Environmental Impact Assessment (EIA) Report (Report No.: AEIAR-201/2016) for the Project was approved under EIAO in October 2016 in accordance with the EIA Study Brief (No. ESB-276/2014) and the Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM). The corresponding Environmental Permit was issued (EP no.: EP-510/2016) by the Director of Environmental Protection (DEP) in November 2016.
- 2.5 The Works Contract (Contract No. ND/2018/01 Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po) generally consists of site formation & infrastructure works for the co-location of various police facilities at Kong Nga Po as well as upgrading works to a section of the existing Kong Nga Po Road between the police facilities and Man Kam To Road (hereinafter called "the Project").
- 2.6 Part of the construction site was handed over to Architectural Services Department (ArchSD) on 23<sup>rd</sup> 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. A further environmental permit (FEP) (FEP no.: FEP-01/510/2016) was issued by the Director of Environmental Protection (DEP) on 16 February 2023 to Architectural Services Department as permit holder for the construction of building works.
- 2.7 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 14<sup>th</sup> March 2020 to 2<sup>nd</sup> April 2020 to establish the background conditions of the designated sensitive receivers prior to the commencement of the Project's construction works.

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

## **Project Organization**

- 2.9 Different parties with different levels of involvement in the Project organization under EP no.: EP-510/2016 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
- 2.10 The key personnel contact names and numbers are summarised in **Table 2.1**.

**Table 2.1** Key Contacts of the Project

Party	Role	<b>Contact Person</b>	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 Leader	Ms. Ivy Tam	2151 2090	2898 7076
Environmental Team (Wellab Limited)	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	Site Agent	Mr. Book Kin Man	2272 3128	
Construction Limited)	Environmental Officer	Mr. Alex Liu	9754 3432	2528 1751

#### **Summary of Construction Works Undertaken During Reporting Month**

2.11 The major site activities undertaken in the reporting month included:

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

- Slope Upgrading Works
- Road & Associated Works
- Bridge & Associated Works

#### **Construction Programme**

2.12 A copy of Contractors' construction programmes are provided in **Appendix A**.

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

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

Table 2.2 Status of Environmental Licences, Notifications and Permits

Dannit / License No	Valid F	C4 a 4 a		
Permit / Licence No.	From	То	Status	
<b>Environmental Permit (El</b>	P)			
EP-510/2016	N/A	N/A	Valid	
<b>Construction Noise Permi</b>	t (CNP)			
GW-RN0081-23	28-01-2023	27-07-2023	Valid	
Notification pursuant to A	ir Pollution Control (C	Construction Dust) Re	gulation	
EPD Ref no.: 451555	N/A	N/A	N/A	
Billing Account for Const	ruction Waste Disposal			
Account No. 7036173	24-12-2019	N/A	Valid	
Registration of Chemical	Registration of Chemical Waste Producer			
WPN5213-641-B2590-01	18-5-2020	N/A	Valid	
Effluent Discharge Licenc	Effluent Discharge Licence under Water Pollution Control Ordinance			
WT00035709-2020	11-5-2020	31-5-2025	Valid	

## **Summary of EM&A Requirement**

- 2.14 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.

## **Status of Compliance with Environmental Permits Conditions**

2.15 The status of compliance with Environmental Permit (EP) No. EP-510/2016 and required submission related to this Project under the EP is summarized in **Table 2.3**:

Table 2.3 Summary Table for Status of Compliance / Required Submission under EP No. EP-510/2016

EP Conditions	Submission	Submission Date	Approval Status
1.12	Notification of Commencement Date of Construction	3 <sup>rd</sup> June 2020	*
2.7	Proposal on the Reporting Mechanism and Curriculum Vitae of the IEC	6 <sup>th</sup> February 2020	*
2.11	Management Organizations	9 <sup>th</sup> March 2020	*
2.12	Construction Works Schedule and Location Plans	20 <sup>th</sup> March 2020	*
	Detailed Vegetation Survey Report (Version 1.0)	2 <sup>nd</sup> April 2020	
2.13 & 2.14	Detailed Vegetation Survey Report (Version 2.0)	8 <sup>th</sup> May 2020	Approved
	Detailed Vegetation Survey Report (Version 3.0)	9 <sup>th</sup> July 2020	
	Transplantation Proposal (Version 1.0)	2 <sup>nd</sup> April 2020	
2.4 & 2.14	Transplantation Proposal (Version 2.0)	8 <sup>th</sup> May 2020	Approved
	Transplantation Proposal (Version 3.0)	9 <sup>th</sup> July 2020	
2.15	Baseline Survey Report for Golden- Headed Cisticola	9 <sup>th</sup> March 2020	Approved
2.16	Explanatory Statement for Revised Layout Plan of Kong Nga Po Road	10 <sup>th</sup> March 2020	Approved
2.17	Layout Plan for Permeable Pavings	2 <sup>nd</sup> August 2022 (The demarcation and detail design of the permeable paving is subject to the design by ArchSD's Contractor)	N/A
	Landscape and Visual Mitigation Plan	7 <sup>th</sup> April 2020	
2.18 & 2.19	Landscape and Visual Mitigation Plan (Revised Final Rev. 4)	28th September 2020	Approved
2.20	Plan for Perimeter Walls/ Boundary Walls at Project Site and Side Walls of Firing Range	To be submitted at least one month before the commencement of construction of relevant part(s) of the Project (under ArchSD's building works Contract)	N/A
2.23	Helicopter Flight Plan	To be submitted at least one month before the commencement of operation of the Helipad (under ArchSD's building works Contract)	N/A
3.4	Baseline Air Quality and Noise Monitoring Report	20 <sup>th</sup> April 2020	*
3.4	Baseline Monitoring Report for Landscape and Visual Resources	21st April 2020	*

Remarks: \* Approval not required in EP-510/2016 N/A – Not applicable at this stage

## 3 AIR QUALITY MONITORING

#### **Monitoring Requirements**

- 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. **Appendix B** shows the established Action/Limit Levels for the air quality monitoring works.
- 3.2 Impact 1-hour TSP monitoring was conducted for at least three times every 6 day at one air quality monitoring station.

## **Monitoring Location**

3.3 According to Section 2.2.5 of the EM&A Manual, impact air quality monitoring was conducted at the two designated monitoring stations for the Project as 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

## **Monitoring Equipment**

- 3.4 As the setup of HVS for 1-hour TSP monitoring at the designated locations and request for secured supply of electricity for HVS were not allowed by the villager, direct reading dust meters was therefore used to carry out the 1-hour TSP monitoring. Dust meter has been commonly used for measuring 1-hour TSP levels in a number of designated projects of major infrastructure works. The proposed use of direct reading dust meter was submitted to IEC and agreed by the IEC. With the use of direct reading dust meter, it can allow prompt and direct results for the EM&A reporting and the implementation of the event and action plan. The 1-hour sampling was determined on bi-monthly basis by the HVS to check the validity and accuracy of the results measured by direct reading method.
- 3.5 **Table 3.2** summarises the equipment used in the impact air quality monitoring programme. Copies of calibration certificates are attached in **Appendix C**.

**Table 3.2 Air Quality Monitoring Equipment** 

Equipment	Model and Make	Quantity
Dust Monitor	AEROCET-831	8

3.6 Meteorological information was extracted from "Hong Kong Observatory - Ta Kwu Ling Weather Station" as the alternative method to obtain representative wind data. For Ta Kwu Ling Weather Station, it is located nearby the Project site and situated at approximately 15m above mean sea level. The station's wind data monitoring equipment is set above the existing ground ten meters in compliance with the general setting up requirement. Furthermore, this station also provides other meteorological information, such as the humidity, rainfall, air pressure and temperature etc. The general meteorological conditions and the meteorological data at Ta Kwu Ling Weather Station are presented in **Appendix G**.

3.7 The general weather conditions (i.e. sunny, cloudy or rainy) were recorded by the field staffs during the monitoring day.

#### **Monitoring Parameters, Frequency and Duration**

3.8 **Table 3.3** summarises the monitoring parameters and frequencies of impact dust monitoring during the Works Contracts activities. The air quality monitoring schedule for the reporting month is shown in **Appendix D**.

 Table 3.3
 Impact Dust Monitoring Parameters, Frequency and Duration

Parameters	Frequency
1-hr TSP	Three times/ 6 days

## Monitoring Methodology and QA/QC Procedure

#### 1-hour TSP Air Quality Monitoring

#### Instrumentation

- 3.9 Direct reading dust meter was deployed for the air quality monitoring as shown in **Table 3.2**.
- 3.10 The measuring procedures of the dust meter are in accordance with the Manufacturer's Instruction Manual as follows:

#### (Met One Instrument: Model no/ AEROCET-831)

- The 1-hour dust meter is placed at least 1.3 meters above ground.
- Press and hold the Power key momentarily to power on the unit and make sure that the battery level was not flash or in low level.
- Allow the instrument to stand for about 3 second to display the Sample Screen minutes.
- Press the START / STOP key to run the internal vacuum pump for 1 minute and ready to use
- Use the select dial to select the PM range and press the START / STOP key to start a measurement.
- Finally, push the START/STOP key to stop the measuring after 1 hour sampling.
- Information such as sampling date, time, value and site condition were recorded during the monitoring period.
- All data were recorded in the data logger for further data processing.

#### Maintenance/Calibration

- 3.11 The following maintenance/calibration was required for the direct dust meters:
  - Check and calibrate the dust meter by high volume sampler (HVS) to check the validity and accuracy of the results measured by direct reading method. Calibration of dust meter should be carried out on a bi-monthly basis throughout all stages of the air quality monitoring.
  - The correlation of dust meter and HVS in TSP measurement was obtained by direct comparison of the weight of dust particle trapped in a filter paper using HVS with the

- reading of the dust meter. Calibration of the dust meter with HVS should be powered on and off at the same location and the same time.
- The correlation coefficient was checked to establish the correlation relationship between the dust meter and HVS. The correlation factor was determined by comparing the results of HVS and dust meter.
- Checking is made prior to dust monitoring commencing to ensure all equipment is in good working condition with necessary power supply. Zero count test were conducted before and after each monitoring event.

#### **Results and Observations**

3.12 The monitoring results for 1-hour TSP monitoring are summarised in **Table 3.4**. Detailed monitoring results and graphical presentations of 1-hour TSP monitoring results are shown in **Appendix E**.

Table 3.4 Summary Table of 1-hour TSP Monitoring Results during the Reporting Month

Monitoring		entration ag/m³) Action Leve		Limit Level, μg/m³
Station	Average	Range	$\mu g/m^3$	, ,
AM1	36.7	22.2 - 73.7	308	500
AM2	42.7	24.2 - 58.6	311	500

- 3.13 1-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedances were recorded.
- 3.14 According to our field observations, the major dust source identified at the designated air quality monitoring stations in the reporting month are shown in **Table 3.5**:

**Table 3.5 Observation at Dust Monitoring Stations** 

<b>Monitoring Station</b>	Major Dust Source	
AM1	Road traffic, exposed site area, site vehicle / equipment operation and	
	movement	
AM2	Road traffic, exposed site area, site vehicle / equipment operation and	
	movement, vehicle / equipment operation and movement at warehouse	
	nearby	

#### **Event and Action Plan**

3.15 Should project-related non-compliance of the criteria occur, action in accordance with the Event Action Plan in **Appendix I** shall be carried out.

#### 4 NOISE MONITORING

## **Monitoring Requirements**

4.1 In accordance with EM&A Manual, construction noise monitoring was conducted in terms of the A-weighted equivalent continuous sound pressure level (Leq) to monitor the construction noise arising from the construction activities. The regular monitoring frequency for each monitoring station shall be on a weekly basis and one set of measurements between 0700 and 1900 hours on normal weekdays shall be conducted. **Appendix B** shows the established Action/Limit Levels for the environmental monitoring works.

## **Monitoring Location**

4.2 According to Section 3.2.3 of the EM&A Manual, impact noise monitoring was conducted at fourteen designated noise monitoring stations as shown in **Figure 3**. **Table 4.1** describes the locations of the noise monitoring stations.

**Table 4.1** 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
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 the 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

## **Monitoring Equipment**

4.3 Integrating Sound Level Meters were used for impact noise monitoring. The meters were Type 1 sound level meter capable of giving a continuous readout of the noise level readings including equivalent continuous sound pressure level (Leq) and percentile sound pressure level (Lx) that also complied with International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1) specifications. **Table 4.2** summarises the noise monitoring equipment being used. Copies of calibration certificates are attached in **Appendix C**.

**Noise Monitoring Equipment** Table 4.2

Equipment	Model	Quantity
Integrating Sound Level Meter	BSWA 308	6
Acoustical Calibrator	B&K 4231 / SVANTEK SV30A	3

## Monitoring Parameters, Frequency and Duration

**Table 4.3** summarises the monitoring parameters, frequency and total duration of monitoring. 4.4 The noise monitoring schedule is shown in **Appendix D**.

Table 4.3 **Noise Monitoring Parameters. Duration and Frequency** 

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

#### Remarks:

#### Monitoring Methodology and QA/QC Procedures

- 4.5 The monitoring procedures are as follows:
  - The sound level meter was set on a tripod at a point 1m from the exterior of the noise sensitive facade and at the position of 1.2m above the ground;
  - For free field measurement, the meter was positioned away from any nearby reflective surfaces. Free field noise levels was adjusted with a correction of +3 dB(A);
  - The battery condition was checked to ensure the correct functioning of the meter;

<sup>[1]:</sup> Correction of +3dB (A) for Free-field Measurement.

<sup>[2]:</sup> A-weighted equivalent continuous sound pressure level (Leq). 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<sub>10</sub> 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<sub>10</sub>. L<sub>90</sub> is the level exceeded for 90% of the time. For 90% of the time, the noise level is above this level.

• Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:

frequency weighting : Atime weighting : Fast

time measurement :  $L_{eq(30 \text{ min.})} dB(A)$ 

(as six consecutive  $L_{eq, 5min}$  readings) during non-restricted hours (i.e. 0700-1900 hrs on normal

weekdays)

- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1.0 dB, the measurement would be considered invalid and repeat of noise measurement would be required after re- calibration or repair of the equipment;
- During the monitoring period, the L<sub>eq</sub>, L<sub>90</sub> and L<sub>10</sub> were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet;
- Noise measurement was paused temporarily during periods of high intrusive noise (e.g. dog barking, helicopter noise) if possible and observation record during measurement period should be provided; and
- Noise monitoring was cancelled in the presence of fog, rain, and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s. The wind speed should be checked with a portable wind speed meter capable of measuring the wind speed in m/s.

#### **Maintenance and Calibration**

- 4.6 The microphone head of the sound level meter and calibrator were cleaned with a soft cloth at quarterly intervals.
- 4.7 The sound level meter and calibrator were checked and calibrated at yearly intervals.
- 4.8 Immediately prior to and following each noise measurement, the accuracy of the sound level meter should be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements would be accepted as valid only if the calibration levels before and after the noise measurement agreed to within 1.0 dB.

#### **Results and Observations**

4.9 The noise monitoring results are summarised in **Table 4.4**. Detailed monitoring results and graphical presentations of noise monitoring are shown in **Appendix F**. The weather information for the reporting month is summarised in **Appendix G**.

Table 4.4 Summary Table of Noise Monitoring Results during the Reporting Month

Monitoring	Average	Range	Baseline Level	Limit Level
Station	$L_{eq (30 min)} dB(A)$	$L_{eq (30 min)} dB(A)$	dB(A)	dB(A)
NM1 <sup>[1]</sup>	66.5	54.2 – 70.9	54.9	
NM2 <sup>[1]</sup>	63.7	58.6 – 67.5	56.7	75.0
NM3	55.8	53.1 – 58.0	54.5	

61.3

59.6

Monitoring	Average	Range	Baseline Level	Limit Level
Station	L <sub>eq (30 min)</sub> dB(A)	Leq (30 min) dB(A)	dB(A)	dB(A)
NM4	59.8	56.4 – 63.4	58.7	
NM5	60.8	54.8 – 64.0	57.0	
NM6 <sup>[1]</sup>	64.1	57.9 – 68.5	56.0	
NM7	57.0	48.6 – 59.9	49.8	
NM8 <sup>[1]</sup>	54.7	51.6 – 56.6	57.6	
NM9 <sup>[1]</sup>	59.5	54.6 – 62.6	55.9	
NM10 <sup>[1]</sup>	58.1	55.7 – 59.9	52.8	
NM11	53.6	46.5 – 55.9	46.4	
NM12	58.3	55.6 – 60.4	54.7	

Remarks

 $NM13^{[1]}$ 

 $NM14^{[1]}$ 

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

52.9

58.2

4.10 Construction noise monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded. The summary of exceedance record in reporting month is shown in **Appendix J**.

48.2 - 56.9

56.1 - 59.8

4.11 According to our field observations, the major noise sources identified at the designated noise monitoring stations in the reporting month are as follows:

**Table 4.5 Observation at Noise Monitoring Stations** 

Monitoring Station	Major Noise Source
NM1	Road traffic, excavation works, loading & unloading
NM2	Road traffic, excavation works, loading & unloading
NM3	Road traffic, excavation works, loading & unloading,
NM4	Road traffic, excavation works, loading & unloading
NM5	Road traffic, excavation works, loading & unloading
NM6	Road traffic, excavation works, loading & unloading
NM7	Road traffic, excavation works, loading & unloading
NM8	Road traffic, excavation works, loading & unloading
NM9	Road traffic, excavation works, loading & unloading
NM10	Road traffic, excavation works, loading & unloading
NM11	Road traffic, excavation works, loading & unloading
NM12	Road traffic, excavation works, loading & unloading
NM13	Road traffic
NM14	Road traffic, dog barking

## **Event and Action Plan**

4.12 Should any project related non-compliance of the criteria occur, action in accordance with the Event Action Plan in **Appendix I** shall be carried out.

#### 5 ECOLOGICAL MONITORING

#### **Monitoring of Flora Species of Conservation Interest**

- 5.1 As required under Section 8.3.2 of EM&A Manual, during construction phase, temporary protective fence shall be erected enclosing the flora species of conservation interest identified under the detailed vegetation survey. The temporary protective fence shall be properly maintained and monitored for the effectiveness. Monthly monitoring of individual of flora species of conservation interest identified in the detailed vegetation survey shall be conducted during the construction phase to make sure that the flora species of conservation interest are not affected by the construction activities of the Project.
- 5.2 The purpose of the monitoring is 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 recommended protection measures in the implementation schedule as stated in approved transplantation proposal were monitored and the conditions of the individuals of flora species of conservation interest were recorded as shown in **Table 5.1**.
- 5.3 According to the approved detailed vegetation survey report and transplantation proposal, 71 individuals of *Brainea insignis*, 41 individuals of *Spiranthes sinensis* and 3 individuals of *Aquilaria sinensis* were identified to be transplanted to the receptor site. 51 individuals of *Keteleeria fortunei*, 26 undersized seedlings of *Keteleeria fortunei* and 7 undersized seedlings of *Aquilaria sinensis* were identified to be retained along Kong Nga Po Road near Police Dog Unit and Force Search Unit Training School.

#### Post-Transplantation Monitoring and Maintenance Programme

- 5.4 According to approved transplantation proposal, post-transplantation monitoring should be conducted by the Contractor once per week in the first three months and once per month afterwards during the 12-month establishment period and the post-establishment period until the end of construction phase of the Project. Regular monitoring allows early detection of the growth status of transplanted species, sign of construction activity within and nearby the receptor site, and any environmental change of the receptor site.
- 5.5 Maintenance works were recommended for the first year of establishment to allow health 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. Watering was recommended in daily practice during the first three months after the transplantation and during dry season. Watering frequency may be reduced to at least twice a week and adjusted based on the plant condition to keep the soil moist. Other maintenance works like use of mulch and weeding shall be conducted if required.
- Part of the construction site including the approved receptor site for *Brainea insignis* and *Spiranthes sinensis* was handed over to Architectural Services Department (ArchSD) on 23<sup>rd</sup> December 202. The post-transplantation maintenance and monitoring works for *Brainea insignis* and *Spiranthes sinensis* have been conducted by the Contractor under Contract No. SSK509 since February 2023. In addition, monthly monitoring of for *Brainea insignis* and

Spiranthes has also been handed over to the ET under Contract No. SSK509 (FEP no.: FEP-01/510/2016) starting from April 2023.

#### **Results and Observations**

5.7 Monthly monitoring of flora species of conservation interest (*Keteleeria fortunei* and Undersized seedling of *Aquilaria sinensis* only) was conducted by ET on 23<sup>rd</sup> June 2023 during the reporting month. The implementation status of protection measures and the maintenance of temporary protective fence were inspected. The implementation status of protection measures is shown in **Table 5.1** and photographic record and checklists for monthly monitoring are shown in **Appendix H1.** The health conditions of the retained species are generally in fair condition. The Contractor was reminded to closely monitored the retained species and implemented the protection measures to protect the retained species.

#### Transplanted Brainea insignis and Spiranthes sinensis

5.8 71 individuals of *Brainea insignis* and 41 individuals of *Spiranthes sinensis* were transplanted to receptor site from 21<sup>st</sup> to 26<sup>th</sup> May 2020. Transplantation Report recording the process of transplantation have been submitted to ET, IEC and the *Supervisor* for review and record. Post-transplantation monitoring was conducted once per week in the first three months (June to August 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. The health condition of the transplanted species was monitored by the Contractor. The Contractor provided maintenance works including watering, use of mulch and weeding in the first year of establishment to allow health growth of the transplanted species. Post-transplantation monitoring works on transplanted *Brainea insignis* and *Spiranthes sinensis* has been handed over to the Contractor under Contract No. SSK509 since February 2023.

#### Transplanted *Aquilaria sinensis*

- 5.9 3 individuals of *Aquilaria sinensis* were transplanted to receptor site from 3<sup>rd</sup> to 19<sup>th</sup> October 2020. Transplantation Report recording the process of transplantation have been submitted to ET, IEC and the *Supervisor* for review and record. Post-transplantation monitoring was conducted once per week in the first three months (October 2020 to January 2021) and once per month during the 12-month establishment period and the post-establishment period until the end of construction phase of the Project. The health conditions of the transplanted species were monitored by the Contractor. The Contractor provided maintenance works including watering, use of mulch and weeding in the first year of establishment to allow health growth of the transplanted species.
- 5.10 All recommended measures as set out in the deposited Detailed Vegetation Survey Report and the Transplantation Proposal have been fully and properly implemented in accordance with EP-510/2016 Condition 2.14 and presented in **Appendix H2.**
- 5.11 The three individuals of transplanted *Aquilaria sinensis* A-008, A-0009 and A-0010 were collapsed after Typhoon Signal No. 8 in July 2022. According to the Tree Risk Assessment Report provided by the Contractor's landscape specialist, the collapsed trees have been removed on 16<sup>th</sup> July 2022.

#### Retained Keteleeria fortunei and Aquilaria sinensis

- 5.12 51 individuals of *Keteleeria fortunei*, 26 undersized seedlings of *Keteleeria fortunei* and 7 undersized seedlings of *Aquilaria sinensis* were identified to be retained along Kong Nga Po Road near Police Dog Unit and Force Search Unit Training School. Individuals of *Keteleeria fortunei* and *Aquilaria sinensis* were preserved based on the revised layout plan of Kong Nga Po Road.
- 5.13 During monitoring, no construction activity was observed within the area of retained species. Temporary protective fence was properly erected and maintained for the retained species. The photographic records for the retained individuals are shown in **Appendix H1**.

Table 5.1 Implementation Status of Protection Measures for Flora Species of Conservation Interest

Recommended Mitigation Measures	Implementation Status
Keteleeria fortunei	
Identification of Plant Species of Conservation Importance to be Retained /	
Transplanted	۸
To mark trees/plants proposed to be retained and to be transplanted on the layout plan prior to commencement of site construction works.	
Protection of Plant Species of Conservation Importance prior to Site Clearance /	
Transplantation Works	
a) No site clearance shall be started at the locations of flora species of conservation	N/A
<ul><li>interest until the transplantation works completed.</li><li>b) Set up buffer zone to enhance the protection of flora species of conservation importance to be preserved / transplanted including the proposed location for</li></ul>	N/A
transplantation when the site clearance works shall commence before the transplantation works completed.	
Temporary Protective Fence for Flora Species of Conservation Interest /	
Retained Tree	
a) To erect a temporary protective fence enclosing the flora species of conservation	^
interest identified under the detailed vegetation survey.	
b) To set up a protection zone at least 1m from the plant / retained tree and erect robust, bright-coloured fencing of 1.5m in height.	^
Maintenance of the Protection Zone for Flora Species of Conservation Interest /	
Retained Tree	
a) Monthly monitoring of flora species of conservation interest identified in the detailed vegetation survey should be conducted.	۸
b) To inspect the temporary protective fence whether it is properly erected and maintained during construction.	۸
Post-transplantation Monitoring	
a) Weekly post-transplantation monitoring of transplanted species in the first three	N/A
months and monthly afterwards.	
Maintenance of Transplanted Species	<b>3</b> 7/4
a) To keep the soil moist by watering the receptor sites properly and adequately.	N/A
b) To apply mulches on the soil surface over the plant root system, if required.	N/A
c) To remove unwanted weeds found in receptor sites.	N/A

Recommended Mitigation Measures	Implementation Status
Other Protection Measures for Flora Species of Conservation Interest / Retained	
Tree / Vegetated Areas	ļ
a) All works should be confined within the site boundary.	^
b) Access of site staff should be controlled.	^
c) Care should be taken to prevent trees/plants being damaged by mechanical	^
equipment or stockpile both during site clearance works and construction works.	
d) No fixings should be driven into trees/plants.	^
e) No workshop, canteens, or similar should be installed beneath trees/plants, nor will	^
equipment maintenance etc. be carried out under trees/plants.	^
f) No excavation, including that for services or changes in ground level will take place within the spread of the crown of the trees / plants.	,
	^
g) No soil, debris or construction materials should be deposited around and against the trunk of a tree/plant as this causes bark damage and compaction of the soil.	
h) No fire should be lit below the branches and no petrol, oil or caustic substances	^
stored near the trees/plants.	
i) No trees/plants should be used for anchoring or winching purposes or for the	^
display of signs.	
j) Any damage or injury to the retained / transplanted plants should be reported as	^
soon as possible for repair immediately.	
Aquilaria sinensis (Undersized Seedling)	
Identification of Plant Species of Conservation Importance to be Retained /	
Transplanted	^
To mark trees/plants proposed to be retained and to be transplanted on the layout plan	
prior to commencement of site construction works.	
<b>Protection of Plant Species of Conservation Importance prior to Site Clearance</b> /	
Transplantation Works	
a) No site clearance shall be started at the locations of flora species of conservation	N/A
interest until the transplantation works completed.	
b) Set up buffer zone to enhance the protection of flora species of conservation	N/A
importance to be preserved / transplanted including the proposed location for	
transplantation when the site clearance works shall commence before the	
transplantation works completed.	
Temporary Protective Fence for Flora Species of Conservation Interest /	
Retained Tree	^
a) To erect a temporary protective fence enclosing the flora species of conservation interest identified under the detailed vegetation survey.	
b) To set up a protection zone at least 1m from the plant / retained tree and erect robust,	^
bright-coloured fencing of 1.5m in height.	
Maintenance of the Protection Zone for Flora Species of Conservation Interest /	
Retained Tree	
a) Monthly monitoring of flora species of conservation interest identified in the	^
detailed vegetation survey should be conducted.	
b) To inspect the temporary protective fence whether it is properly erected and	^
maintained during construction.	
Post-transplantation Monitoring	
a) Weekly post-transplantation monitoring of transplanted species in the first three	N/A
months and monthly afterwards.	
Maintenance of Transplanted Species	
a) To keep the soil moist by watering the receptor sites properly and adequately.	N/A
b) To apply mulches on the soil surface over the plant root system, if required.	N/A

	Recommended Mitigation Measures	Implementation Status
c)	To remove unwanted weeds found in receptor sites.	N/A
Ot	her Protection Measures for Flora Species of Conservation Interest / Retained	
Tre	ee / Vegetated Areas	
a)	All works should be confined within the site boundary.	٨
b)	Access of site staff should be controlled.	٨
c)	Care should be taken to prevent trees/plants being damaged by mechanical equipment or stockpile both during site clearance works and construction works.	۸
d)	No fixings should be driven into trees/plants.	٨
e)	No workshop, canteens, or similar should be installed beneath trees/plants, nor will equipment maintenance etc. be carried out under trees/plants.	۸
f)	No excavation, including that for services or changes in ground level will take place within the spread of the crown of the trees / plants.	٨
g)	No soil, debris or construction materials should be deposited around and against the trunk of a tree/plant as this causes bark damage and compaction of the soil.	۸
h)	No fire should be lit below the branches and no petrol, oil or caustic substances stored near the trees/plants.	۸
i)	No trees/plants should be used for anchoring or winching purposes or for the display of signs.	۸
j)	Any damage or injury to the retained / transplanted plants should be reported as soon as possible for repair immediately.	۸

Implementation	Mitigation measure was fully implemented
status:	Observation/reminder was made during monitoring but improved/rectified by the contractor
	Observation/reminder was made during monitoring but not yet improved/rectified by the contractor
	Non-compliance of mitigation measure
	Non-compliance but rectified by the contractor
	I/A Not Applicable at this stage as no such site activities were conducted in the reporting period

## Mitigation Measure for Golden-headed Cisticola

5.14 According to EP Condition 2.15, a baseline survey-for Golden-headed Cisticola for the Project was conducted and the baseline survey report was submitted. The mitigation measures detailed in the documents are recommended to minimise the noise, light and water quality impact from construction works to avifauna. Good site practice measures shall be implemented throughout the construction period. The recommended mitigation measures are summarised as following:

#### Noise

- Silencers or mufflers on well-maintained construction equipment should be utilized and properly maintained during the construction program
- Noise enclosure or acoustic shed should be effectively utilized, where practicable
- Machines or equipment known to emit noise or light strongly in one direction should, wherever possible, be orientated the noise away from the adjacent habitat

## Light

- Adjusting the outdoor lighting to lower intensity
- Use of directional lighting to avoid light spill into sensitive areas
- Control/timing of lighting periods of some facilities, particularly those close to the ecological sensitive receivers

#### Water

- Proper drainage system installed to collect and dispose rainwater.
- Installation of sediment/rubbish trapping facilities (e.g. catch pits or sand/silt traps to contain the increase in suspended solids and materials in the storm water drainage system so as to avoid pollutants being washed out during heavy rainstorms)

#### **Good Site Practice Measures**

- Placement of stockpiling into designated area should be selected at disturbed area in order to minimize the disturbance to wildlife
- Open fire should be strictly prohibited
- The boundary of project boundary should be clearly demarcated
- General drainage system arrangement should include sediment and oil trapper to collect the site run-off
- Waste bin should be provided to collect the general refuse and construction waste
- 5.15 Site audits were conducted by ET on weekly basis to monitor the timely implementation of the recommended mitigation measures by the Contractor on the Project site. The observations are summarised in **Table 7.1** and the implementation status is given in **Appendix K**. Toolbox talk training related to ecological protection has been provided by the Contractor to site staff and frontline workers. Presence of avifauna and bird nest were checked prior to site clearance work.

#### **Precautionary Measure for Butterfly Species of Conservation Interest**

- 5.16 According to EP Condition 2.21, with consideration of minimizing impact on butterfly species of conservation interest recorded at the grassland in the Project site, planting of common grass species which are the larval food plants for butterfly species such as Small Three-Ring are included in Landscape and Visual Mitigation Plan.
- 5.17 The re-establishment of grassland areas in the Project shall be implemented before Commencement of Operation of the Project. Details of the plant species as larval food plants of butterflies including design and implementation arrangement will be further submitted under ArchSD's building works contract.

#### Precautionary Measures to Minimize Indirect Disturbance on Ecology

5.18 In accordance with Section 9.7.3 of EIA Report, mitigation measures for air, noise, water,

waste and landscape aspects could act as precautionary measures to prevent and minimize any indirect disturbance impact or pollution arisen from the construction activities on the local ecology and offsite habitats. Site audits were carried out by ET on weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures on the Project site and the observations are summarised in Section 7.3.

#### 6 LANDSCAPE AND VISUAL MONITORING

## **Monitoring Requirements**

- 6.1 The EIA Report has recommended mitigation measures for landscape and visual resources to be undertaken during the construction and operation phases of the Project.
- 6.2 These measures include the consideration of a number of development options and the provision of mitigation measures to directly offset unavoidable impacts. The measures include strategies for reducing, offsetting and compensating impacts during construction and operation phases according to Section 10.13 in the EIA Report.
- 6.3 The implementation and maintenance of landscape compensatory planting measures is a key aspect of this and shall be checked to ensure that they are fully realised and that potential conflicts between the proposed landscape measures and any other Project works and operational requirements are resolved at the earliest possible date and without compromise to the intention of the mitigation measures. In addition, implementation of the mitigation measures recommended by the EIA shall be monitored throughout the construction phase site audit programme.
- 6.4 Bi-weekly inspection of the implementation of landscape and visual mitigation measures was conducted by ET during weekly site audit. The observation and recommendations made during the audit sessions are summarised in **Table 7.1**. The implementation status is given in **Appendix K**.

#### 7 ENVIRONMENTAL SITE INSPECTION

#### **Site Audits**

- 7.1 Site audits were carried out by ET on weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures on the Contract site.
- 7.2 Site audits were conducted by ET with the representative of the *Supervisor*'s Representative and the Contractor on 2<sup>nd</sup>, 9<sup>th</sup>, 16<sup>th</sup>, 23<sup>rd</sup> and 30<sup>th</sup> June 2023 in the reporting month. Joint site audits with the representative of the *Supervisor*'s Representative, the Contractor and IEC were carried out on 23<sup>rd</sup> June 2023.
- 7.3 During site inspections in the reporting month, no non-conformance was identified. The observations and recommendations made during the audit sessions are summarised in **Table** 7.1.

**Table 7.1 Observations and Recommendations of Site Audit** 

Parameters	Date	Observations	Follow Up Action
Air Quality	16/06/2023	The site exit / entrance at Feature 4 should be paved and the water from wheel washing should be properly collected and treated before discharging out.	Concrete bund was provided to avoid the water from wheel washing discharging out as observed during follow-up audit session on 23/06/2023. The effectiveness of mitigation measures would be reviewed from time to time subject to the site condition.
	23/06/2023	The door of air compressor should be closed and maintenance should also be provided to avoid heavy smoke emission (Portion B1).	The door of air compressor was closed and no further heavy smoke emission as observed during follow-up audit session on 30/06/2023.
	30/06/2023	The used cement bags should be cleared or covered at Feature A.	The used cement bags have been cleared by the Contractor as observed during follow-up audit session on 07/07/2023.
	30/06/2023	NRMM labels should be provided for the roller, excavator and generator at Feature A.	NRMM labels have been provided for the plant equipment by the Contractor as observed during follow-up audit session on 07/07/2023.
Construction Noise Impact	23/06/2023	The door of air compressor should be closed and maintenance should also be provided to avoid heavy smoke emission (Portion B1).	The door of air compressor was closed and no further heavy smoke emission as observed during follow-up audit session on 30/06/2023.
Water Quality	02/06/2023	The site boundary along the water-filled barriers should be sealed to avoid the muddy surface runoff leaking out (near dog unit).	The site boundary along the water-filled barriers have been sealed by the Contractor as observed during follow-up audit session on 09/06/2023.
	09/06/2023	Mud trail was found outside the site exit of Portion B1, RD-A, Feature A and Feature 4. The	No further mud trail was observed outside the site exit of Portion B1, RD-A and Feature A and those site

Parameters	Date	Observations	Follow Up Action
		Contractor was reminded to clean up the mud trails and provide a proper wheel washing area and avoid the wheel washing water discharging out directly.	exit has been closed as observed during follow-up audit session on 16/06/2023.
	16/06/2023	The site exit / entrance at Feature 4 should be paved and the water from wheel washing should be properly collected and treated before discharging out.	Concrete bund was provided to avoid the water from wheel washing discharging out as observed during follow-up audit session on 23/06/2023. The effectiveness of mitigation measures would be reviewed from time to time subject to the site condition.
	23/06/2023	Provide mitigation measures to avoid muddy surface runoff from temporary site drainage channel directly discharging out (Portion B1).	Sand bag bund was provided to protect the existing drainage by the Contractor as observed during follow-up audit session on 30/06/2023.
	30/06/2023	The water-filled barriers should be deployed along the works area at Feature A completely to avoid the leakage of soil / debris outside the site boundary.	Follow up action is required for this item in the upcoming site audit session.
	30/06/2023	The exposed slopes at Feature A should be covered with tarpaulin sheet.	Follow up action is required for this item in the upcoming site audit session.
Waste/ Chemical Management	16/06/2023	The accumulated construction wastes at Feature A should be cleared regularly.	The accumulated construction wastes have been cleared by the Contractor as observed during follow-up audit session on 23/06/2023.
Landscape and Visual	30/06/2023	The construction materials / wastes at near the trees should be removed (Feature A).	Follow up action is required for this item in the upcoming site audit session.
Ecology	02/06/2023	The construction materials at near the retained trees should be removed (near dog unit).	The construction materials at near the retained trees have been removed by the Contractor as observed during follow-up audit session on 09/06/2023.
	16/06/2023	The protective fence enclosing the flora species of conservation importance should be properly maintained.	The protective fence has been replaced and properly erected by the Contractor as observed during follow-up audit session on 23/06/2023.

Parameters	Date	Observations	Follow Up Action
Permit/Licences		No environmental deficiency was identified during the reporting month.	

#### **Implementation Status of Environmental Mitigation Measures**

- 7.4 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 K**.
- 7.5 During site inspections in the reporting month, the Contractor's readiness with the mitigation measures during wet season against muddy surface runoff was found generally satisfactory despite some observations/recommendations as detailed above were raised. The mitigation measures implemented in April 2023 are shown in the summary table in **Appendix K.**

## **Solid and Liquid Waste Management Status**

- 7.6 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.
- 7.7 The Contractor have nominated on-site Environmental Officers to oversee the environmental management, pollution control measures, good site practices and training of site personnel in waste management. Proactive measures have been undertaken to make use of construction and demolition (C&D) materials to minimize the waste generated. On-site sorting and screening of excavated materials have been carried out to recover any recyclable portions. Inert C&D materials were used on-site for backfilling works and hard paving of haul road. In addition, inert C&D materials generated from excavation works were reused as fill materials in other local projects. The surplus inert C&D materials were disposed of at the Government's public fill reception facilities (PFRFs) for beneficial use by other projects. In order to monitor the disposal of inert and non-inert C&D materials and to control fly-tipping, every excavated materials before leaving the site are weighted by a weight bridge and Trip Ticket System is strictly followed.
- 7.8 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 K**.
- 7.9 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 month is shown in **Appendix L**.

#### 8 ENVIRONMENTAL NON-CONFORMANCE

## **Summary of Exceedances**

- 8.1 No exceedance of Action and Limit Levels of air quality and construction noise was recorded
- 8.2 Should the monitoring results of the environmental monitoring parameters at any designated monitoring stations indicate that the Action / Limit Levels are exceeded, the actions in accordance with the Event and Action Plans in **Appendix I** be carried out. The summary of exceedance record in reporting month is shown in **Appendix J**.

## **Summary of Environmental Non-Compliance**

8.3 No environmental non-compliance was recorded in the reporting month.

## **Summary of Environmental Complaint**

- 8.4 In accordance with the EM&A Manual, Section 11.3, complaints should be referred to the ET for action. During the complaint investigation works, the ET and IEC as established according to EP Condition 2.1 and 2.6 can carry out *Ad-hoc* site inspections to identify the source of the complaint, review the effectiveness of the Contractor's remedial measures and the updated situation once received the complaint. In addition, additional monitoring and audit can also be arranged immediately to verify the situation if necessary. ET and IEC will also oversee the circumstances that leading to the complaint do not recur. Moreover, ET and IEC can cooperate efficiently with the Contractor and *Supervisor* on site for completion of the investigation.
- 8.5 There was one environmental complaint related to water quality received in the reporting month. The Cumulative Complaint Log since the commencement of the Project is presented in **Appendix M**.

#### **Summary of Environmental Summon and Successful Prosecution**

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

#### 9 FUTURE KEY ISSUES

## **Key Issues in the Coming Three Months**

9.1 The tentative construction programmes for the Project are provided in **Appendix A**. The major construction activities undertaken in the coming three months will include:

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

- Slope Upgrading Works
- Road & Associated Works
- Bridge & Associated Works
- 9.2 With reference to the site layout plan including the indication of coming three months construction site activities in **Appendix A**, potential environmental impacts arising from the above construction activities are mainly associated with construction dust, noise, water quality, waste management, landscape and visual and ecology. The foreseeable environmental impacts were taken into consideration of the planned mitigation measures in the coming months.
- 9.3 The mitigation measures to be implemented for the coming three months were proposed by the Contractor and reviewed by ET, IEC and the *Supervisor* through Email, during site audit and SSMC meeting. The Proactive Environmental Protection Proforma summarizing the major site activities, potential environmental impacts and recommended mitigation measures was reviewed and endorsed by the *Supervisor*, ET and IEC and was shown in **Appendix A**.
- 9.4 The Contractor is recommended to arrange and maintain the water quality mitigation measures according to the construction site drainage plan during wet season (i.e., March to October). 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.
- 9.5 Dust can be generated during construction works and exposed site area. 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 (refer to the layout plan in **Appendix A**). 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.

- 9.6 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.
- 9.7 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)".
- 9.8 All other mitigation measures recommended in the Project Implementation Schedule in the approved EIA report / EM&A Manual should be properly implemented and maintained as far as practicable.

## **Monitoring Schedule for the Next Month**

9.9 The tentative environmental monitoring schedule for the next month is shown in **Appendix D**.

#### 10 CONCLUSIONS AND RECOMMENDATIONS

#### **Conclusions**

- 10.1 This Monthly EM&A Report presents the EM&A work undertaken in June 2023 in accordance with EM&A Manual.
- 10.2 No Action/Limit Level exceedance was recorded for air quality and construction noise in the reporting month.
- 10.3 Environmental site inspections were conducted on 2<sup>nd</sup>, 9<sup>th</sup>, 16<sup>th</sup>, 23<sup>rd</sup> and 30<sup>th</sup> June 2023 by ET in the reporting month. No environmental non-compliance was recorded in the reporting month.
- 10.4 One environmental complaint, no notification of summons or successful prosecutions was received in the reporting month.
- 10.5 The ET would keep track on the EM&A programme to ensure compliance of environmental requirements and the proper implementation of all necessary mitigation measures.

#### Recommendations

10.6 According to the environmental audits performed in the reporting month, the following recommendations were made:

#### 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;
- To maintain the wheel washing facilities provided at every construction site exit where practicable are functioning properly;
- To cover / clear the used cement bags on site; and
- To maintain the plant equipment to avoid heavy smoke emission.

#### Construction Noise

- 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;
- To maintain temporary noise barriers for operations of noisy equipment near the noise sensitive receivers, if necessary; and
- To keep the door of air compressors close.

#### Water Impact

WMA20001\Rpt 2306 v1.0

- To maintain the cover for open stockpile of and exposed slope;
- To keep reviewing and updating 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;
- To divert the muddy water at the retention pond to the wetsep for treatment before discharging out; and
- To review and update site drainage plan based on the current site condition, and implement water quality mitigation measures as appropriate.

#### 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.

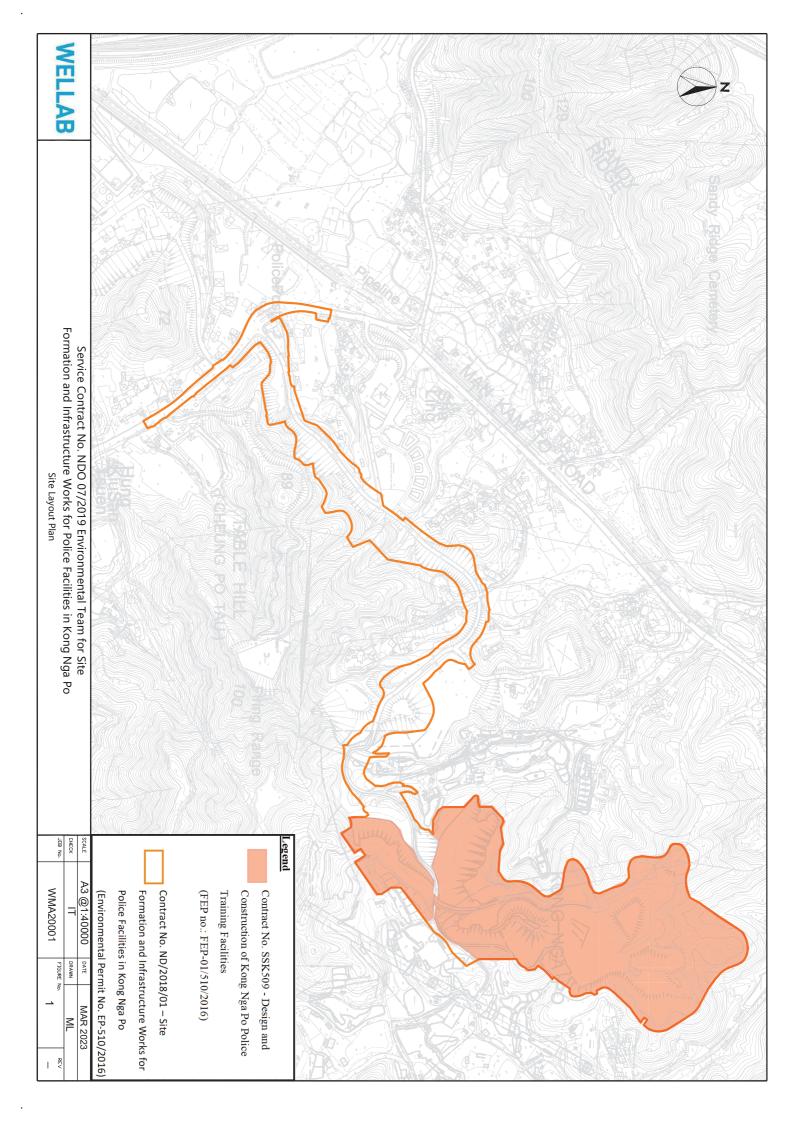
## Ecology

- 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 soil, debris and construction materials / wastes inside the protective fence and or deposited around the trunk of retained trees / conservation species.

#### Landscape and Visual

- To erect and maintain the protection fencing and tree protection zone around the preserved
- To remove the soil, debris and construction materials / wastes inside the protective fence and or deposited around the trunk of retained trees;
- To keep the tree protection zone large enough to protect the tress.

FIGURE(S)





# Legend

Contract No. SSK509 - Design and

Construction of Kong Nga Po Police

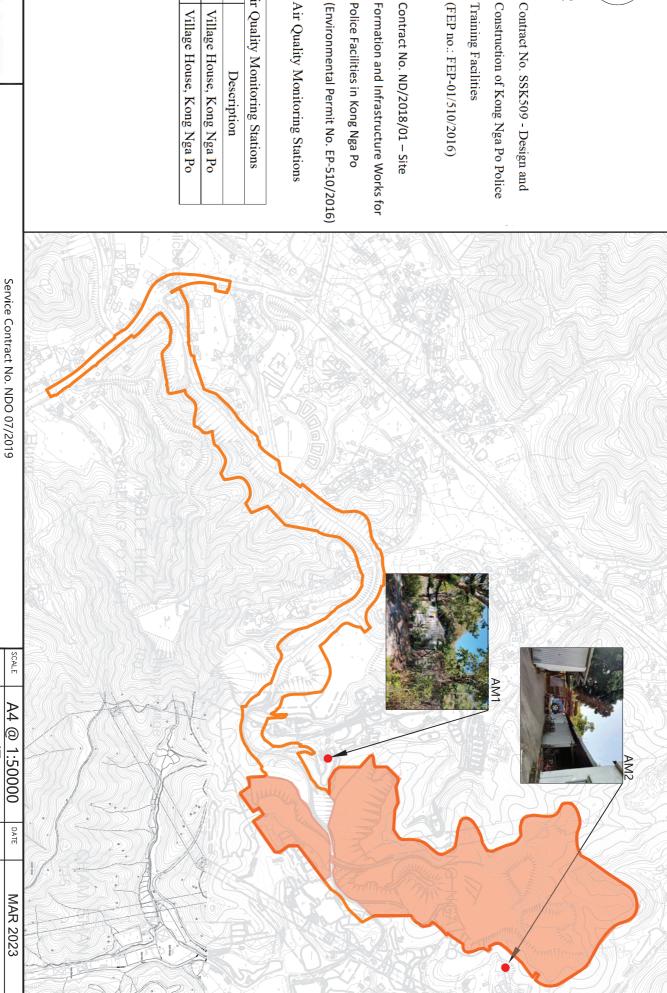
Training Facilities

(FEP no.: FEP-01/510/2016)

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

Air Quality Monitoring Stations

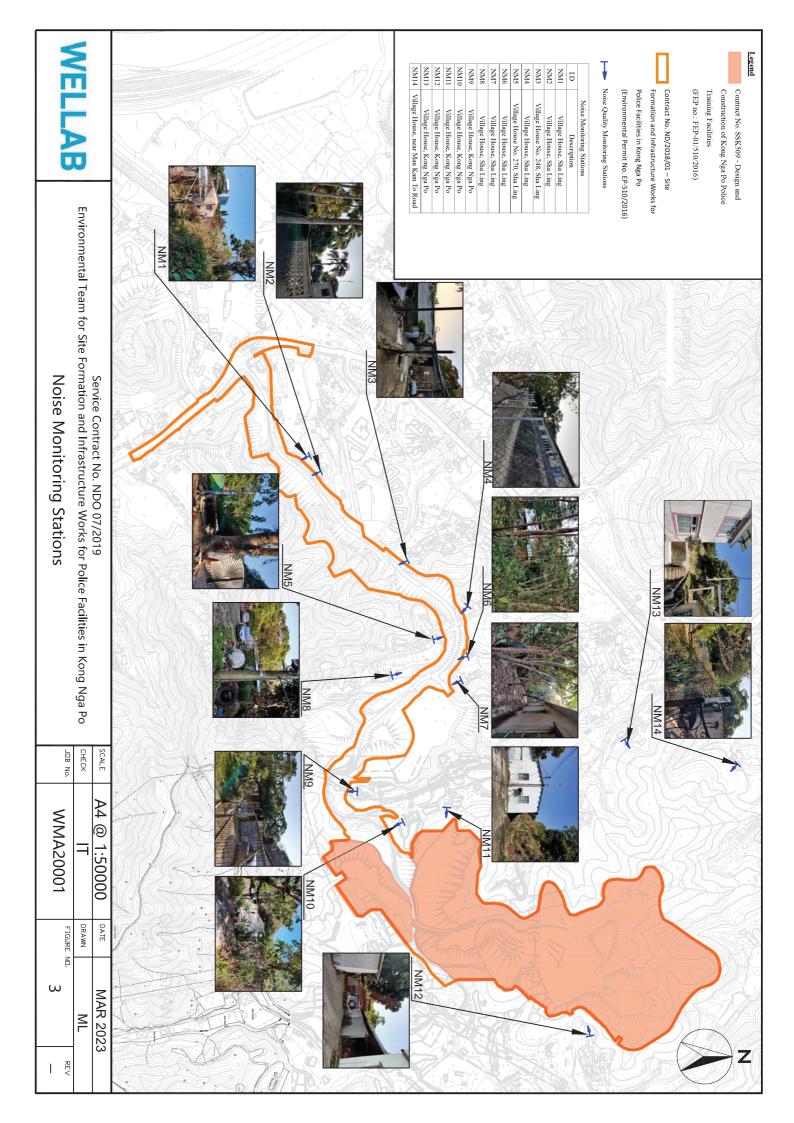
	Air Quality Monitoring Stations
I.D	Description
AM1	Village House, Kong Nga Po
AM2	Village House, Kong Nga Po



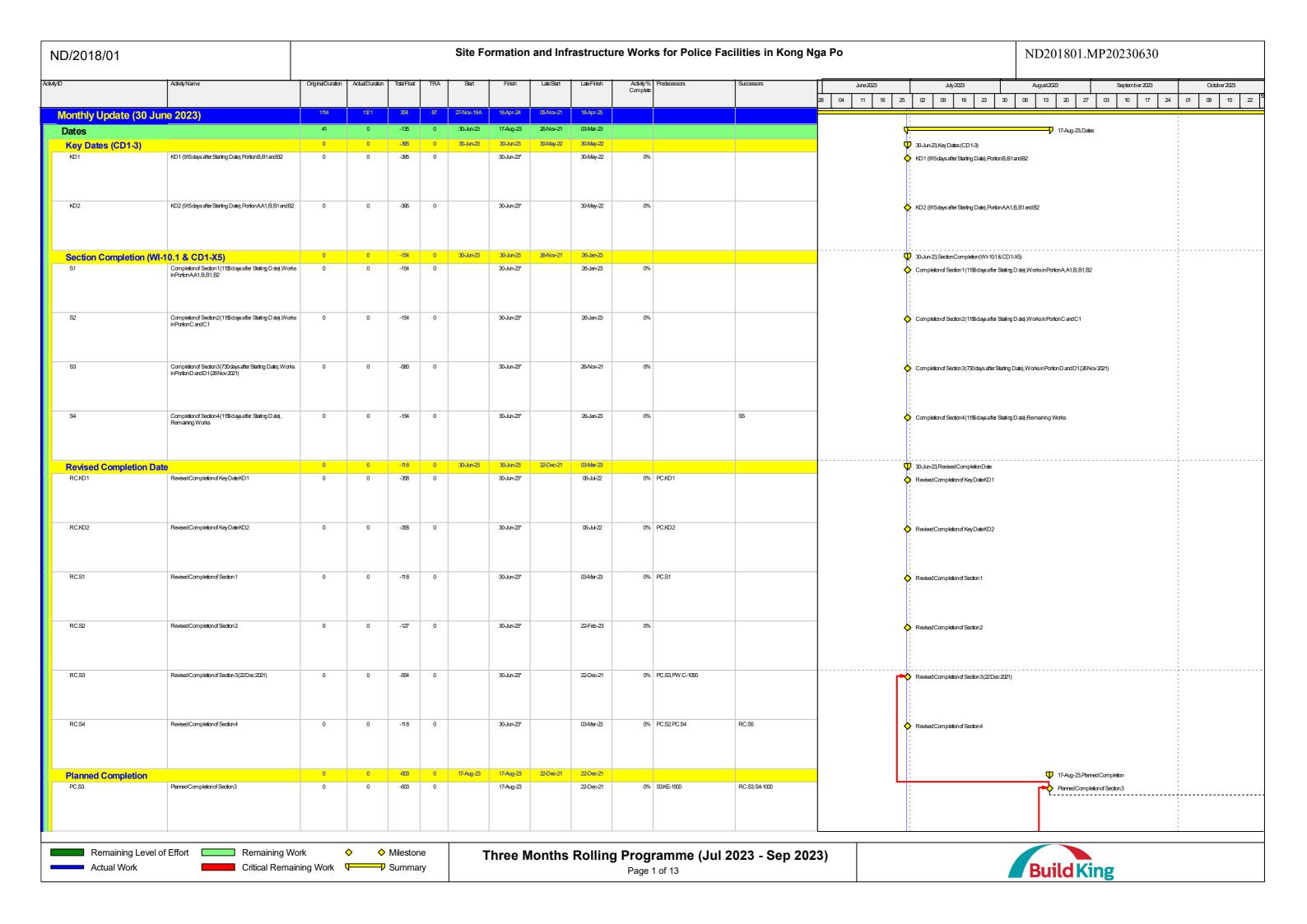


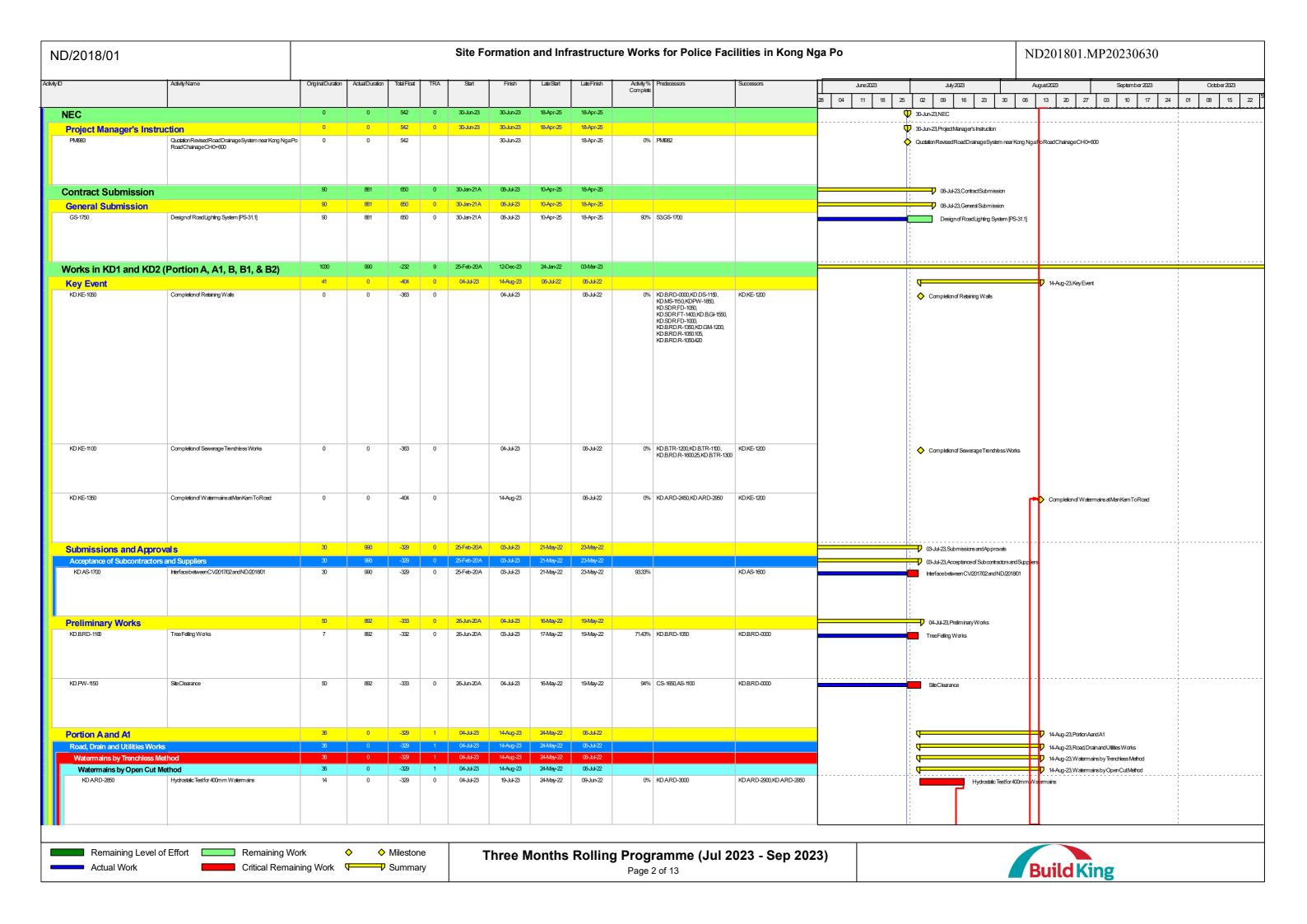
Environmental Team for Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po Air Quality Monitoring Stations

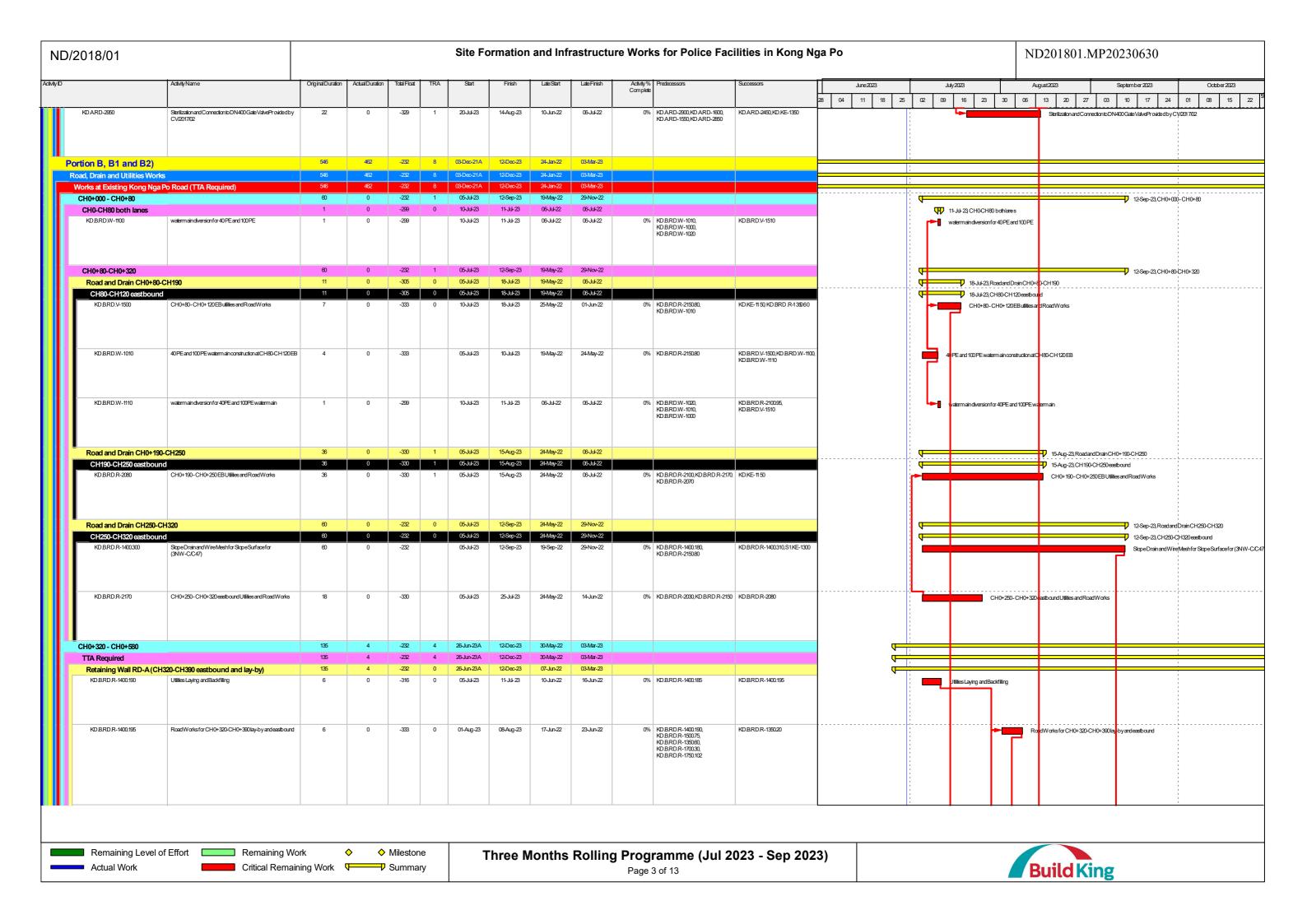
SHECK JOB No. WMA20001 DRAWN FIGURE NO. ML REV

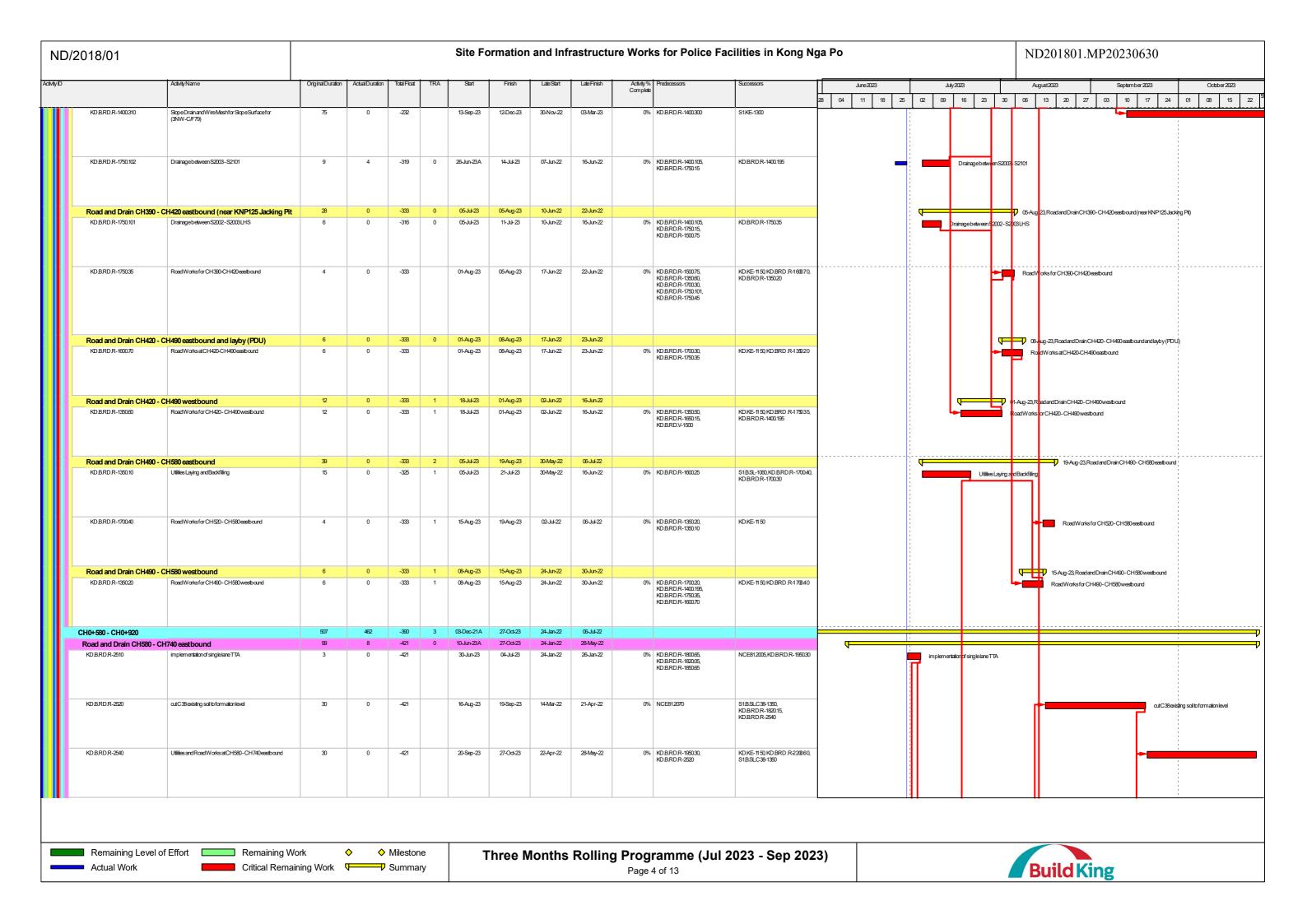


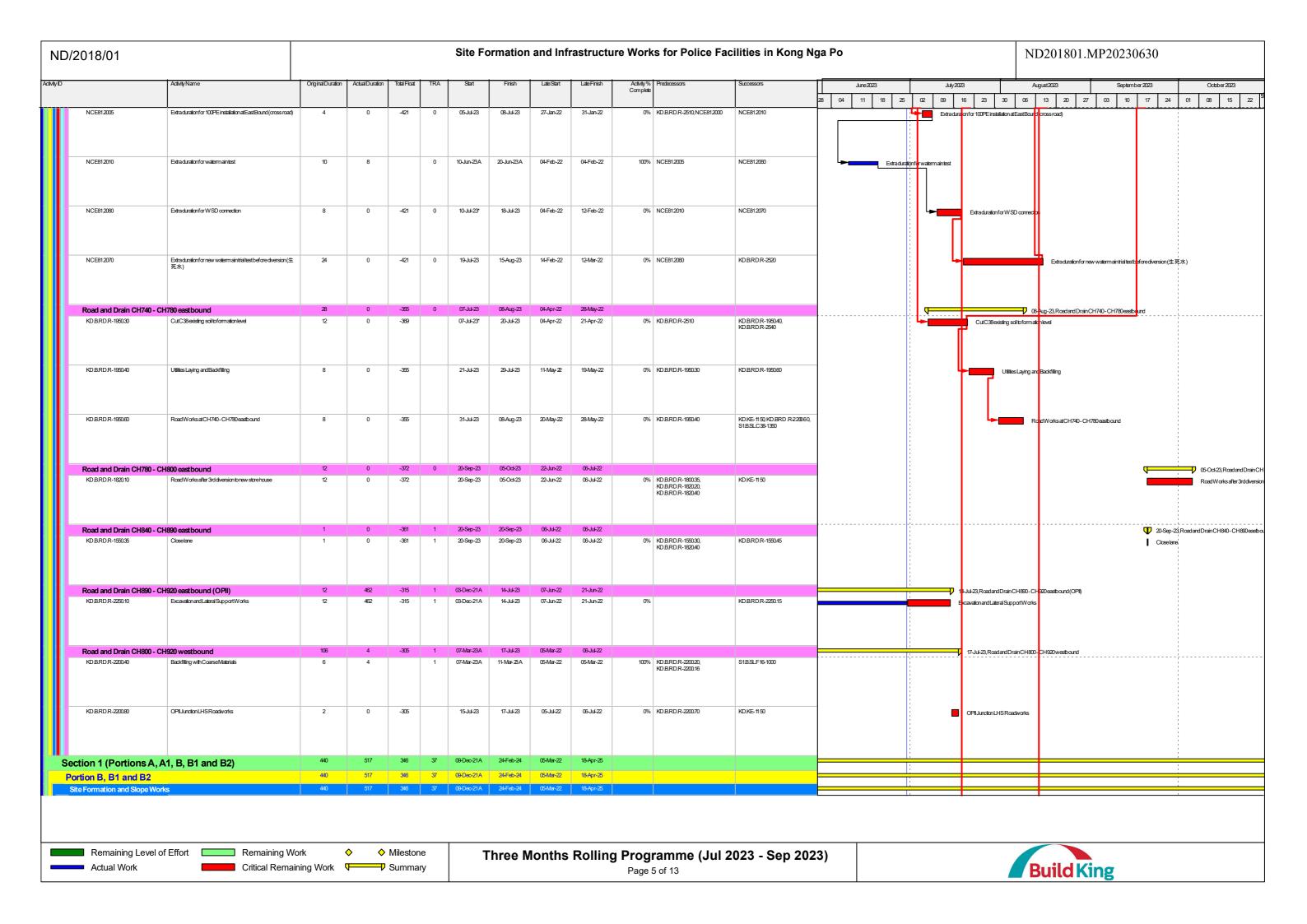
APPENDIX A
CONSTRUCTION PROGRAMME AND
PROACTIVE ENVIRONMENTAL
PROTECTION PROFORMA

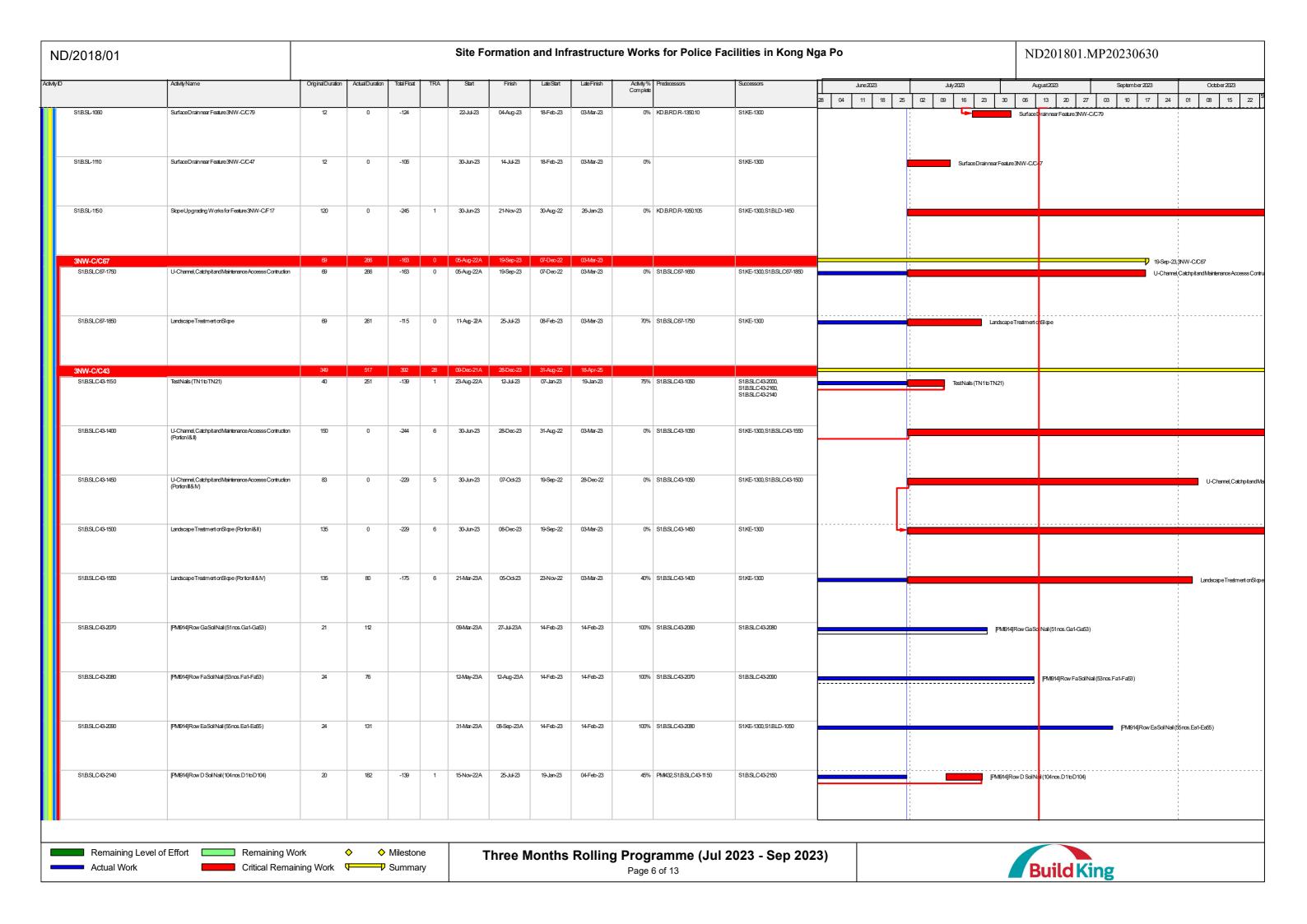


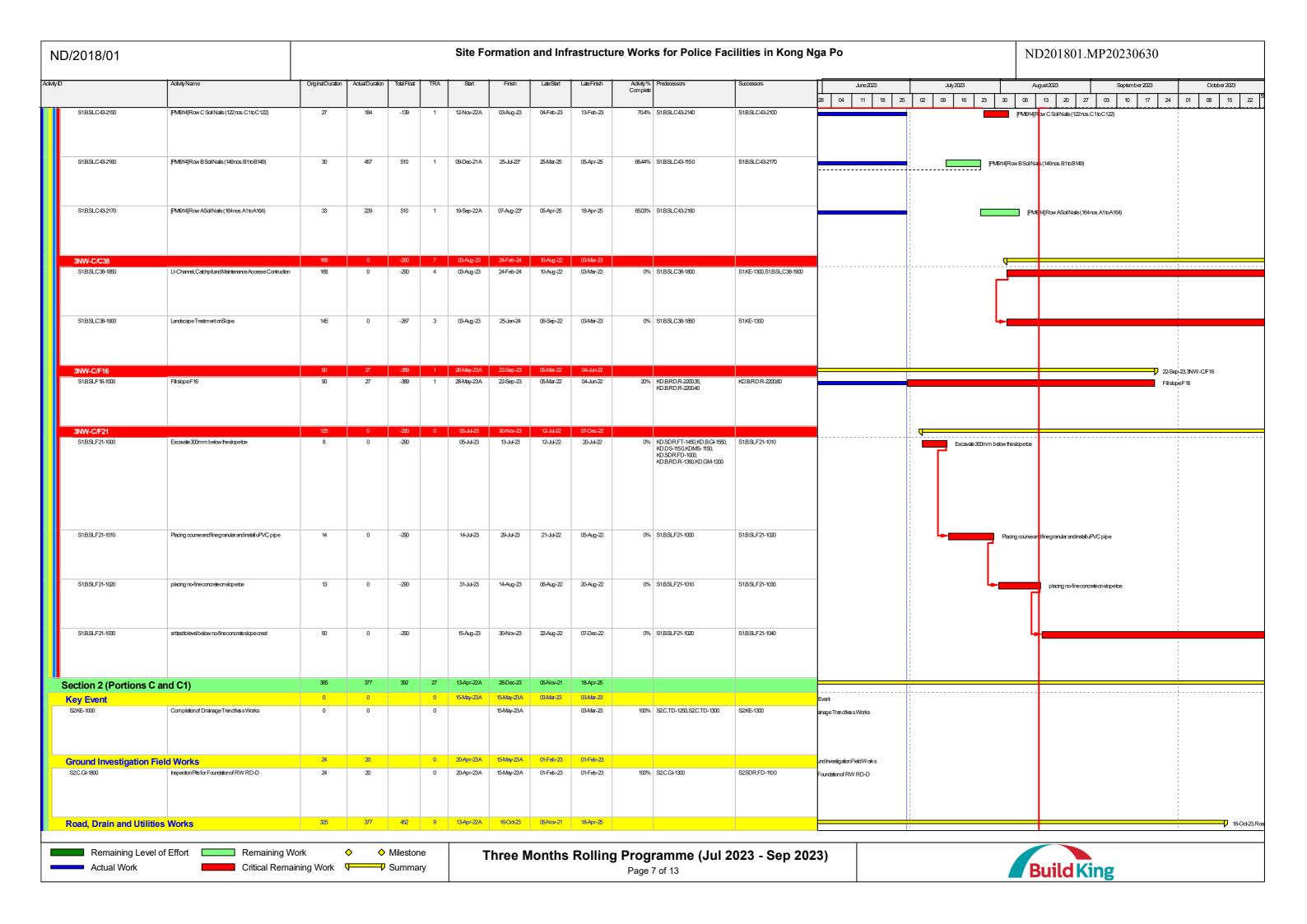


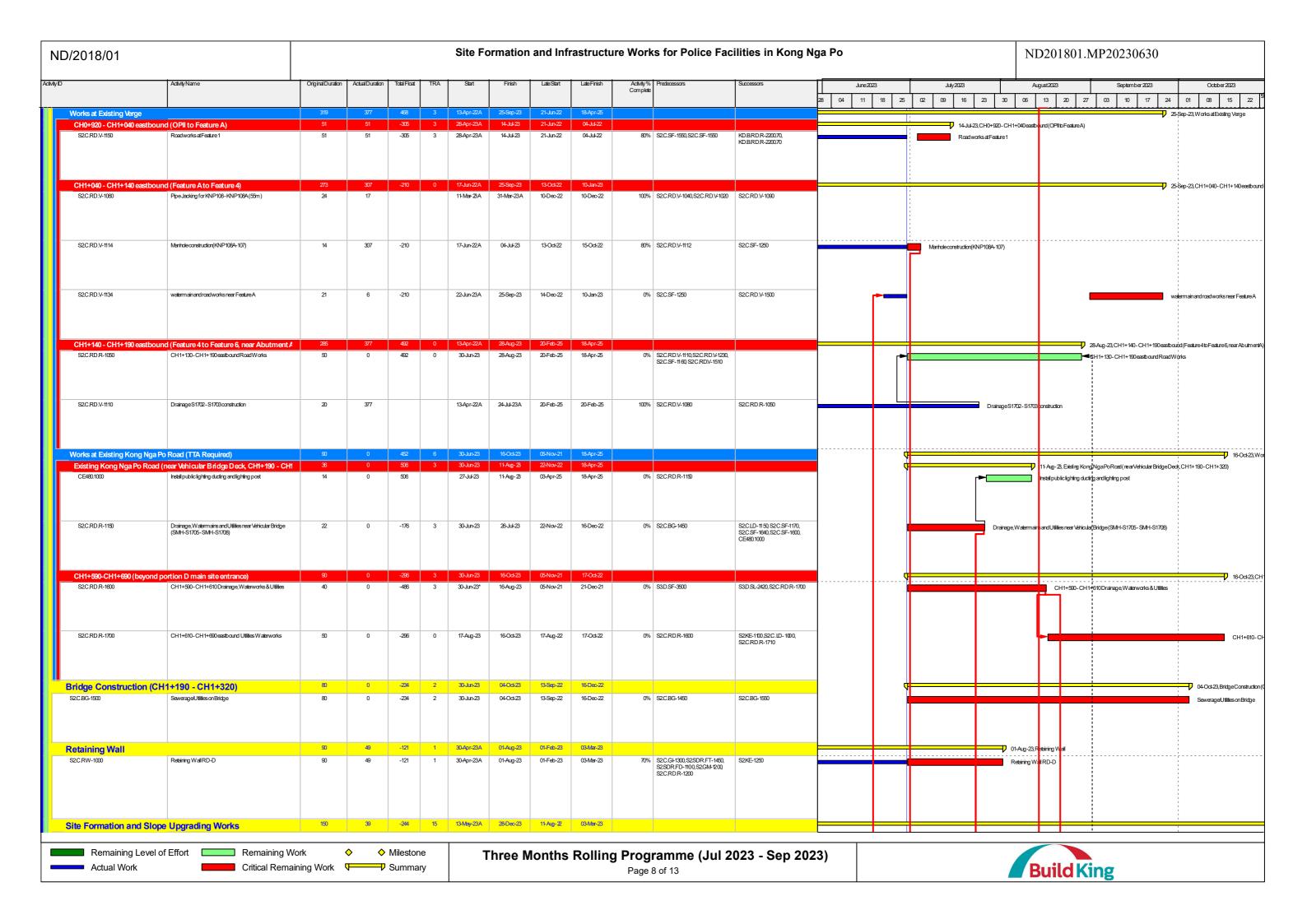


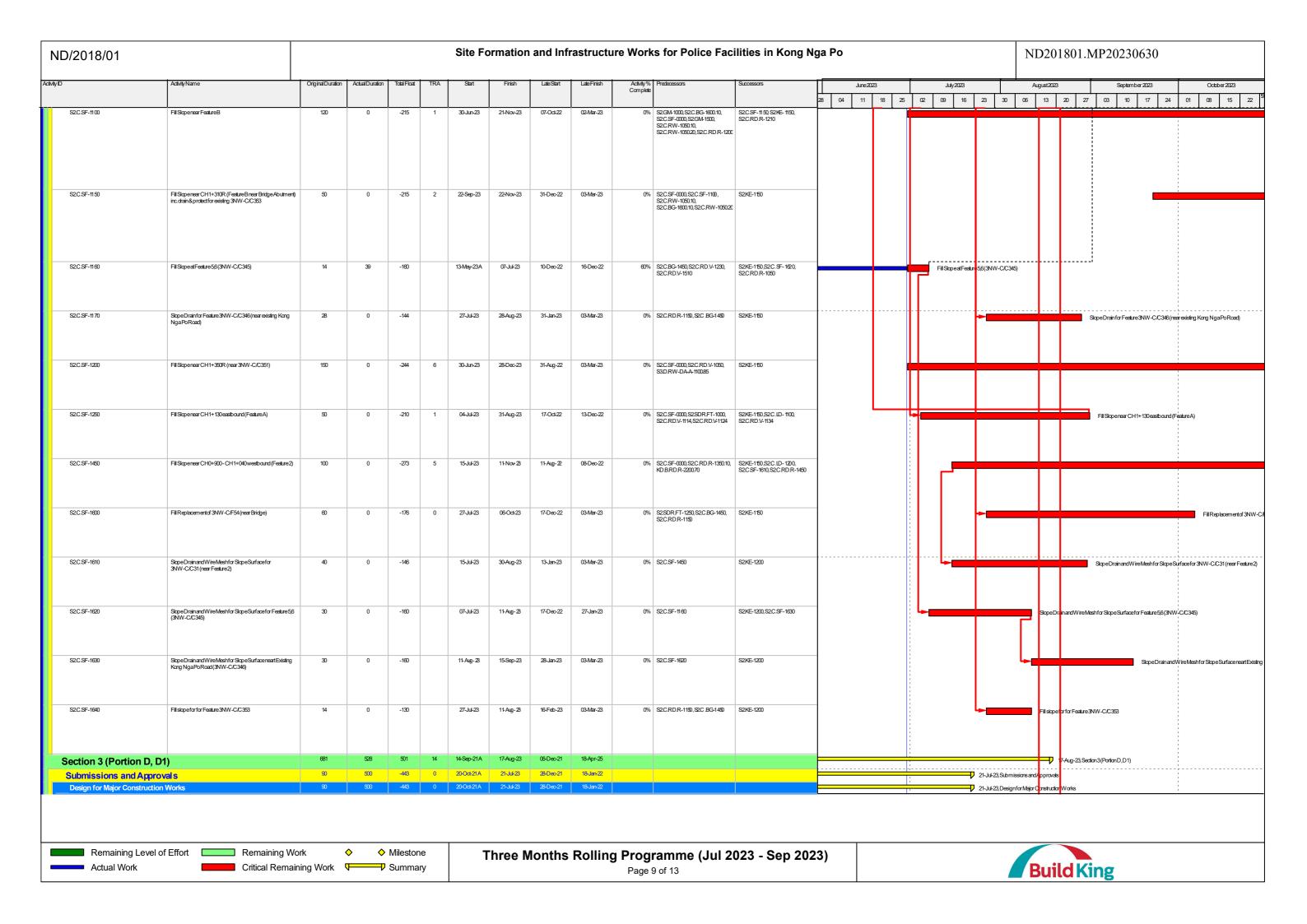


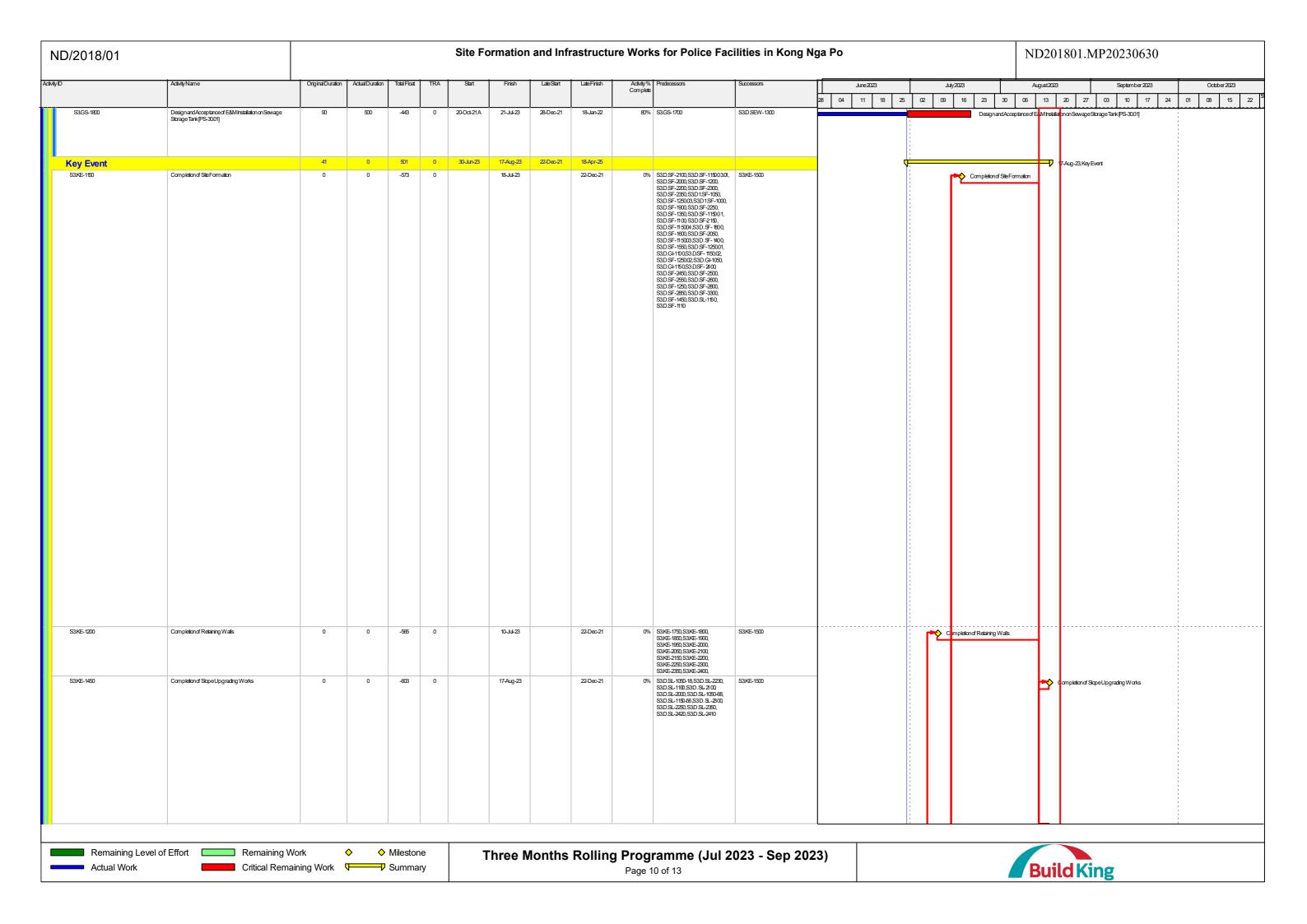


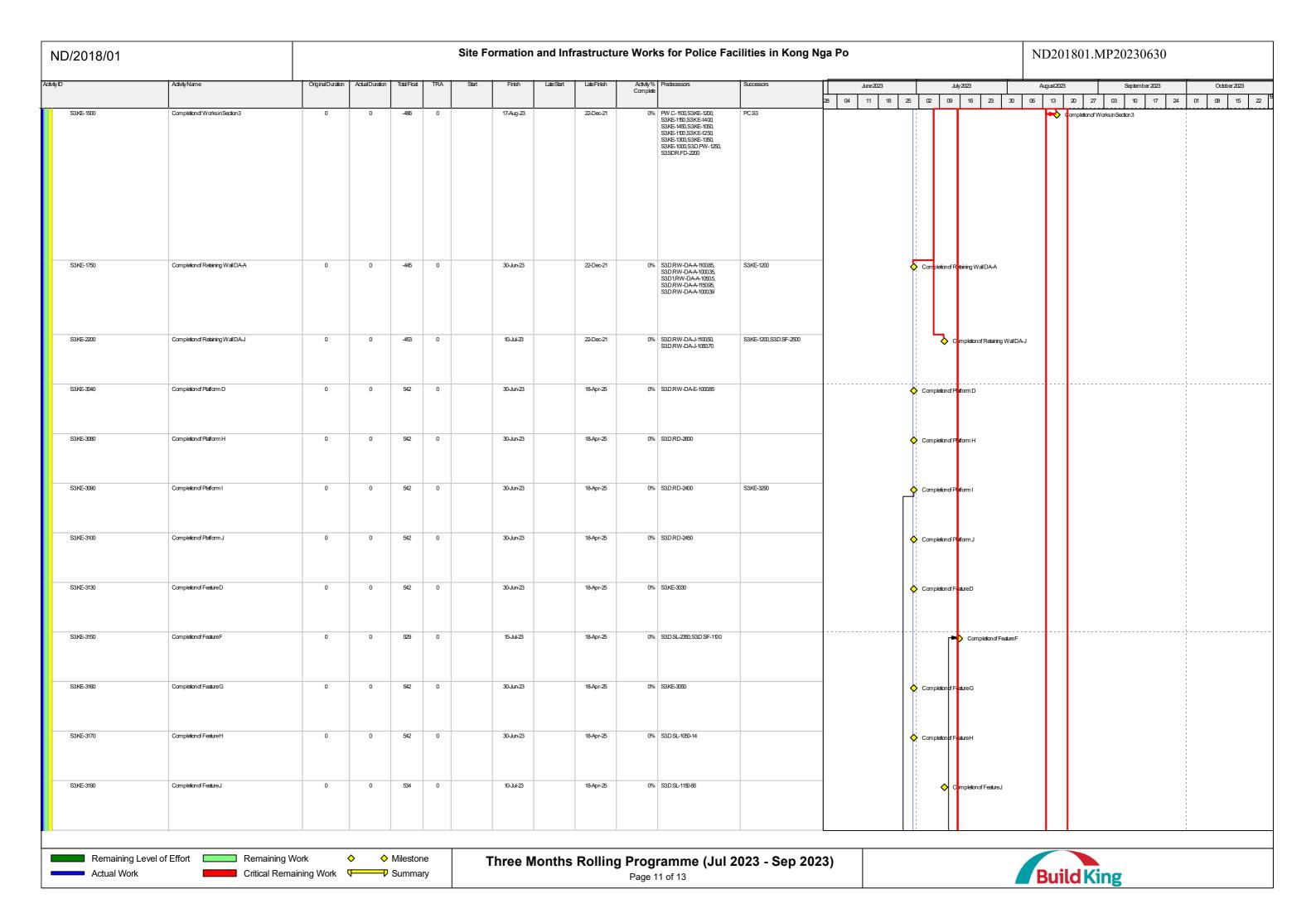


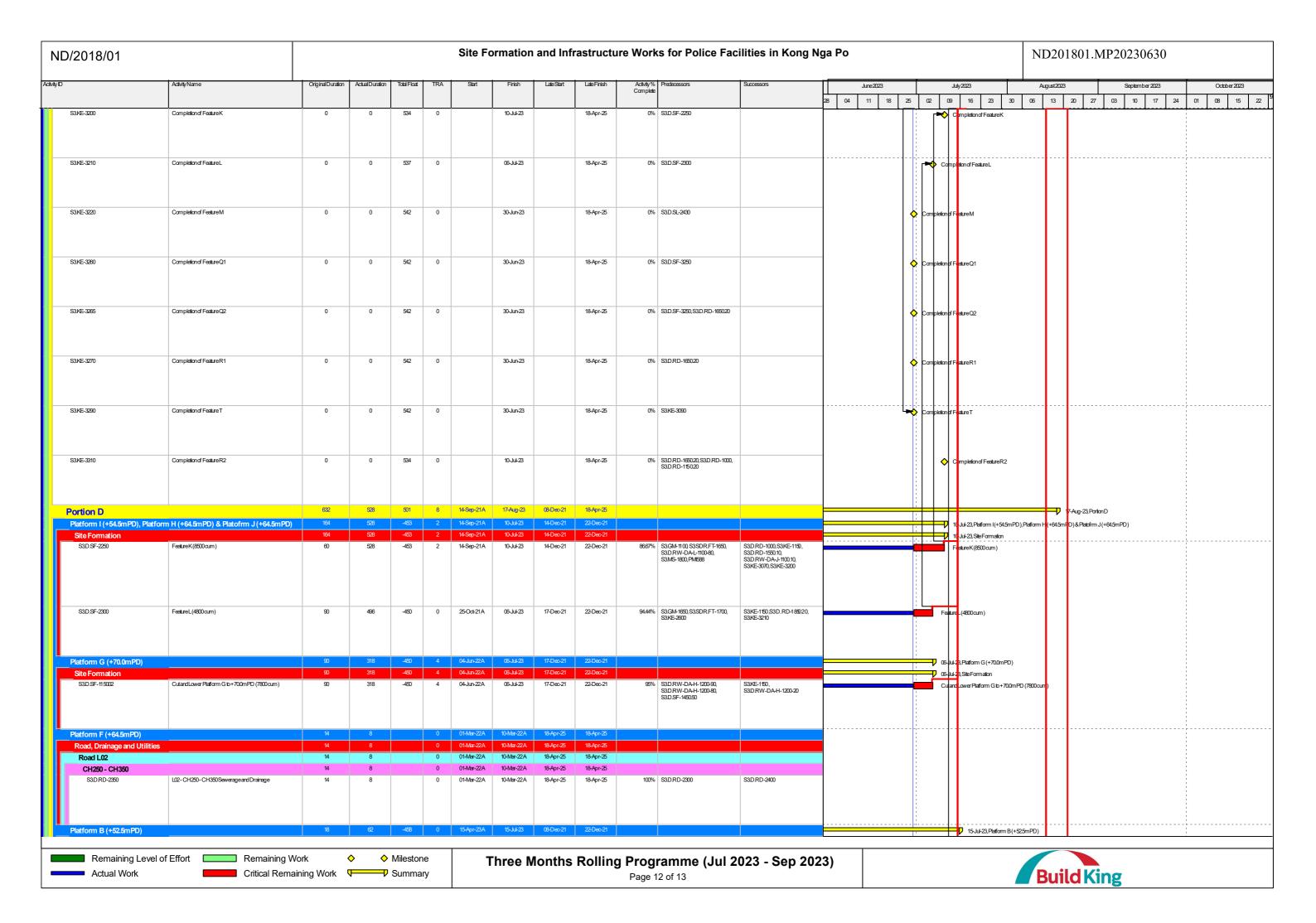


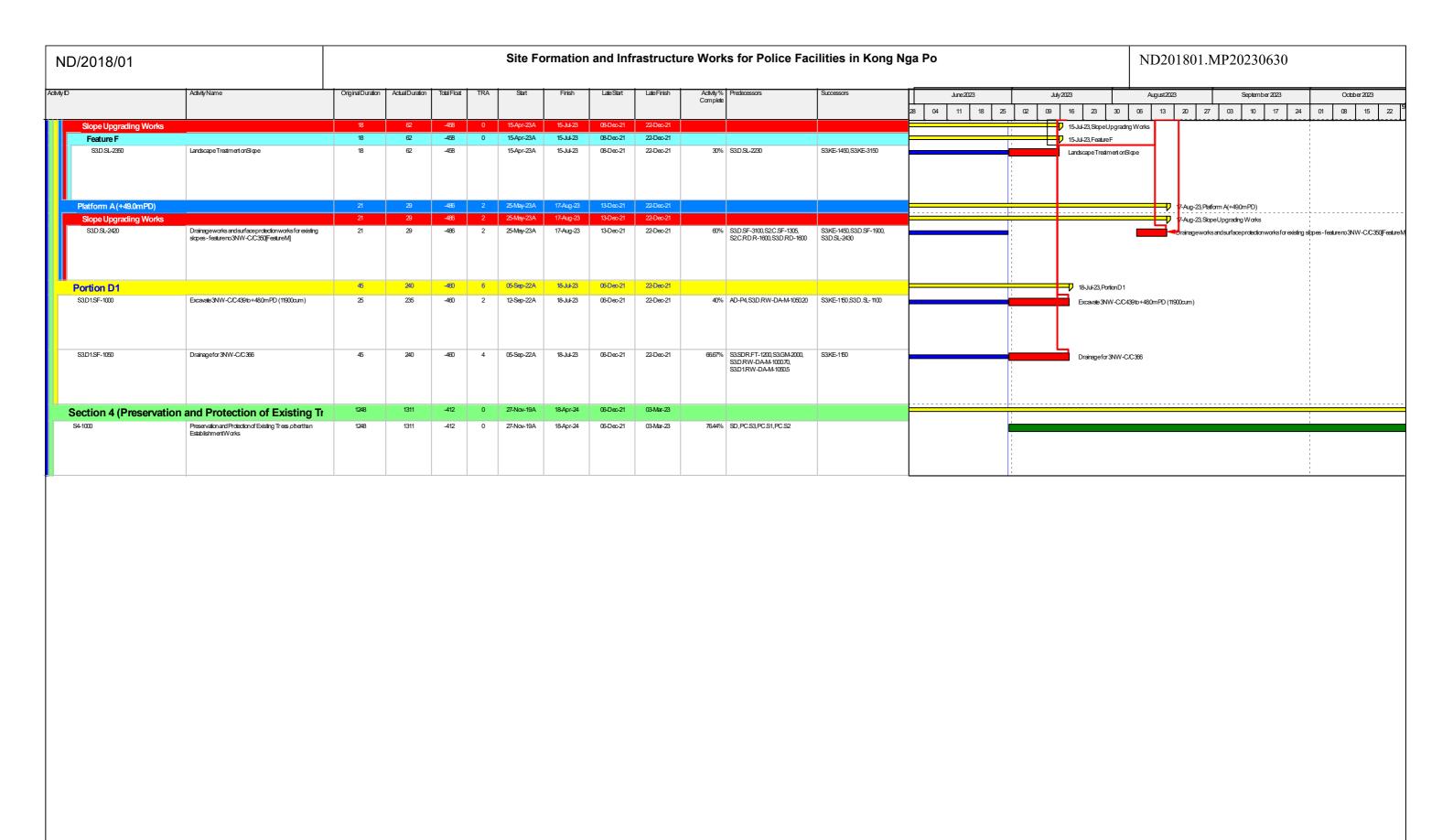




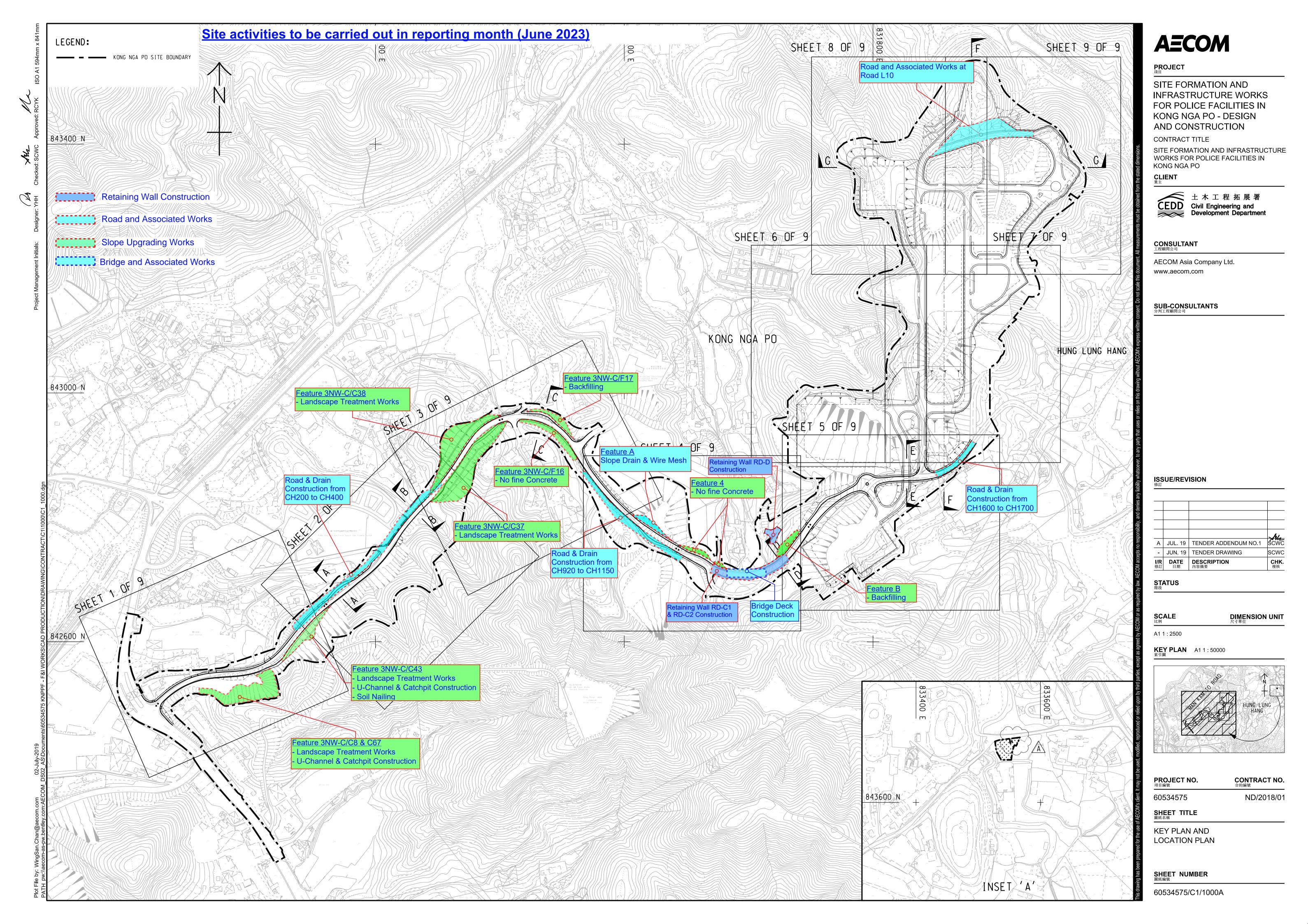


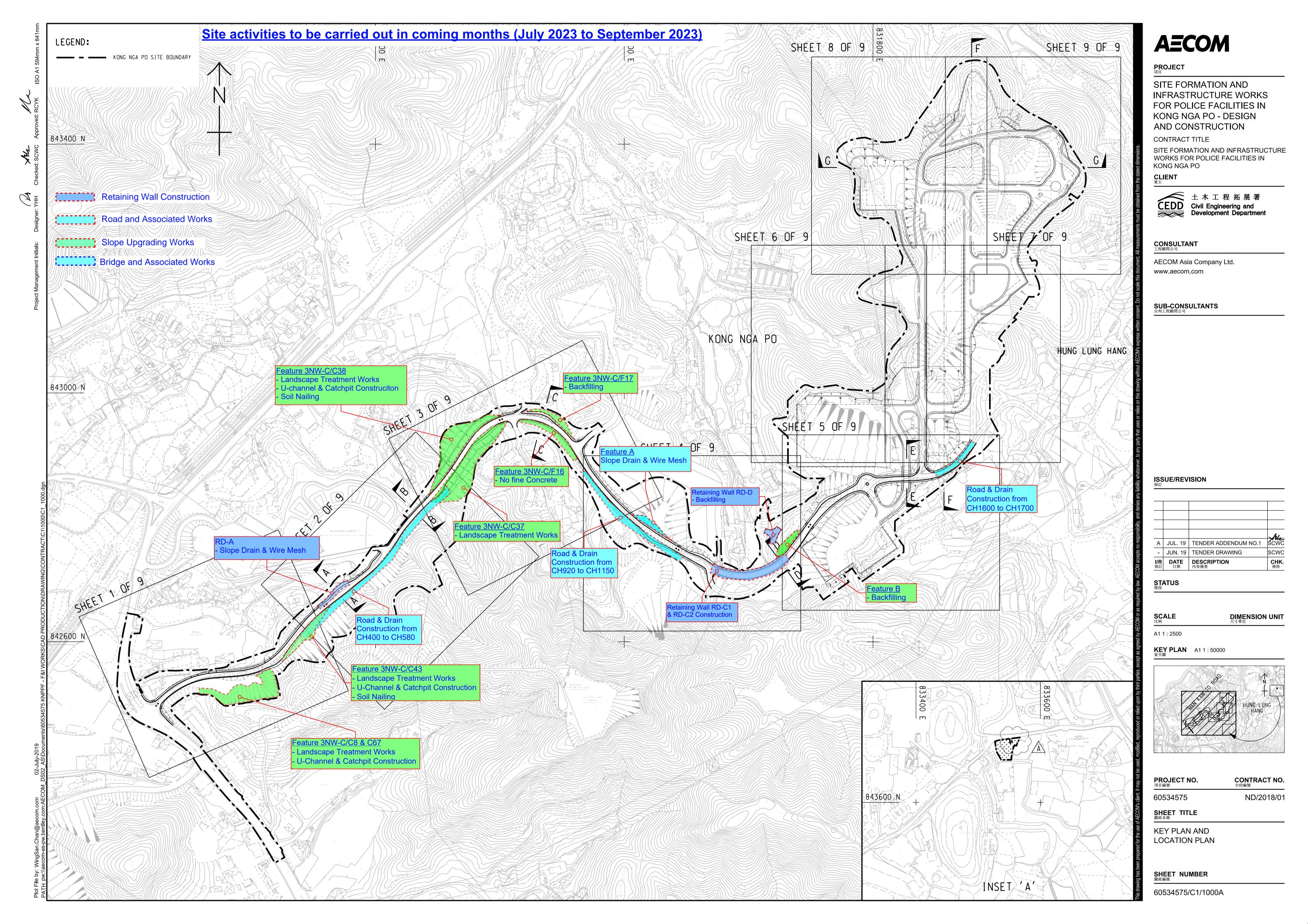












Ref*	Proposed	Location/Working	Anticipated Major	Recommended Mitigation Measures		
	Construction	Period	Impacts			
	Method**					
EIA 3.91;	Reinforced	Kong Nga Po Main	Air	Dusty materials that exceeded 20 bags will be stored in area sheltered on top		
EM&A Log 2.2	Concrete	Site		and the three sides or covered entirely by impervious sheeting		
	Structure	Kong Nga Po Road				
EIA 5.6.1.2;	Construction		Waste water	Soil berm and retention pit will be provided for the control of water outflow		
EM&A Log 4.2	(Bridge		pollution control	Desilting/sedimentation devices will be provided for wastewater treatment		
	Deck)			prior to discharge		
				Designated location for residual concrete washout		
EIA 4.4.6;			Noise	Well-planning of concreting works to prevent working in restricted hours		
EM&A Log 3.2						
EIA 4.4.6;			Working in	Valid construction noise permit should be obtained and displayed on site		
EM&A Log 3.2			Restricted Hours	• In case of non-compliance with the construction noise criteria, more frequent		
				monitoring and action should be carried out		
EIA 7.5.1.4;			Chemicals for	Chemical for concreting works should be stored in designated area with proper		
EM&A Log 6.2			concreting works	labelling and packing		
				Designated location for residual concrete washout		
EIA 3.91;	Slope	Kong Nga Po Road	Dust impact from	Three side enclosure with top shelter for cement mixing works		
EM&A Log 2.2	Upgrading		soil nail works	Water spraying on soil nailing works		
	Works			Dusty materials exceeding 20 bags shall be stored in area sheltered on top and		
				the three sides or covered entirely by impervious sheeting		
EIA 5.6.1.2;			Water	Deploy desilting/sedimentation devices for wastewater treatment prior to		

Ref*	Proposed	Location/Working	Anticipated Major	Recommended Mitigation Measures
	Construction	Period	Impacts	
	Method**			
EM&A Log 4.2	(Cont')	(Cont')	(Cont')	discharge
	Slope	Kong Nga Po Road	Water	Establish soil berm with retention pit to control water outflow
	Upgrading			
EIA 4.4.6;	Works		Noise	Regular inspection and maintenance of plant and equipment in good condition
EM&A Log 3.2				Provide noise barriers for soil nailing works where near the sensitive receiver
EIA 10.11,			Ecology Concern	Provide training to frontline workers for the conservative species
EM&A Log 9.4				Provision of protective fence for the conservative species
				Regular inspection for concerned vegetation
EIA Table 10.11			Landscape and visual	Properly fenced off the conservative species
EM&A Table			impact	Preservation of existing trees will be undertaken in accordance with DEVB
9.1				TC(W) 7/2015 and Guidelines for Tree Risk Assessment and Management
				Arrangement
EIA 3.91;	Road and	Kong Nga Po Main	Air	• Use of regular water spraying (once every 1.25 hours or 8 times per day) at all
EM&A Log 2.2	Associated	Site	Dust impact from	active works area exposed site surfaces and unpaved roads, particularly during
	Works	Kong Nga Po Road	excavation activities	dry weather
			and earth moving	Regular inspection and maintenance of plant and equipment in good condition
				Regularly clean up stockpiles and debris to avoid accumulation of materials

Ref*	Proposed	Location/Working	Anticipated Major	Recommended Mitigation Measures
	Construction	Period	Impacts	
	Method**			
(Cont')	(Cont')	(Cont')	(Cont')	Wheel washing facilities shall be provided at each construction site exit of
EIA 3.91;	Road and	Kong Nga Po Main	Dust impact from	roadworks
EM&A Log 2.2	Associated	Site	excavation activities	Provision of wheel washing facilities before the trucks leaving the works area
	Works	Kong Nga Po Road	and earth moving	so as to minimise dust introduction to public roads
EIA 5.6.1.2;			Water	Provide desilting/sedimentation devices for wastewater treatment before
EM&A Log 4.2				discharge
				• 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
EIA 4.4.6;			Noise from	Enclose the noisy part of machineries with noise isolating mats during hard
EM&A Log 3.2			roadworks	surface breaking
EIA 4.4.6;			Working in	Valid construction noise permit should be obtained and displayed on site
EM&A Log 3.2			Restricted Hours	• In case of non-compliance with the construction noise criteria, more frequent
				monitoring and action should be carried out
EIA 7.5.1.4;			Chemical Waste	Drip tray and chemical spillage kit shall be provided on site
EM&A Log 6.2				

Ref*	Proposed Construction	Location/Working Period	Anticipated Major Impacts	Recommended Mitigation Measures	
	Method**				
EIA Table 10.11	(Cont')	(Cont')	Landscape and visual	Properly fenced off the conservative species	
EM&A Table	Road and	Kong Nga Po Main	impact	Properly implement temporary traffic arrangement which control construction	
9.1	Associated	Site		area to minimize landscape and visual impacts	
,	Works	Kong Nga Po Road			

<sup>\*</sup>EIA Ref/EM&A Log Ref/Design Document Ref

<sup>\*\*</sup>Details of equipment, vehicles, plants, processes, technologies for the construction method

	Name	Signature	Date
Prepared by Contractor	Alexo Liu		3 July 2023
Endorsed by Supervisor's Representative	Andy Chey	Olle	3 July 2023
Reviewed by Environmental Team Leader	Ivy Tam	Tryton	11 July 2023
Approved by Independent Environmental Checker	Tandy Tse	lust y	11 July 2023

# APPENDIX B ACTION AND LIMIT LEVELS

# **Appendix B - Action and Limit Levels**

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

Monitoring station	Action Level (ug/m³)	Limit Level (ug/m³)
AM1	308	500
AM2	311	500

**TableB-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 C COPIES OF CALIBRATION CERTIFCATES



### TEST REPORT

APPLICANT: Wellab Limited

(EM&A Department)

Room 1808, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.: 38174

Date of Issue: 2023-05-08

Date Received: 2023-05-05

Date Tested: 2023-05-05

Date Completed: 2023-05-08

Next Due Date: 2023-07-07

Page:

1 of 1

ATTN:

Ms. Meiling Tang

# **Certificate of Calibration**

#### Item for Calibration:

Description

: Dust Monitor

Manufacturer

: Met One Instruments

Model No.

: AEROCET-831

Serial No.

: X23807

Flow rate

: 0.1 cfm

Zero Count Test

: 0 count per 1 minute

Equipment No.

: WA-01-01

#### **Test Conditions:**

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

## Test Specifications & Methodology:

- 1. Instruction and Operation Manual High Volume Sampler, Tisch Environmental Inc.
- 2. In-house method in according to the instruction manual: The Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

## Results:

Correlation Factor (CF) 1.119

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

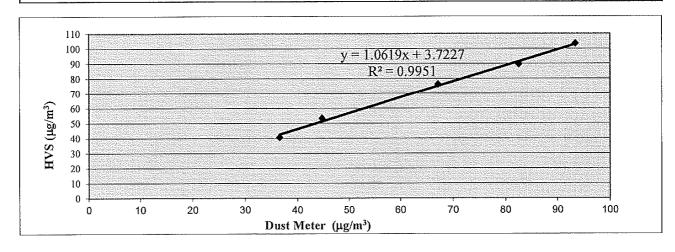
PÅTRICK TSE

Dust Meter	Dust Meter	High Volume Sampler	
Equipment No.:	WA-01-01	WA-12-09	
Model No.:	AEROCET-831	TE-5170	
Serial No.	X23807	2203	
Calibration Date:	5-May-23	5-May-23	
Location:	Wellab Office (Calibration Room)		

	Calibration	n of 1 hr TSP			
	Dust Meter		HVS		
Calibration Point	Mass Concentration (μg/m³)	l l	Mass concentration (μg/m³)		
	X-axis		Y-axis		
1	37		41		
2	45		53		
3	67		76		
4	83		90		
5	93		103		
Average	64.9		72.7		
By Linear Regression o			2 222		
Slope, mw =	1.0619	Intercept, bw =	3.7227		
Correlation coefficie	$nt^* = 0.9976$				

<sup>\*</sup>If Correlation Coefficient < 0.90, check and recalibrate.

Particaulate Concentration by High Volume Sampler (µg/m³)	72.7
Particaulate Concentration by Dust Meter (µg/m³)	64.9
Measureing time, (min)	60
Set Correlation Factor , SCF SCF = [ K=High Volume Sampler / Dust Meter, (μg/m³) ]	1.119



OC Reviewer:	LBB MAN	Uzv	Signature:	hei	Date:	\$/5/223



### TEST REPORT

APPLICANT: Wellab Limited

(EM&A Department)

Room 1808, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

 Test Report No.:
 38174A

 Date of Issue:
 2023-05-08

 Date Received:
 2023-05-05

 Date Tested:
 2023-05-05

 Date Completed:
 2023-05-08

 Next Due Date:
 2023-07-07

Page:

1 of 1

ATTN:

Ms. Meiling Tang

# **Certificate of Calibration**

#### Item for Calibration:

Description : Dust Monitor

Manufacturer : Met One Instruments

Model No. : AEROCET-831

Serial No. : X23808 Flow rate : 0.1 cfm

Zero Count Test : 0 count per 1 minute

Equipment No. : WA-01-02

**Test Conditions:** 

Room Temperature : 17-22 degree Celsius

Relative Humidity : 40-70%

### Test Specifications & Methodology:

- 1. Instruction and Operation Manual High Volume Sampler, Tisch Environmental Inc.
- 2. In-house method in according to the instruction manual: The Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

## Results:

Correlation Factor (CF)	1 178
Contenation Pacion (Cr)	1,1/0

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

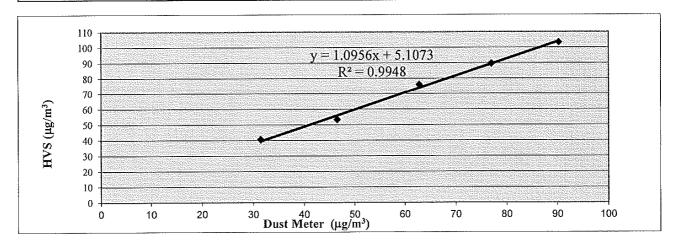
PATRICK TSE

Dust Meter	Dust Meter	High Volume Sampler		
Equipment No.:	WA-01-02	WA-12-09		
Model No. :	AEROCET-831	TE-5170		
Serial No.	X23808	2203		
Calibration Date:	5-May-23	5-May-23		
Location:	Wellab Office (Calibration Room)			

	Calibrat	on of 1 hr TSP			
	Dust Meter		HVS		
Calibration Point	Mass Concentration (μg/m³)	Mass co	oncentration (μg/m³)		
	X-axis		Y-axis		
1	32		41		
2	47		53		
3	63		76		
4	77		90		
5	90		103		
Average	61.7		72.7		
By Linear Regression of Slope, mw =  Correlation coefficie	1.0956	Intercept, bw =	5.1073		

<sup>\*</sup>If Correlation Coefficient < 0.90, check and recalibrate.

61.7
<b>40</b>
60
1.178



QC Reviewer:	Chb	Mons	Her	Signature:	her	Date:	4 (5/213
•							



# TEST REPORT

APPLICANT: Wellab Limited

(EM&A Department)

Room 1808, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.:	38174B
Date of Issue:	2023-05-08
Date Received:	2023-05-05
Date Tested:	2023-05-05
Date Completed:	2023-05-08
Next Due Date:	2023-07-07

Page:

1 of 1

ATTN:

Ms. Meiling Tang

# Certificate of Calibration

Item for Calibration:

Description

: Dust Monitor

Manufacturer

: Met One Instruments

Model No.

: AEROCET-831

Serial No.

: X23809

Flow rate

: 0.1 cfm

Zero Count Test

: 0 count per 1 minute

Equipment No.

: WA-01-03

**Test Conditions:** 

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

#### Test Specifications & Methodology:

- 1. Instruction and Operation Manual High Volume Sampler, Tisch Environmental Inc.
- 2. In-house method in according to the instruction manual: The Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

# Results:

Correlation Factor (CF) 1.147

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE

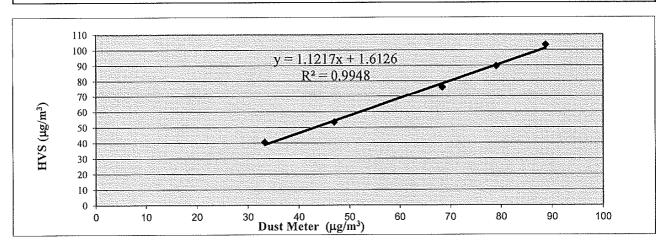
Dust Meter	Dust Meter	High Volume Sampler		
Equipment No.:	WA-01-03	WA-12-09		
Model No. :	AEROCET-831	TE-5170		
Serial No.	X23809	2203		
Calibration Date:	5-May-23	5-May-23		
Location:	Wellab Office (Calibration Room)			

	Dust Meter	HVS
Calibration Point	Mass Concentration (μg/m³)	Mass concentration (μg/m³)
	X-axis	Y-axis
1	33	41
2	47	53
3	69	76
4	79	90
5	89	103
Average	63.3	72.7

By Linear Regression	of Y on X				
Slope, mw =	1.1217		Intercept, bw =	1.6126	
Correlation coeffic	ient* =	0.9974			

<sup>\*</sup>If Correlation Coefficient < 0.90, check and recalibrate.

Particaulate Concentration by High Volume Sampler (µg/m³)	72.7	
Particaulate Concentration by Dust Meter (μg/m³)	63.3	
Measureing time, (min)	60	
Set Correlation Factor , SCF SCF = [K=High Volume Sampler / Dust Meter, (µg/m³)]	1.147	



OC Reviewer:	126	Kyr	Hor	Signature:	her	Date:	515/223



# TEST REPORT

APPLICANT: Wellab Limited

(EM&A Department)

Room 1808, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

 Test Report No.:
 38174C

 Date of Issue:
 2023-05-08

 Date Received:
 2023-05-05

 Date Tested:
 2023-05-05

 Date Completed:
 2023-05-08

Next Due Date:
Page:

1 of 1

2023-07-07

ATTN:

Ms. Meiling Tang

# **Certificate of Calibration**

#### Item for Calibration:

Description

: Dust Monitor

Manufacturer

: Met One Instruments

Model No.

: AEROCET-831

Serial No.

: X23810

Flow rate

: 0.1 cfm

Zero Count Test

: 0 count per 1 minute

Equipment No.

: WA-01-04

#### **Test Conditions:**

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

#### Test Specifications & Methodology:

- 1. Instruction and Operation Manual High Volume Sampler, Tisch Environmental Inc.
- 2. In-house method in according to the instruction manual: The Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

# Results:

Correlation Factor (CF) 1.108

For and On Behalf of WELLAB Ltd.

PREPARED AND CHECKED BY:

PATRICK TSE

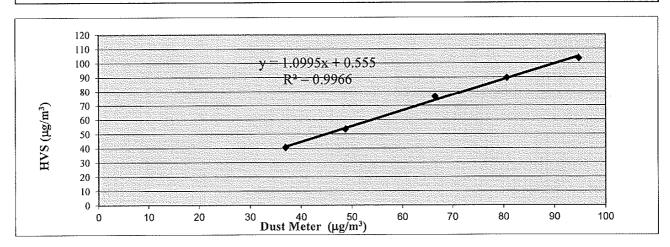
Dust Meter	Dust Meter	High Volume Sampler		
Equipment No.:	WA-01-04	WA-12-09		
Model No. :	AEROCET-831	TE-5170		
Serial No.	X23810	2203		
Calibration Date:	5-May-23	5-May-23		
Location:	Wellab Office (Calibration Room)			

	Dust Meter	HVS		
Calibration Point	Mass Concentration (μg/m³)	Mass concentration (μg/m³)		
	X-axis	Y-axis		
1	37	41		
2	49	53		
3	67	76		
4	81	90		
5	95	103		
Average	65.6	72.7		

By Linear Regression	of Y on X				
Slope, mw =	1.0995		Intercept, bw =	0.5550	
Correlation coeffici	lent* =	0.9983			

<sup>\*</sup>If Correlation Coefficient < 0.90, check and recalibrate.

Particaulate Concentration by High Volume Sampler (μg/m³)	72.7		
Particaulate Concentration by Dust Meter (µg/m³)	65.6		
Measureing time, (min)	60		
Set Correlation Factor, SCF SCF =   K=High Volume Sampler / Dust Meter, (µg/m³)	1.108		



QC Reviewer:	let	MAN	Mbr	Signature:	hei	Date:	5/5/2023
		100					



WELL'AB LIMITED Room 1714, Technology Park 18 On Lai Street, Shatin New Territories, Hong Kong Tel: 2898 7388 Fax: 2898 7076

Website: www.wellab.com.hk

# TEST REPORT

APPLICANT: Wellab Limited

(EM&A Department)

Room 1808, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.: 38469

Date of Issue: 2023-06-26

Date Received: 2023-06-23 Date Tested: 2023-06-23

Date Completed: 2023-06-26

Next Due Date: 2023-08-25 Page: 1 of 1

ATTN:

Ms. Meiling Tang

# **Certificate of Calibration**

#### Item for Calibration:

Description

: Dust Monitor

Manufacturer

: Met One Instruments

Model No.

: AEROCET-831

Serial No.

: X24476

Flow rate

: 0.1 cfm

Zero Count Test

: 0 count per 1 minute

Equipment No.

: WA-01-05

**Test Conditions:** 

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

#### Test Specifications & Methodology:

- 1. Instruction and Operation Manual High Volume Sampler, Tisch Environmental Inc.
- 2. In-house method in according to the instruction manual: The Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

#### **Results:**

Correlation Factor (CF) 1.145 \*

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE General Manager

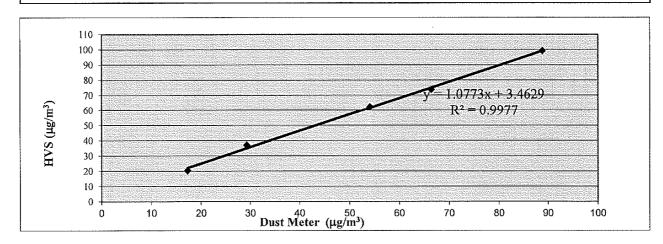
Dust Meter	Dust Meter	High Volume Sampler WA-12-09		
Equipment No.:	WA-01-05			
Model No. :	AEROCET-831	TE-5170		
Serial No.	X24476	2203		
Calibration Date:	23-Jun-23	23-Jun-23		
Location:	Wellab Office (Calibration Room)			

	Dust Meter	HVS		
Calibration Point	Mass Concentration (μg/m³)	Mass concentration (μg/m³)		
	X-axis	Y-axis		
1	17	20		
2	29	37		
3 54		62		
4	66	74		
5	89	99		
Average	51.2	58.6		

Correlation coefficient\* = 0.9988

<sup>\*</sup>If Correlation Coefficient < 0.90, check and recalibrate.

Particaulate Concentration by High Volume Sampler (μg/m³)	58.6		
Particaulate Concentration by Dust Meter (µg/m³)	51,2		
Measureing time, (min)	60		
Set Correlation Factor , SCF SCF = [K=High Volume Sampler / Dust Meter, (µg/m³)]	1.145		



QC Reviewer:	LEE MAN	HAV	Signature:	hei	Date:	24/6/21
`						



#### TEST REPORT

Wellab Limited APPLICANT:

(EM&A Department)

Room 1808, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.:	38174D
Date of Issue:	2023-05-08
Date Received:	2023-05-05
Date Tested:	2023-05-05
Date Completed:	2023-05-08
Next Due Date:	2023-07-07

Page:

1 of 1

ATTN:

Ms. Meiling Tang

#### Certificate of Calibration

#### Item for Calibration:

: Dust Monitor Description

: Met One Instruments Manufacturer

: AEROCET-831 Model No.

: X24475 Serial No. : 0.1 cfm Flow rate

: 0 count per 1 minute Zero Count Test

: WA-01-07 Equipment No.

**Test Conditions:** 

: 17-22 degree Celsius Room Temperature

: 40-70% Relative Humidity

#### Test Specifications & Methodology:

- 1. Instruction and Operation Manual High Volume Sampler, Tisch Environmental Inc.
- 2. In-house method in according to the instruction manual: The Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

#### Results:

Correlation Factor (CF) 1.144 \*

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

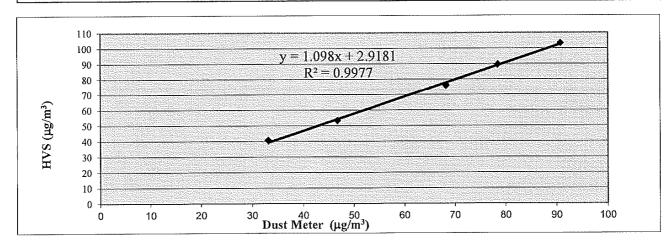
## <u>TSP - Total Suspended Particulates (1 hr Dust Meter)</u> <u>Calibration Report</u>

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-07	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24475	2203
Calibration Date:	5-May-23	5-May-23
Location:	Wellab Office	(Calibration Room)

	Cali	oration of 1 hr TSP	
10,000 kilds (600 kilds)	Dust Meter		HVS
Calibration Point	Mass Concentration (με	/m³)	Mass concentration (μg/m³)
	X-axis		Y-axis
1	33		41
2	47		53
3	68		76
4	79		90
5	91		103
Average	63.5		72.7
By Linear Regression of Slope, mw =	of Y on X 1.0980	Intercept, bw =	2.9181
Correlation coefficie	nt* = 0.998	8	

<sup>\*</sup>If Correlation Coefficient < 0.90, check and recalibrate.

3	tor	name and a superioration
Particaulate Concentration by High Volume Sampler (µg/m³)	72.7	
Particaulate Concentration by Dust Meter (µg/m³)	63.5	
Measureing time, (min)	60	
Set Correlation Factor , SCF SCF = [ K=High Volume Sampler / Dust Meter, (µg/m³) ]	1.144	



QC Reviewer:	<u> </u>	MON	402	_Signature:	hi	Date:	\$ (5/2022
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#### TEST REPORT

APPLICANT: Wellab Limited

(EM&A Department)

Room 1808, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

 Test Report No.:
 38139B

 Date of Issue:
 2023-04-24

 Date Received:
 2023-04-22

 Date Tested:
 2023-04-22

 Date Completed:
 2023-04-24

 Next Due Date:
 2023-06-23

Page:

1 of 1

ATTN:

Ms. Meiling Tang

#### Certificate of Calibration

#### Item for Calibration:

Description

: Dust Monitor

Manufacturer

: Met One Instruments

Model No.

: AEROCET-831

Serial No.

: X24479

Flow rate

: 0.1 cfm

Zero Count Test

: 0 count per 1 minute

Equipment No.

: WA-01-08

#### **Test Conditions:**

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

#### Test Specifications & Methodology:

- 1. Instruction and Operation Manual High Volume Sampler, Tisch Environmental Inc.
- 2. In-house method in according to the instruction manual: The Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

#### Results:

Correlation Factor (CF)

1.132

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE

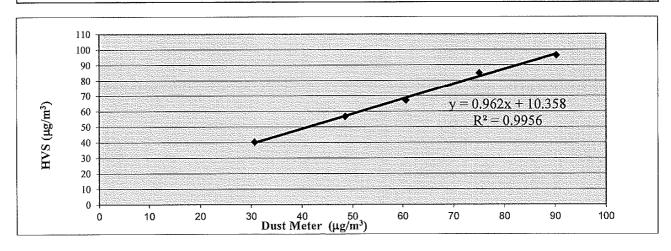
# <u>TSP - Total Suspended Particulates (1 hr Dust Meter)</u> <u>Calibration Report</u>

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-08	WA-12-09
Model No.:	AEROCET-831	TE-5170
Serial No.	X24479	2203
Calibration Date:	22-Apr-23	22-Apr-23
Location:	Wellab Office	(Calibration Room)

1	A STATE OF THE STA	of 1 hr TSP	
	Dust Meter	Substitution of the substi	HVS
Calibration Point	Mass Concentration (μg/m³)	M	lass concentration (μg/m³)
	X-axis		Y-axis
1	31		40
2	49		57
3	61		67
4	75		85
5	90		96
Average	61.1		69.1
By Linear Regression of Slope, mw =	f Y on X 0.9620	Intercept, bw =	10.3583
Correlation coefficie	nt* = 0.9978	_	

<sup>\*</sup>If Correlation Coefficient < 0.90, check and recalibrate.

Particaulate Concentration by High Volume Sampler (μg/m³)	69.1
Particaulate Concentration by Dust Meter (µg/m³)	61.1
Measureing time, (min)	60
Set Convolution Factor, SCE	
Set Correlation Factor , SCF SCF = [ K=High Volume Sampler / Dust Meter, (μg/m³) ]	1.132



OCKEVIEWER 1997 1997 Signature.	QC Reviewer:	Lrv	MON	Ивг	Signature:	he-	Date:	V3 (412022
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#### TEST REPORT

APPLICANT: Wellab Limited

(EM&A Department)

Room 1808, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

 Test Report No.:
 38139C

 Date of Issue:
 2023-04-24

 Date Received:
 2023-04-22

 Date Tested:
 2023-04-22

 Date Completed:
 2023-04-24

 Next Due Date:
 2023-06-23

Page:

1 of 1

ATTN:

Ms. Meiling Tang

#### Certificate of Calibration

#### Item for Calibration:

Description

: Dust Monitor

Manufacturer

: Met One Instruments

Model No.

: AEROCET-831

Serial No.

: X23811

Flow rate

: 0.1 cfm

Zero Count Test

: 0 count per 1 minute

Equipment No.

: WA-01-09

**Test Conditions:** 

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

#### Test Specifications & Methodology:

1. Instruction and Operation Manual High Volume Sampler, Tisch Environmental Inc.

\*

2. In-house method in according to the instruction manual: The Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

#### Results:

Correlation Factor (CF) 1.067

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE

Laboratory Manager

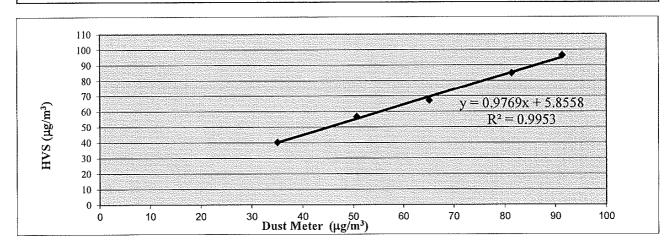
## <u>TSP - Total Suspended Particulates (1 hr Dust Meter)</u> <u>Calibration Report</u>

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-09	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23811	2203
Calibration Date:	22-Apr-23	22-Apr-23
Location:	Wellab Office	(Calibration Room)

	Dust Meter		HVS
Calibration Point	Mass Concentration (μg/m³)	1	Mass concentration (μg/m³)
	X-axis		Y-axis
1	35		40
2	51		57
3	65		67
4	81		85
5	91		96
Average	64.8		69.1
By Linear Regression ( Slope , mw =	of Y on X 0.9769	Intercept, bw =	5.8558

<sup>\*</sup>If Correlation Coefficient < 0.90, check and recalibrate.

Particaulate Concentration by High Volume Sampler (μg/m³)	69.1	
Particaulate Concentration by Dust Meter (μg/m³)	64.8	
Measureing time, (min)	60	
Set Correlation Factor , SCF SCF = [ K=High Volume Sampler / Dust Meter, (µg/m³) ]	1.067	



QC Reviewer:	LZ 12	Mon	HER	Signature:	her	Date:	23 (4/102)
Q C X (C ( 1 C ) ( C )							



### **High-Volume TSP Sampler** 5-POINT CALIBRATION DATA SHEET

						File No	Cal./230422
Equipment No.:	WA-	12-09		Serial No.	2203		
Model No.	TE-	5170		Cal. Date:	22-Apr-2	23	
Operator:	Н	IL.					
			Ambient Co	ndition			
Temperatur	Temperature, Ta (K) 293.4		Pressure, Pa	a (mmHg)		758.6	
			* - x				
	· · · · · · · · · · · · · · · · · · ·		ce Transfer Stane		F		
Serial		0993	Slope, mc	0.0574	Intercept,		-0.04292 1/2
Last Calibra		16-Jan-23	-		$bc = [\Delta H \times (Pa/760)]$		
Next Calibra	tion Date:	16-Jan-24		$Qstd = \{   \Delta H \}$	x (Pa/760) x (298/1	l'a)] <sup></sup> -bc} / i	me
			Calibration of T	SP Sampler			
·	· · · · · · · · · · · · · · · · · · ·	Orfice		or pampier	· · · · · · · · · · · · · · · · · · ·	HVS	#." · · · · · · · · · · · · · · · · · · ·
Calibration	ΔH (orifice),	T		Qstd (CFM)	ΔW (HVS), in. of		760) x (298/Ta)] <sup>1/2</sup>
Point	in. of water	[ΔH x (Pa/760) x	x (298/Ta)] <sup>1/2</sup>	X - axis	water		Y-axis
1	11.8	3.46		60.96	7.8		2.81
2	9.6	3.12		55.06	6.2		2,51
3	8.7	2.97	,	52.45	5.8		2.42
4	5.4	2.34		41.48	3.7		1.94
5	3.4	1.86	<u> </u>	33.07	2.4		1.56
By Linear Regr Slope, mw = Correlation co *If Correlation C	0.0444 pefficient* =	0.9995 0, check and recalibrate		Intercept, bw	0.0925	<u>:</u>	
	<u>.</u> H. 100 A		Set Point Cal	aulation			
From the TSP Fi	eld Calibration (	Curve, take Qstd = 43 CF		Cuiation	·		
		ne "Y" value according to					
_		_	$d + bw = [\Delta W \ x]$		/Ta)] <sup>1/2</sup>		
Therefore Remarks:	e, Set Point; W =						
Conducted by:	DAR MAN (to (ga	Marja	Signature: Signature:	Le	1/4	Date:	22/4/2023 W/4/25



# High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET

						File No.	Cal./230505
Equipment No.:	WA-	12-09		Serial No.	2203		
Model No.	TE-	5170		Cal. Date:	5-May-2	23	
Operator:	F	<u>IL</u>					
			Ambient Co	ndition		y ARREST TO	
Temperatur	Temperature, Ta (K) 294.3			a (mmHg)		761.2	
		Orific	ce Transfer Stand	lard Informati	on		
Serial	Serial No. 0993		Slope, mc	0.0574	Intercept,		-0.04292
Last Calibra	ntion Date:	16-Jan-23			$bc = [\Delta H \times (Pa/760)]$		
Next Calibra	ation Date:	16-Jan-24		$Qstd = \{ [\Delta H$	x (Pa/760) x (298/	Ta)] <sup>1/2</sup> -bc} / n	ne
			Calibration of TS	SP Sampler			
Calibration		Orfice				HVS	
Point	ΔH (orifice), in. of water	[ΔH x (Pa/760) x	(298/Ta)] <sup>1/2</sup>	Qstd (CFM) X - axis	ΔW (HVS), in. of water		760) x (298/Ta)] <sup>1/2</sup> <b>Y-axis</b>
1	11.9	3.47		61.23	7.5		2.76
2	9.4	3.09		54.50	6.0		2.47
3	8.6	2.95		52.16	5.7		2.40
4	5.7	2.40		42.60	3.6		1.91
5	3.6	1.91		34.01	2.5		1.59
By Linear Regr Slope , mw = Correlation co	0.0437	ζ  0.9981		Intercept, bw	0.0881		
*If Correlation C	Coefficient < 0.99	0, check and recalibrate.		-			
			Set Point Cal	culation			
From the TSP Fi	eld Calibration C	Curve, take Qstd = 43 CF	M				-
From the Regress	sion Equation, th	e "Y" value according to	i				
Therefore	e, Set Point; W =	mw x Qst $\epsilon$ ( mw x Qstd + bw ) $^2$ x (	d + bw = [ΔW x ( 760 / Pa) x ( Ta/		Ta)] <sup>1/2</sup> 3.82		
Remarks:	Libb Man	4117	Signature:	ha		Date:	51/5/2023
Checked by:	Ho Ca	. chm	Signature:		<del></del>	Date:	5/5/13



# High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET

						File No.	Cal./230623
Equipment No.:	WA	-12-09		Serial No.	2203		
Model No.	TE-	5170		Cal. Date:	23-Jun-2	23	
Operator:	erator: HL						
	· · · · · · · · · · · · · · · · · · ·		Ambient Co	ndition			
Temperatui	re, Ta (K)	293.3	Pressure, P	a (mmHg)		757	
				· · · · · · · · · · · · · · · · · · ·			
		9	ce Transfer Stan			· · · · · · · · · · · · · · · · · · ·	
Serial		0993	Slope, mc	0.0574	Intercept,		-0.04292
Last Calibra		16-Jan-23	_		bc = [ΔH x (Pa/760		
Next Calibra	ation Date:	16-Jan-24		$Qstd = \{ [\Delta H] \}$	x (Pa/760) x (298/	Γa)]"" -bc} / i	nc
			Calibration of T	CD Complex		s et dyse de	NEASTA NEED AND A
	· · · · · · · · · · · · · · · · · · ·	Orfice		or sampler		HVS	
Calibration	ΔH (orifice),	1		Qstd (CFM)	ΔW (HVS), in. of		/760) x (298/Ta)] <sup>1/2</sup>
Point	in. of water	[ΔH x (Pa/760) :	x (298/Ta)] <sup>1/2</sup>	X - axis	water	[	Y-axis
1	12.0	3.48	3	61.42	7.8		2.81
2	9.4	3.0	3	54.44	6.2		2.50
3	8.8	2.98	3	52.70	5.7		2.40
4	5.6	2,3	3	42.19	3.9		1.99
5	3.7	1.94	4	34.44	2.7		1.65
By Linear Regr Slope, mw = Correlation co *If Correlation C	0.0425 oefficient* =	X — 0.999 90, check and recalibrate	·····	Intercept, bw	0.1868		
			Set Point Ca	leniation			
From the TSP Fi	eld Calibration	Curve, take Qstd = 43 Cl	A	icumiton.			***************************************
		he "Y" value according to					
J	• ,	_	$td + bw = [\Delta W x]$	(Pa/760) x (298/	Ta)] <sup>1/2</sup>		
Therefor	e, Set Point; W	$= (mw x Qstd + bw)^2 x$	(760 / Pa) x (Ta	/ 298 ) =	4.01		
Remarks:	ALL COMMANDES OF THE STATE OF T	,					
					10,101,000,000,000,000		
Conducted by:	CE now	War char	Signature;	(X		Date:	23/6/202
Checked by:	<u> </u>	ed com	Signature:	$-\omega$	<u> </u>	Date:	15/6/2023



## RECALIBRATION DUE DATE:

January 16, 2024

# Certificate of Calibration

**Calibration Certification Information** 

Cal. Date: January 16, 2023

Rootsmeter 5/N: 438320

Ta: 293

°K

Operator: Jim Tisch

sch

Pa: 749.0

mm Hg

Calibration Model #:

TE-5025A

Calibrator S/N: 0993

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.3860	3.2	2.00
2	3	4	1	0.9880	6.4	4.00
3	5	6	1	0.8810	8.0	5.00
4	7	8	1	0.8410	8.8	5.50
5	9	10	1	0.6950	12.8	8.00

		Data Tabulat	ion		
Vstd	Qstd	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$		Qa	$\sqrt{\Delta H \Big(  Ta/Pa \Big)}$
(m3)	(x-axis)	(y-axis)	Va	(x-axis)	(y-axis)
0.9981	0.7201	1.4159	0.9957	0.7184	0.8845
0.9938	1.0059	2.0024	0.9915	1.0035	1.2509
0.9917	1.1257	2.2388	0.9893	1.1230	1.3985
0.9906	1.1779	2.3480	0.9883	1.1751	1.4668
0.9853	1.4177	2.8318	0.9829	1.4143	1.7690
	m=	2.02881		m=	1.27041
QSTD	b=	-0.04292	QA	b=	-0.02681
~	r=	0.99998		r=	0.99998

	Calculation	S	
Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	Va=	ΔVol((Pa-ΔP)/Pa)
Qstd= Vstd/ΔTime		Qa=	Va/ΔTime
>2.04.24 (A=4/4.5	For subsequent flow rat	e calculatio	ns:
Qstd=	$1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$	Qa=	$1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b$

	Standard Conditions
Tstd:	298.15 °K
Pstd:	760 mm Hg
	Key
ΔH: calibrator	manometer reading (in H2O)
ΔP: rootsmete	er manometer reading (mm Hg)
Ta: actual abs	olute temperature (°K)
Pa: actual bar	ometric pressure (mm Hg)
b: intercept	
m: slope	

#### RECALIBRATION

US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30

Tisch Environmental, Inc. 145 South Miami Avenue Village of Cleves, OH 45002 www.tisch-env.com

TOLL FREE: (877)263-7610 FAX: (513)467-9009



#### **TEST REPORT**

APPLICANT: Wellab Limited

(EM&A Department)

Room 1808, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.: 37893B
Date of Issue: 2023-03-06
Date Received: 2023-03-03
Date Tested: 2023-03-03
Date Completed: 2023-03-06
Next Due Date: 2024-03-05

Page:

1 of 1

ATTN:

Ms. Meiling Tang

#### **Certificate of Calibration**

#### Item for calibration:

Description

: Sound Level Meter

Manufacturer Model No.

: BSWA : BSWA 308

Serial No.
Equipment No.

: 580005 : WN-01-03

#### **Test conditions:**

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

#### **Test Specifications:**

Performance checking at 94 and 114 dB

#### Methodology:

In-house method, according to manufacturer instruction manual

#### Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE General Manager



WELLAB LIMITED Room 1714, Technology Park 18 On Lai Street, Shatin New Territories, Hong Kong Tel: 2898 7388 Fax: 2898 7076

Website: www.wellab.com.hk

#### **TEST REPORT**

APPLICANT: Wellab Limited

(EM&A Department)

Room 1808, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.:	37893C
Date of Issue:	2023-03-06
Date Received:	2023-03-03
Date Tested:	2023-03-03
Date Completed:	2023-03-06
Next Due Date:	2024-03-05

Page:

1 of 1

ATTN:

Ms. Meiling Tang

#### **Certificate of Calibration**

#### Item for calibration:

Description

: Sound Level Meter

Manufacturer Model No.

: BSWA : BSWA 308 : 580006

Serial No. Equipment No.

: WN-01-04

#### Test conditions:

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

#### **Test Specifications:**

Performance checking at 94 and 114 dB

#### Methodology:

In-house method, according to manufacturer instruction manual

#### Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE

General Manager



#### **TEST REPORT**

APPLICANT: Wellab Limited

(EM&A Department)

Room 1808, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.: 37893D Date of Issue: 2023-03-06 Date Received: 2023-03-03

Date Tested: 2023-03-03

Date Completed: 2023-03-06 Next Due Date: 2024-03-05

Page:

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ATTN:

Ms. Meiling Tang

#### **Certificate of Calibration**

#### Item for calibration:

Description

: Sound Level Meter

Manufacturer

: BSWA : BSWA 308

Model No. Serial No.

: 580007 : WN-01-05

Equipment No.

**Test conditions:** 

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

#### **Test Specifications:**

Performance checking at 94 and 114 dB

#### Methodology:

In-house method, according to manufacturer instruction manual

#### Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



WELLAB LIMITED Room 1714, Technology Park 18 On Lai Street, Shatin New Territories, Hong Kong Tel: 2898 7388 Fax: 2898 7076

Website: www.wellab.com.hk

#### TEST REPORT

APPLICANT: Wellah Limited

(EM&A Department)

Room 1808, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.:	37894
Date of Issue:	2023-03-13
Date Received:	2023-03-10
Date Tested:	2023-03-10
Date Completed:	2023-03-13
Next Due Date:	2024-03-12

Page:

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ATTN:

Ms. Meiling Tang

#### **Certificate of Calibration**

#### Item for calibration:

Description

: Sound Level Meter

Manufacturer

: BSWA

Model No.

: BSWA 308 : 580011

Serial No. Equipment No.

: WN-01-08

#### **Test conditions:**

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

#### **Test Specifications:**

Performance checking at 94 and 114 dB

#### Methodology:

In-house method, according to manufacturer instruction manual

#### **Results:**

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE General Manager



#### TEST REPORT

APPLICANT: Wellab Limited

(EM&A Department)

Room 1808, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

 Test Report No.:
 37894A

 Date of Issue:
 2023-03-13

 Date Received:
 2023-03-10

 Date Tested:
 2023-03-10

 Date Completed:
 2023-03-13

 Next Due Date:
 2024-03-12

Page:

1 of 1

ATTN:

Ms. Meiling Tang

#### **Certificate of Calibration**

#### Item for calibration:

Description

: Sound Level Meter

Manufacturer Model No.

: BSWA : BSWA 308 : 580013

Serial No. Equipment No.

: WN-01-09

#### Test conditions:

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

#### **Test Specifications:**

Performance checking at 94 and 114 dB

#### Methodology:

In-house method, according to manufacturer instruction manual

#### Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



#### TEST REPORT

APPLICANT: Wellab Limited

(EM&A Department)

Room 1808, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

 Test Report No.:
 37894B

 Date of Issue:
 2023-03-13

 Date Received:
 2023-03-10

 Date Tested:
 2023-03-10

 Date Completed:
 2023-03-13

 Next Due Date:
 2024-03-12

Page:

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ATTN:

Ms. Meiling Tang

#### **Certificate of Calibration**

#### Item for calibration:

Description

: Sound Level Meter

Manufacturer Model No. Serial No.

: BSWA 308 : 580017

Equipment No.

: WN-01-10

#### Test conditions:

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

#### **Test Specifications:**

Performance checking at 94 and 114 dB

#### Methodology:

In-house method, according to manufacturer instruction manual

#### **Results:**

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE General Manager



#### **TEST REPORT**

APPLICANT: Wellab Limited

(EM&A Department)

Room 1808, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.:	37163
Date of Issue:	2022-10-02
Date Received:	2022-09-30
Date Tested:	2022-10-02
Date Completed:	2022-10-02

Page:

Next Due Date:

1 of 1

2023-10-01

ATTN:

Ms. Meiling Tang

#### **Certificate of Calibration**

#### Item for calibration:

Description

: Acoustical Calibrator

Manufacturer Model No.

: SVANTEK : SV30A

Serial No.

: 24803

Equipment No.

: N-09-03

#### Test conditions:

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

#### Methodology:

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

#### **Results:**

Sound Pressure Level (1kHz)	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB
At 114 dB SPL	114.0	114.0 ± 0.1 dB

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE



WELLAB LIMITED Room 1701, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong.

Tel: 2898 7388 Fax: 2898 7076 Website: www.wellab.com.hk

#### TEST REPORT

APPLICANT: Wellab Limited

(EM&A Department)

Room 1808, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

 Test Report No.:
 37018A

 Date of Issue:
 2022-08-22

 Date Received:
 2022-08-19

 Date Tested:
 2022-08-19

 Date Completed:
 2022-08-22

 Next Due Date:
 2023-08-21

Page:

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ATTN:

Ms. Meiling Tang

#### **Certificate of Calibration**

#### Item for calibration:

Description

: Acoustical Calibrator

Manufacturer

: SVANTEK

Model No. Serial No. : SV30A : 24791

Equipment No.

: N-09-04

#### Test conditions:

Room Temperatre

: 17-22 degree Celsius

Relative Humidity

: 40-70%

#### Methodology:

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

#### Results:

Sound Pressure Level (1kHz)	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB
At 114 dB SPL	114.0	114.0 ± 0.1 dB

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE



consulting, testing, research

WELL'AB LIMITED Room 1714, Technology Park 18 On Lai Street, Shatin New Territories, Hong Kong Tel: 2898 7388 Fax: 2898 7076 Website: www.wellab.com.hk

#### TEST REPORT

APPLICANT: Wellab Limited

(EM&A Department)

Room 1801, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.: 37163A

Date of Issue: 2022-10-02

Date Received: 2022-09-30

Date Tested: 2022-10-02

Date Completed: 2022-10-02 Next Due Date: 2023-10-01

Page:

1 of 1

ATTN:

Ms. Meiling Tang

#### **Certificate of Calibration**

#### Item for calibration:

Description

: Acoustical Calibrator

Manufacturer

: SVANTEK

Model No.

: SV30A

Serial No.

: 24780

Equipment No.

: N-09-05

#### Test conditions:

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

#### Methodology:

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

#### Results:

Sound Pressure Level (1kHz)	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB
At 114 dB SPL	114.0	114.0 ± 0.1 dB

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

#### APPENDIX D ENVIRONMENTAL MONITORING SCHEDULES

#### Service Contract No. NDO 07/2019

#### Environmental Team for Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po Impact Air Quality and Noise Monitoring Schedule (June 2023)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	,	,	,	1-Jun		3-Jun
4-Jun	5-Jun	6-Jun	7-Jun	8-Jun	9-Jun	10-Jun
	4.1. TOD WA	4.1. TOD VA			4.1. TOD WA	
	1 hr TSP X3 AM2	1 hr TSP X3 AM1			1 hr TSP X3 AM2	
	AIVIZ	AWI			AIVIZ	
	<u>Noise</u> NM8 to NM9,	Noise				
		NM1 to NM7, NM10				
11.7	NM11 to NM14	10.7		12.4		
11-Jun	12-Jun	13-Jun	14-Jun	15-Jun	16-Jun	17-Jun
	1 hr TSP X3			1 hr TSP X3	1 hr TSP X3	
	AM1			1 hr TSP X3 AM2	1 hr TSP X3 AM1	
	<u>Noise</u>			Noise Noise		
	NM1 to NM7, NM10			NM8 to NM9, NM11 to NM14		
18-Jun	19-Jun	20-Jun	21-Jun	NM11 to NM14  22-Jun	23-Jun	24-Jun
10-3411	19-Juli	20-Jun	21-Juli	22-3011	25-Juli	24-Juli
		1 hr TSP X3	1 hr TSP X3			
		AM2	AM1			
					Monitoring of Flora Species	
		NM8 to NM9,	NM1 to NM7, NM10		of Conservation Interest (for Keteleeria fortunei &	
		NM11 to NM14	NMI to NM/, NMIU		Aquilaria sinensis)	
25-Jun	26-Jun	27-Jun	28-Jun	29-Jun		
= 7, 7,						
	1 hr TSP X3 AM2	1 hr TSP X3 AM1			1 hr TSP X3 AM2	
	AM2	AM1			AM2	
	Noise	Noise				
	NM8 to NM9,	NM1 to NM7, NM10				
	NM11 to NM14					

Air Quality Monitoring Station(s) AM1 - Village House, Kong Nga Po AM2 - Village House, Kong Nga Po

Noise Monitoring Station(s)
NM1 - Village House, Sha Ling NM8 - Village House, Sha Ling NM2 - Village House, Sha Ling NM9 - Village House, Kong Nga Po NM3 - Village House No. 248, Sha Ling NM10 - Village House, Kong Nga Po NM4 - Village House, Sha Ling NM11 - Village House, Kong Nga Po NM12 - Village House, Kong Nga Po NM13 - Village House, Kong Nga Po NM14 - Village House, Road Man Kam To Road NM5 - Village House No. 270, Sha Ling NM6 - Village House, Sha Ling NM7 - Village House, Sha Ling

#### Service Contract No. NDO 07/2019

## Environmental Team for Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po Tentative Impact Air Quality and Noise Monitoring Schedule (July 2023)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
•	·	•			·	1-Jul
2-Jul	3-Jul	4-Jul	5-Jul	6-Jul	7-Jul	8-Jul
	1 hr TSP V3			1 br TSP Y3	1 br TSP V3	
	1 hr TSP X3 AM1			1 hr TSP X3 AM2	1 hr TSP X3 AM1	
	<u>Noise</u>			NM8 to NM9,		
	NM1 to NM7, NM10					
9-Jul	10-Jul	11-Jul	12-Jul	NM11 to NM14 13-Jul	14-Jul	15-Jul
9-3111	10-Jui	11-Jul	12-Jul	13-Jul	14-Jul	13-Jul
			1 hr TSP X3	1 hr TSP X3		
			1 hr TSP X3 AM2	1 hr TSP X3 AM1		
			Noise NM8 to NM9,	NM1 to NM7, NM10		
			NM8 to NM9, NM11 to NM14	NM1 to NM7, NM10		
16-Jul	17-Jul	18-Jul	19-Jul	20-Jul	21-Jul	22-Jul
	·	-				
		1 hr TSP X3	1 hr TSP X3			
		AM2	AM1			
		N-:	N-:			
		Noise NM8 to NM9,	NM1 to NM7, NM10			
		NM11 to NM14	141111 10 141117, 1411110			
23-Jul	24-Jul	25-Jul	26-Jul	27-Jul	28-Jul	29-Jul
	4.1 200 214					
	1 hr TSP X3 AM2	1 hr TSP X3 AM1			1 hr TSP X3 AM2	
	AMZ	AMI			Monitoring of Flora Species	
	<u>Noise</u>	<u>Noise</u>			of Conservation Interest	
	NM8 to NM9,	NM1 to NM7, NM10			(for Keteleeria fortunei &	
	NM11 to NM14	·			Aquilaria sinensis)	
30-Jul	31-Jul	·		-		
	1 k., TCD V2					
	1 hr TSP X3 AM1					
	AIVII					
	<u>Noise</u>					
	NM1 to NM7, NM10					

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

Air Quality Monitoring Station(s) AM1 - Village House, Kong Nga Po AM2 - Village House, Kong Nga Po

Noise Monitoring Station(s)
NM1 - Village House, Sha Ling NM8 - Village House, Sha Ling NM2 - Village House, Sha Ling NM9 - Village House, Kong Nga Po NM3 - Village House No. 248, Sha Ling NM10 - Village House, Kong Nga Po NM4 - Village House, Sha Ling NM11 - Village House, Kong Nga Po NM5 - Village House No. 270, Sha Ling NM12 - Village House, Kong Nga Po NM6 - Village House, Sha Ling NM13 - Village House, Kong Nga Po NM7 - Village House, Sha Ling NM14 - Village House, near Man Kam To Road

#### APPENDIX E AIR QUALITY MONITORING RESULTS AND GRAPHICAL PRESENTATION

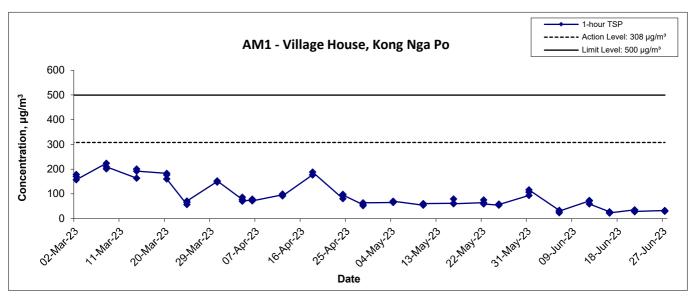
## **Appendix E - 1-hour TSP Monitoring Results**

Location AM1 - Village House, Kong Nga Po				
Date	Time	Weather	Particulate Concentration ( μg/m³)	
6-Jun-23	13:00	Cloudy	33.7	
6-Jun-23	14:00	Cloudy	23.9	
6-Jun-23	15:00	Cloudy	30.2	
12-Jun-23	9:00	Sunny	71.7	
12-Jun-23	10:00	Sunny	73.7	
12-Jun-23	11:00	Sunny	59.2	
16-Jun-23	9:00	Rainy	27.4	
16-Jun-23	10:00	Rainy	22.2	
16-Jun-23	11:00	Rainy	23.2	
21-Jun-23	13:00	Sunny	35.6	
21-Jun-23	14:00	Sunny	27.9	
21-Jun-23	15:00	Sunny	28.9	
27-Jun-23	9:00	Sunny	32.5	
27-Jun-23	10:00	Sunny	29.7	
27-Jun-23	11:00	Sunny	31.0	
		Minimum	22.2	
		Maximum	73.7	
		Average	36.7	

Location AM2 - Village House, Kong Nga Po				
Date	Time	Weather	Particulate Concentration ( µg/m³)	
5-Jun-23	14:50	Sunny	39.9	
5-Jun-23	15:50	Sunny	45.7	
5-Jun-23	16:50	Sunny	43.9	
9-Jun-23	13:00	Cloudy	35.7	
9-Jun-23	14:00	Cloudy	42.1	
9-Jun-23	15:00	Cloudy	38.3	
15-Jun-23	13:00	Rainy	53.5	
15-Jun-23	14:00	Rainy	47.0	
15-Jun-23	15:00	Rainy	44.9	
20-Jun-23	9:00	Cloudy	50.1	
20-Jun-23	10:00	Cloudy	58.6	
20-Jun-23	11:00	Cloudy	44.5	
26-Jun-23	13:00	Cloudy	40.5	
26-Jun-23	14:00	Cloudy	47.7	
26-Jun-23	15:00	Cloudy	41.2	
30-Jun-23	13:00	Fine	24.2	
30-Jun-23	14:00	Fine	34.6	
30-Jun-23	15:00	Fine	35.4	
		Minimum	24.2	
		Maximum	58.6	
		Average	42.7	

WMA20001/App E - 1hr TSP Wellab

#### 1-hr TSP Concentration Levels





Title	Service Contract No. NDO 07/2019
	Environmental Team for Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po
	Graphical Presentation of 1-hour TSP Monitoring Results

Scale		Project No.
	N.T.S	WMA20001
Date		Appendix
	Jun 23	l E



APPENDIX F NOISE MONITORING RESULTS AND GRAPHICAL PRESENTATION

		use, Sha Ling		Uni	t: dB (A) (5-r	min)	Average	Baseline Level
Date	Weather	Wind Speed (m/s)	Time	L <sub>eq</sub>	L <sub>10</sub>	L 90	L <sub>eq</sub>	L <sub>eq</sub>
			13:00	55.6	56.2	50.3	54	- 54
			13:05	54.3	56.7	49.9		
0.1.00	01 1	0.0	13:10	54.8	55.4	50.2	54.0	
6-Jun-23	Cloudy	0.0	13:15	53.7	55.6	50.3	54.2	
			13:20	52.6	53.8	49.7		
			13:25	53.9	54.3	49.8		
			08:30	72.5	75.1	68.5		
	n-23 Sunny	nny 0.0	08:35	71.5	73.9	67.6	70.9	54.9
12-Jun-23			08:40	70.0	71.9	66.4		
12-Juli-23			08:45	68.7	70.8	67.1		
			08:50	71.9	73.9	68.4		
			08:55	69.7	71.0	68.4		
			13:00	64.7	65.5	63.8		
			13:05	64.9	65.7	64.1		
21-Jun-23	Sunny	0.0	13:10	67.0	70.6	62.5	64.9	
21-Juli-23	Suring	0.0	13:15	63.2	64.3	62.0	04.9	
			13:20	64.1	65.3	63.0		
			13:25	64.3	65.9	62.7		
			09:05	64.9	68.2	57.0		
27-Jun-23 S			09:10	65.4	70.3	57.2		
	Sunny	0.0	09:15	66.9	72.4	56.5	63.6	
21-Jun-23	Suring	0.0 –	09:20	57.7	59.3	56.4		
			09:25	58.4	61.0	56.4		
			09:30	60.2	63.5	56.7		

Date	Weather	Wind Speed (m/s)	Time	Uni	t: dB (A) (5-ı	min)	Average	Baseline Leve
24.5		······α σροσα (···//σ)		L <sub>eq</sub>	L <sub>10</sub>	L 90	L <sub>eq</sub>	L <sub>eq</sub>
			13:05	54.8	56.3	48.1		
			13:10	58.5	60.4	49.5		
6-Jun-23	Cloudy	0.0	13:15	56.7	58.6	48.3	58.6	
0-Juli-23	Cloudy	0.0	13:20	60.2	61.9	49.1	36.0	
			13:25	59.8	61.5	49.2		
			13:30	59.3	60.8	48.8		
			08:40	69.0	70.8	66.3	67.5	
		0.0	08:45	67.1	69.1	64.6		56.7
12-Jun-23	Sunny		08:50	67.5	69.2	65.2		
12-Juli-23			08:55	67.2	68.6	65.2		
			09:00	67.2	69.9	64.6		
			09:05	66.6	68.0	63.5		
			13:10	61.5	62.1	60.8		
			13:15	62.0	62.7	61.1		
21-Jun-23	Sunny	0.0	13:20	62.4	64.4	61.2	61.7	
21-Juli-23	Suring	0.0	13:25	61.1	61.7	60.4	01.7	
			13:30	61.0	61.6	60.5		
			13:35	62.0	62.6	60.9		
			09:15	66.4	68.0	60.8		1
27-Jun-23 Sunr			09:20	60.6	61.1	60.2	1	
	Suppy	0.0	09:25	60.3	60.8	59.9	62.1	
	Suring	/ 0.0	09:30	60.0	60.4	59.7	02.1	
			09:35	60.3	61.0	59.8		
			09:40	60.2	60.6	59.7		

Date	Weather	Wind Speed (m/s)	Time	Uni	t: dB (A) (5-ı	min)	Average	Baseline Level
Date	Weather	vvilla opeca (III/3)		L <sub>eq</sub>	L <sub>10</sub>	L 90	L <sub>eq</sub>	L <sub>eq</sub>
			13:45	58.3	59.4	51.9		
			13:50	57.3	58.7	51.5		
6-Jun-23	Cloudy	0.2	13:55	56.8	58.1	51.0	56.8	
0-Juli-23	Cloudy	0.2	14:00	57.1	58.3	51.1	30.0	
			14:05	54.2	55.7	47.6		
			14:10	55.9	56.3	47.9		
			09:20	55.2	58.7	53.0		
	2-Jun-23 Sunny	oy 0.0	09:25	55.9	59.2	52.8		54.5
12_ lun_23			09:30	61.1	66.2	53.1	58.0	
12-Juli-23			09:35	60.6	66.2	53.3		
			09:40	55.0	57.1	53.0		
			09:45	55.4	57.0	53.2		
			13:55	54.1	56.5	49.9		
			14:00	55.3	58.7	49.7		
21-Jun-23	Sunny	0.0	14:05	52.9	55.2	48.8	53.1	
21-Juli-23	Suring	0.0	14:10	52.3	55.3	48.5	55.1	
			14:15	52.5	55.9	47.6		
			14:20	49.7	51.2	47.9		
			09:55	48.8	50.2	46.2		1
			10:00	48.6	50.0	46.8		
27-Jun-23	Sunny	0.0	10:05	50.7	53.2	48.2	53.3	
21-Juli-23	Suring	0.0	10:10	58.9	63.0	48.8		
			10:15	51.0	52.9	48.7		
			10:20	50.8	51.4	48.5		

Date	Weather	Wind Speed (m/s)	Time	Uni	t: dB (A) (5-ı	min)	Average	Baseline Leve
24.5				L <sub>eq</sub>	L <sub>10</sub>	L 90	L <sub>eq</sub>	L <sub>eq</sub>
			14:35	62.5	63.2	53.9		
			14:40	63.4	65.6	54.7		
6-Jun-23	Cloudy	0.5	14:45	62.8	64.9	54.3	63.4	<b>-</b> 58.7
0-3411-23	Cloudy	0.5	14:50	65.7	67.2	55.1	58.6	
			14:55	62.5	64.3	54.4		
			15:00	62.6	64.8	54.7		
			10:05	57.1	59.4	53.4		
		0.4	10:10	61.4	60.5	53.8		
12-Jun-23	Sunny		10:15	59.2	60.0	54.6		
12-Juli-25			10:20	57.7	60.3	54.3		
			10:25	55.9	57.8	53.1		
			10:30	57.8	60.3	53.0		
			14:45	55.2	57.5	52.4		
			14:50	58.7	61.3	53.6		
21-Jun-23	Sunny	0.2	14:55	53.9	55.6	52.1	56.4	
21-Juii-23	Suring	0.2	15:00	57.6	60.1	52.0	30.4	
			15:05	55.6	57.1	53.4		
		15:10	55.8	57.4	53.5			
			10:45	57.9	60.2	54.1		
27-Jun-23 Sunnv		10:50	56.1	58.5	53.0			
	Suppy	0.0	10:55	56.6	58.6	53.7	56.8	
21-Juil-23	Sunny	0.0	11:00	55.9	58.2	53.6	50.0	
			11:05	57.4	60.2	54.0		
			11:10	56.7	59.5	52.9		

Date	Weather	Wind Speed (m/s)	Time	Uni	t: dB (A) (5-ı	min)	Average	Baseline Level
Duio	Wodinor	1 ( ' ' )		L <sub>eq</sub>	L <sub>10</sub>	L 90	L <sub>eq</sub>	L <sub>eq</sub>
			13:55	56.4	58.1	48.3		
			14:00	58.6	60.4	49.7		
6-Jun-23	Cloudy	0.3	14:05	56.7	58.4	48.4	57.1	
0-Juli-23	Cloudy	0.5	14:10	55.2	57.5	48.0	37.1	
			14:15	56.3	57.9	48.1		
			14:20	58.6	59.7	49.1		
			10:00	63.2	65.8	54.2		
	2-Jun-23 Sunny	y 0.0	10:05	60.1	63.2	53.9		57.0
12_lun_23			10:10	61.8	64.8	57.8	61.8	
12-3411-23			10:15	61.5	62.7	58.2		
			10:20	61.2	63.7	53.9		
			10:25	62.4	64.5	58.5		
			14:05	56.0	59.1	44.5		
			14:10	55.5	57.5	44.7		
21-Jun-23	Sunny	0.0	14:15	48.8	50.6	43.8	54.8	
21-Jun-23	Suring	0.0	14:20	58.2	60.3	49.6	34.0	
			14:25	53.6	56.7	45.5		
			14:30	50.2	52.0	46.6		
			10:00	62.4	65.3	58.0		1
			10:05	63.5	66.8	57.2		
27-Jun-23	Sunny	0.0	10:10	63.8	67.3	58.5	64.0	
21-Juli-23	Suring	0.0 <u> </u>	10:15	61.5	64.4	56.9		
			10:20	64.3	67.5	58.7		
			10:25	66.7	70.5	58.8		

Date	Weather	Wind Speed (m/s)	Time	Uni	Unit: dB (A) (5-min)			Baseline Level
24.0		(,e)		L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub>
			15:30	66.8	69.3	60.7		
			15:35	70.1	72.4	63.1		
6-Jun-23	Cloudy	0.0	15:40	67.9	70.6	62.4	68.5	- 56.0
0-3411-23	-Jun-23 Cloudy	0.0	15:45	70.6	72.8	62.7	00.5	
		_	15:50	65.7	67.4	60.5		
			15:55	67.8	70.3	61.9		
			10:45	62.7	64.9	54.4		
		0.0	10:50	63.5	65.1	55.0		
12-Jun-23	Sunny		10:55	58.8	60.9	55.2	61.3	
12-Juii-23			11:00	61.0	63.0	55.4		
			11:05	60.4	62.7	56.2		
			11:10	59.2	62.1	55.7		
			14:40	57.6	60.0	51.6		
			14:45	54.3	57.9	50.1		
21-Jun-23	Sunny	0.0	14:50	55.5	58.5	51.3	57.9	
21-Juli-23	Suring	0.0	14:55	55.7	59.4	50.3	37.9	
			15:00	59.6	62.8	50.7		
			15:05	61.0	61.7	50.1		
			10:40	61.0	64.4	53.4		
27-Jun-23			10:45	60.4	63.7	53.3		
	Sunny	0.0	10:50	60.1	63.4	53.1	60.7	
21-Juli-23	Suring	0.0	10:55	60.8	63.5	54.3	00.7	
			11:00	60.0	63.6	52.9		
		Ī	11:05	61.6	65.2	53.9		

Date	Weather	Wind Speed (m/s)	Time	Uni	t: dB (A) (5-r	min)	Average	Baseline Level
Duto	Weather	willia opeca (III/3)		L <sub>eq</sub>	L <sub>10</sub>	L 90	L <sub>eq</sub>	L <sub>eq</sub>
			14:45	50.8	53.2	43.1		
			14:50	50.3	51.9	42.0		
6-Jun-23	Cloudy	0.0	14:55	50.2	52.3	42.3	48.6	
0-Juli-23	Cloudy	0.0	15:00	45.6	47.8	41.9	40.0	
			15:05	45.5	47.5	41.8		
			15:10	45.4	46.3	41.5		
			10:50	54.8	56.8	49.3		
	2-Jun-23 Sunny	ny 0.0	10:55	54.0	56.8	47.4	- 59.9	49.8
12_ lun_23			11:00	58.9	62.6	49.7		
12-3u11-23			11:05	58.9	63.2	47.3		
			11:10	58.9	63.1	49.4		
			11:15	64.7	70.9	49.6		
			15:20	61.0	62.9	58.8		
			15:25	59.0	59.6	57.5		
21-Jun-23	Sunny	0.0	15:30	56.8	59.1	55.2	57.8	
21-Jun-25	Suring	0.0	15:35	57.1	58.8	53.0	37.0	
			15:40	55.1	57.0	53.6		
			15:45	53.5	54.8	50.8		
			11:20	54.9	55.6	54.4		
27-Jun-23 Su			11:25	55.9	57.6	54.5		
	Sunny	0.0	11:30	56.9	58.8	54.9	55.5	
21-Jun-23	Suring	0.0	11:35	54.9	55.7	54.4		
			11:40	54.9	55.5	54.4		
			11:45	55.4	56.6	54.5		

Date	Weather	Wind Speed (m/s)	Time	Uni	t: dB (A) (5-r	min)	Average	Baseline Leve
2410				L <sub>eq</sub>	L <sub>10</sub>	L 90	L <sub>eq</sub>	L <sub>eq</sub>
			14:40	57.6	60.6	51.3		
			14:45	57.9	64.3	49.4		
5-Jun-23	Suppy	Sunny 0.1	14:50	53.9	56.4	48.7	56.6	57.6
3-Juli-23	Suring		14:55	53.7	56.2	48.9	30.0	
			15:00	57.7	61.7	50.0		
			15:05	57.1	58.4	48.5		
			11:00	54.9	57.0	48.8		
		0.0	11:05	54.0	57.7	48.4	52.7 -	
15-Jun-23	Cloudy		11:10	51.0	53.1	46.6		
13-3411-23			11:15	50.0	52.2	46.4		
			11:20	51.4	53.3	46.7		
			11:25	52.7	53.0	45.6		
			09:15	53.0	55.1	47.5		
			09:20	52.3	54.6	45.7		
20-Jun-23	Cloudy	0.0	09:25	52.9	53.6	45.7	51.6	
20-Juli-23	Cloudy	0.0	09:30	49.0	51.1	46.5	31.0	
			09:35	49.8	49.9	46.5		
			09:40	51.3	53.1	47.3		
			13:50	53.7	54.7	45.5		
26-Jun-23 Cloudy			13:55	57.5	62.3	45.6		
	Cloudy	0.0	14:00	60.5	62.8	47.6	56.0	
20-Juii-23	Cloudy	0.0	14:05	54.0	56.4	46.8	0.00	
			14:10	48.7	50.7	46.2		
			14:15	50.7	53.0	46.0		

Date	Weather	Wind Speed (m/s)	Time	Uni	t: dB (A) (5-ı	min)	Average	Baseline Level
Date	Wedner	willia opeca (ili/3)		L <sub>eq</sub>	L <sub>10</sub>	L 90	L <sub>eq</sub>	L <sub>eq</sub>
			15:35	60.9	62.8	58.6		
			15:40	61.0	63.4	58.1		
5-Jun-23	Sunny	0.3	15:45	63.2	65.8	58.4	62.6	
5-Juli-25	Suring	0.3	15:50	62.5	65.6	57.8	02.0	
			15:55	63.6	67.1	57.2		
			16:00	63.5	67.5	56.8		
			11:25	59.0	60.9	55.6		
	5-Jun-23 Cloudy	udy 0.1	11:30	56.6	58.7	55.3		55.9
15 Jun 23			11:35	56.2	57.8	55.1	56.7	
13-3411-23			11:40	56.0	57.3	55.0		
			11:45	55.3	56.0	54.8		
			11:50	56.2	57.1	55.0		
			09:00	55.5	58.2	52.7		
			09:05	52.8	53.7	51.3		
20-Jun-23	Cloudy	0.0	09:10	54.1	55.6	51.9	54.6	
20-Juli-23	Cloudy	0.0	09:15	53.9	55.5	51.8	54.0	
			09:20	55.6	58.3	52.5		
			09:25	55.3	57.5	52.0		
			14:30	59.8	61.6	57.0		
26-Jun-23			14:35	60.3	61.4	57.5		
	Cloudy	0.0	14:40	62.4	63.1	58.2	60.0	
20-Juli-23	Cloudy	0.0	14:45	59.9	61.0	52.9		
			14:50	58.2	60.0	55.2		
			14:55	58.2	60.3	53.6		

Date	Weather	Wind Speed (m/s)	Time	Uni	t: dB (A) (5-r	min)	Average	Baseline Level	
Date	Weather	villa opeca (ilii/o)	711110	L <sub>eq</sub>	L <sub>10</sub>	L 90	L <sub>eq</sub>	L <sub>eq</sub>	
			16:00	54.6	56.9	50.3	· · · · · · · · · · · · · · · · · · ·		
			16:05	53.9	55.6	50.1			
6-Jun-23	Cloudy	0.0	16:10	55.7	56.2	50.6	55.7		
0-Jun-23	Cloudy	0.0	16:15	55.6	56.4	50.8	55.7		
			16:20	57.4	59.2	51.3			
			16:25	56.2	57.5	50.8			
				11:30	56.9	59.0	54.9		1
		ny 0.0	11:35	59.6	63.1	55.9	- 58.1	52.8	
12-Jun-23	Sunny		11:40	59.3	63.2	56.3			
12-3411-23			11:45	56.9	58.2	55.4			
			11:50	57.6	59.6	55.6			
			11:55	57.5	59.7	55.0			
			15:30	56.5	59.1	53.1			
			15:35	56.5	59.2	53.1			
21-Jun-23	Sunny	0.0	15:40	57.1	60.4	52.9	57.7		
21-Juli-23	Suring	0.0	15:45	58.8	61.7	53.9	31.1		
			15:50	59.4	62.7	54.8			
			15:55	56.8	59.0	54.3			
			11:30	60.4	61.1	59.7			
			11:35	60.0	60.8	59.3			
27-Jun-23	Sunny	0.0	11:40	60.3	61.9	59.3	50.0		
21-Juli-23	Suring	0.0	11:45	59.7	60.2	59.3	59.9		
			11:50	59.8	60.8	59.0			
			11:55	58.7	59.5	57.7			

Location NM1	1 - Village H	ouse, Kong Nga Po	)					
Date V	Weather	Wind Speed (m/s)	Time	Unit: dB (A) (5-min)			Average	Baseline Level
				L <sub>eq</sub>	L <sub>10</sub>	L 90	L <sub>eq</sub>	L <sub>eq</sub>
			15:45	51.6	54.7	47.1	51.1	46.4
			15:50	51.9	53.7	48.5		
5-Jun-23	Sunny	0.0	15:55	51.8	53.9	47.2		
5-Juli-25	Suring	0.0	16:00	50.3	53.1	45.4		
			16:05	50.7	52.6	48.4		
			16:10	49.7	51.5	47.4		
	Cloudy	0.0	11:05	62.9	69.2	54.0	55.9	
			11:10	51.2	55.2	47.2		
15-Jun-23			11:15	47.9	48.9	46.7		
13-3411-23			11:20	47.2	48.2	46.4		
			11:25	48.4	49.5	46.6		
			11:30	48.9	49.6	48.1		
	Sunny	0.0	10:00	48.3	49.1	40.8	46.5	40.4
			10:05	44.9	47.0	42.1		-
20-Jun-23			10:10	46.0	48.5	42.3		
20-Juli-23			10:15	46.4	47.6	44.0		
			10:20	46.3	48.1	42.3		
			10:25	46.2	48.0	42.1		
<u> </u>	Cloudy	0.0	15:15	54.7	55.7	53.4	55.6	
26-Jun-23			15:20	57.0	57.9	55.0		
			15:25	55.9	56.8	55.0		
20-Juli-23			15:30	55.2	57.1	53.3		
			15:35	55.3	56.8	53.9		
			15:40	55.3	56.9	53.9		

Date	Weather	Wind Speed (m/s)	Time	Unit: dB (A) (5-min)			Average	Baseline Leve
				L <sub>eq</sub>	L <sub>10</sub>	L 90	L <sub>eq</sub>	L <sub>eq</sub>
			14:50	57.2	58.9	55.8	57.2	54.7
			14:55	57.2	57.5	55.3		
5-Jun-23	Sunny	0.0	15:00	57.1	58.1	55.5		
J-Juli-23	Suring	0.0	15:05	57.3	58.2	56.1		
			15:10	57.5	58.4	56.5		
			15:15	57.1	58.0	56.3		
		0.0	13:00	56.3	56.9	55.4	58.5	
			13:05	58.6	60.7	56.4		
15-Jun-23	Cloudy		13:10	58.2	61.7	57.9		
15-Juli-23	Cloudy		13:15	61.2	62.6	58.0		
			13:20	57.5	60.5	56.2		
			13:25	57.1	60.6	56.3		
	Sunny	0.0	11:20	53.4	55.8	43.7	55.6	
			11:25	57.6	60.7	46.3		
20-Jun-23			11:30	56.6	58.1	44.7		
20-Juli-23			11:35	58.2	61.4	46.5		
			11:40	51.8	53.7	42.5		
			11:45	51.3	52.9	42.3		
26-Jun-23	Sunny	0.0	13:00	59.8	62.0	57.6	60.4	
			13:05	60.3	62.0	58.1		
			13:10	59.8	61.1	57.9		
			13:15	61.0	61.7	59.9		
			13:20	60.8	61.4	60.0		
			13:25	60.8	61.2	59.9		

Date V	Weather	Wind Speed (m/s)	Time	Unit: dB (A) (5-min)			Average	Baseline Leve
				L <sub>eq</sub>	L <sub>10</sub>	L 90	L <sub>eq</sub>	L <sub>eq</sub>
			16:30	53.2	54.0	52.4	56.9	61.3
			16:35	54.5	56.2	52.1		
5-Jun-23	Sunny	0.0	16:40	58.0	60.2	54.6		
5-Jun-23	Sunny	0.0	16:45	58.7	59.5	57.6		
			16:50	58.6	59.3	57.0		
			16:55	55.5	56.7	54.6		
	Cloudy	0.3	13:10	47.4	49.6	43.7	50.0	
			13:15	49.2	51.6	45.1		
15-Jun-23			13:20	48.4	50.9	44.6		
13-3411-23			13:25	50.5	51.6	49.2		
			13:30	50.5	52.0	48.7		
			13:35	52.2	56.7	43.0		
	Sunny	0.0	10:10	44.9	47.1	42.9	48.2	
			10:15	45.0	46.9	42.9		
20 1 22			10:20	48.1	51.2	43.9		
20-Jun-23			10:25	44.5	46.4	42.6		
			10:30	53.2	56.5	44.4		
			10:35	45.3	47.5	43.7		
26-Jun-23	Cloudy	0.0	16:25	55.2	59.3	46.6	50.8	
			16:30	49.2	51.6	46.3		
			16:35	49.1	51.3	46.8		
			16:40	49.2	51.2	46.8		
			16:45	49.3	51.5	46.7		
			16:50	48.0	50.0	45.8		

Date We	Weather	Wind Speed (m/s)	Time	Unit: dB (A) (5-min)			Average	Baseline Leve
				L <sub>eq</sub>	L <sub>10</sub>	L 90	L <sub>eq</sub>	L <sub>eq</sub>
			17:10	54.1	53.3	42.9	56.1	59.6
			17:15	53.4	54.4	44.7		
5-Jun-23	Sunny	0.0	17:20	57.8	59.1	45.1		
o-Jun-23	Suring	0.0	17:25	54.8	55.3	53.1		
			17:30	59.6	65.0	49.1		
			17:35	52.5	53.3	51.8		
		0.0	13:00	61.6	64.1	49.4	59.4	
			13:05	53.3	55.7	48.4		
15-Jun-23	Cloudy		13:10	55.6	57.1	54.0		
15-Juli-25 Ci	Cloudy		13:15	61.3	64.2	58.7		
			13:20	60.1	62.4	59.2		
			13:25	59.3	60.0	58.7		
	Sunny	0.0	10:55	57.8	61.2	48.1	59.8	
			11:00	62.5	64.8	50.9		
20-Jun-23			11:05	63.8	66.4	57.2		
20-Juli-23			11:10	58.0	61.3	49.2		
			11:15	50.4	53.6	46.9		
			11:20	53.6	55.1	47.3		
26-Jun-23	Cloudy	0.0	10:45	51.7	54.9	46.2	56.3	
			10:50	52.1	55.1	47.1		
			10:55	52.3	55.9	46.0		
			11:00	62.2	69.7	44.7		
			11:05	52.7	56.8	43.8		
			11:10	53.3	56.6	46.6		

#### **Noise Levels** NM1 NM1 - Village House, Sha Ling Baseline NL, 54.9dB(A) Limit Level, 75.0 dB(A) 80 75 Construction Noise Level Leq dB (A) (30-min) 65 60 55 50 45 40 02.Mar.23 11.Mar.23 OANAY 23 09-JNU 23 22.1184.23 18-Jun. 25 Date NM2 - Village House, Sha Ling Baseline NL, 56.7dB(A) Limit Level, 75.0 dB(A) 80 75 Construction Noise Level Leq dB (A) (30-min) 70 65 60 55 50 45 40 13/11/8/23 27.Jun.23 OAMAY 23 22.11.84.23 Date NM3 NM3 - Village House No.248, Sha Ling Baseline NL, 54.5dB(A) Limit Level, 75.0 dB(A) 80 75 Construction Noise Level Leq dB (A) (30-min) 70 65 60 55 50 45 40 OAMAY 23 Date Title Service Contract No. NDO 07/2019 Scale Project No. Environmental Team for Site Formation and Infrastructure Works for WMA20001 N.T.S WELLAB 匯力 Police Facilities in Kong Nga Po consulting . testing . research **Graphical Presentation of Construction Noise Monitoring** Date Appendix Jun 23 F

Results

#### **Noise Levels** NM4 NM4 - Village House, Sha Ling Baseline NL, 58.7dB(A) Limit Level, 75.0 dB(A) 80 75 Construction Noise Level Leq dB (A) (30-min) 65 60 55 50 45 40 02.Mar.23 11.Mar.23 OANAY 23 09-1111-23 22.1184.23 18-Jun 23 Date NM5 - Village House No.270, Sha Ling Baseline NL, 57.0dB(A) Limit Level, 75.0 dB(A) 80 75 Construction Noise Level Leq dB (A) (30-min) 70 65 60 55 50 45 40 22.1104.23 OAMAY 23 Date NM6 - Village House, Sha Ling Baseline NL. 56.0dB(A) 80 75 Construction Noise Level Leq dB (A) (30-min) 70 65 60 55 50 45 40 J2-Vary2 OAMBY 23 Date Service Contract No. NDO 07/2019 Title Scale Project No. Environmental Team for Site Formation and Infrastructure Works for N.T.S WMA20001 WELLAB 匯力 Police Facilities in Kong Nga Po consulting . testing . research **Graphical Presentation of Construction Noise Monitoring** Date Appendix Jun 23 F Results

#### **Noise Levels** - NM7 NM7 - Village House, Sha Ling - Baseline NL, 49.8dB(A) Limit Level, 75.0 dB(A) 80 75 Construction Noise Level Leq dB (A) (30-min) 65 60 55 50 45 40 1.Mar.23 02.Mar.23 OANAY 23 22.182423 Date NM8 - Village House, Sha Ling Baseline NL, 57.6dB(A) Limit Level, 75.0 dB(A) 80 75 Construction Noise Level Leq dB (A) (30-min) 70 65 60 55 50 45 40 28-Mar.23 OSWAY, S Date NM9 - Village House, Kong Nga Po Baseline NL, 55.9dB(A) Limit Level, 75.0 dB(A) 80 Construction Noise Level Leq dB (A) (30-min) 75 70 65 60 55 50 45 40 03-W87.23 + 12.May 23 27.1824.23 Date Service Contract No. NDO 07/2019 Title Scale Project No. Environmental Team for Site Formation and Infrastructure Works for WMA20001 N.T.S

Title Service Contract No. NDO 07/2019
Environmental Team for Site Formation and Infrastructure Works for Police Facilities in Kong Nga Po
Graphical Presentation of Construction Noise Monitoring Results

Scale Project No.

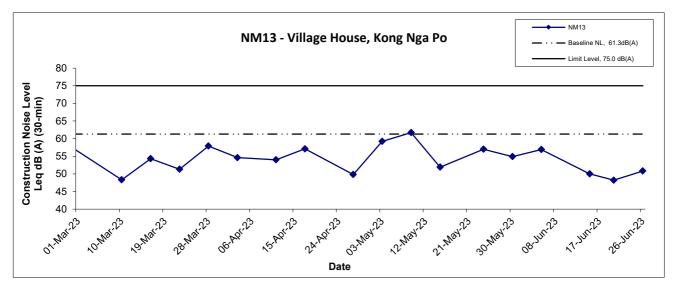
N.T.S WMA20001

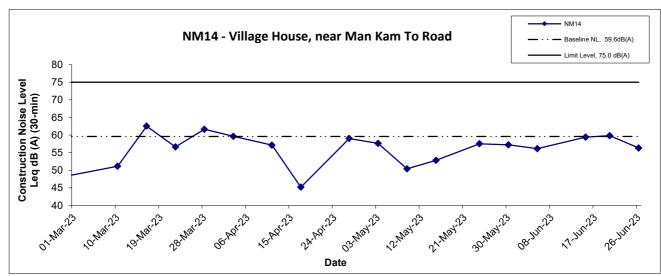
WELLAB 

Tonsulting a testing a research

#### **Noise Levels** - NM10 NM10 - Village House, Kong Nga Po - Baseline NL, 52.8dB(A) Limit Level, 75.0 dB(A) 80 75 Construction Noise Level Leq dB (A) (30-min) 65 60 55 50 45 40 02.Mar.23 11.Mar.23 OANAY 23 22.11.84.23 09rJun 23 18-Jun-23 Date NM11 NM11 - Village House, Kong Nga Po Baseline NL, 46.4dB(A) Limit Level, 75.0 dB(A) 80 75 Construction Noise Level Leq dB (A) (30-min) 70 65 60 55 50 45 40 28-Mar.23 30.May 23 03,1184,23 24-201-23 Date NM12 NM12 - Village House, Kong Nga Po Baseline NL, 54.7dB(A) Limit Level, 75.0 dB(A) 80 Construction Noise Level Leq dB (A) (30-min) 75 70 65 60 55 50 45 40 03-W87.23 + 27.1824.23 Date Title Service Contract No. NDO 07/2019 Scale Project No. Environmental Team for Site Formation and Infrastructure Works for WMA20001 N.T.S WELLAB 匯力 Police Facilities in Kong Nga Po consulting . testing . research **Graphical Presentation of Construction Noise Monitoring** Date Appendix Jun 23 F Results

#### **Noise Levels**





Title	Service Contract No. NDO 07/2019	Scale		Project No.	
	Environmental Team for Site Formation and Infrastructure Works for		N.T.S	WMA20001	VA/ELL AD REL
	Police Facilities in Kong Nga Po		14.1.0	***************************************	WELLAB匯力
	Graphical Presentation of Construction Noise Monitoring	Date		Appendix	consulting . testing . research
	Results		Jun 23	F	
1				Ī	

## APPENDIX G WEATHER CONDITION

Appendix G – General Weather Conditions during the Monitoring Period (June 2023)

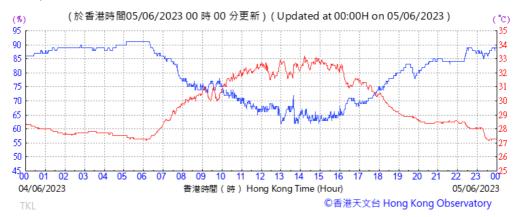
Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
1 June 2023	29.2	79	6
2 June 2023	30.7	76	-
3 June 2023	30.8	76	0.6
4 June 2023	30	81	5.1
5 June 2023	29.7	79	4.8
6 June 2023	28.4	87	31.1
7 June 2023	28.5	88	27.1
8 June 2023	29.4	82	2.6
9 June 2023	29	83	16.8
10 June 2023	29.5	79	0.3
11 June 2023	29.2	83	25.4
12 June 2023	30.2	77	0.2
13 June 2023	29.8	81	31.8
14 June 2023	27.7	88	62.8
15 June 2023	27.4	91	41.5
16 June 2023	26.4	92	41.7
17 June 2023	26.2	94	89.9

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

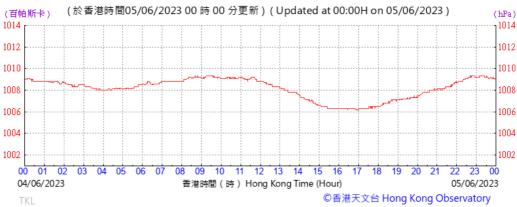
-1				Monthly EM&A Report
	Date	Mean Air Temperature (°C)	Mean Relative	Precipitation
	Dute	wican in Temperature (C)	Humidity (%)	(mm)
	18 June 2023	28	89	35.8
	19 June 2023	29.1	83	10.2
	20 June 2023	30	80	2.3
	21 June 2023	30.2	79	1.9
	22 June 2023	30.2	77	0.6
	23 June 2023	30	80	2.3
	24 June 2023	29.1	85	8.2
	25 June 2023	29.4	83	13
	26 June 2023	29.4	83	11.4
	27 June 2023	30.1	80	Trace
	28 June 2023	28.8	86	5.4
	29 June 2023	29.5	84	0.9
	30 June 2023	29.8	82	11.2

<sup>\*</sup> The above information was extracted from the daily weather summary by Hong Kong Observatory.

#### Temperature/Humidity:



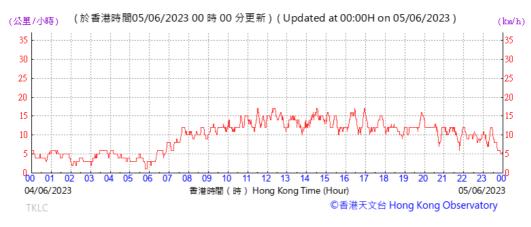
Pressure:



Wind Direction:



Wind Speed:

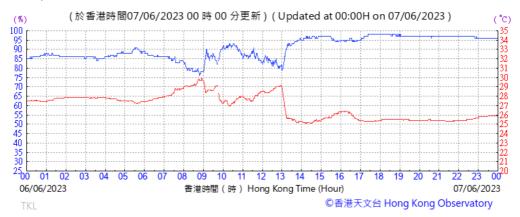


Title Service Contract No. NDO 07/2019
Environmental Team for Site Formation and Infrastructure
Works for Police Facilities in Kong Nga Po

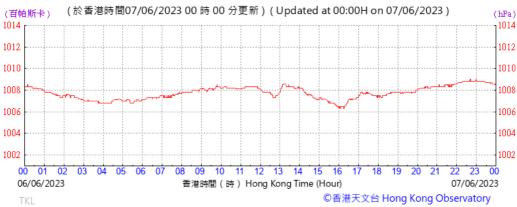
Meteorological Data at Ta Kwu Ling Weather Station

Scale		Project
	N.T.S	<sup>No.</sup> WMA20001
Date		Appendix
	Jun 23	G

### Temperature/Humidity:



#### Pressure:



#### Wind Direction:



#### Wind Speed:

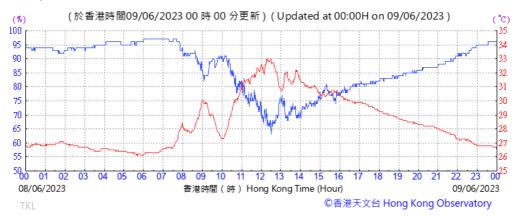


Title	Service Contract No. NDO 07/2019
	Environmental Team for Site Formation and Infrastructure
	Works for Police Facilities in Kong Nga Po
	Meteorological Data at Ta Kwu Ling Weather Station

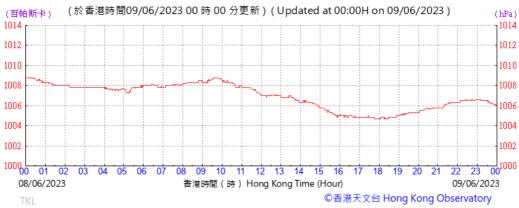
Scale		Project
	N.T.S	<sup>No.</sup> WMA20001
Date		Appendix
	Jun 23	G

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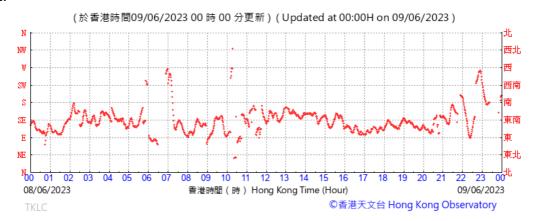
### Temperature/Humidity:



#### Pressure:



#### Wind Direction:



#### Wind Speed:

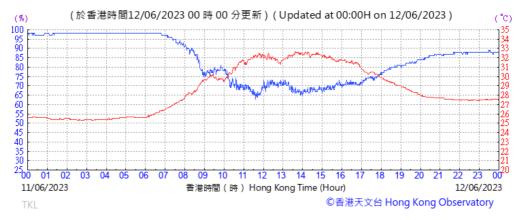


Tit	tle Service Contract No. NDO 07/2019
	Environmental Team for Site Formation and Infrastructure
	Works for Police Facilities in Kong Nga Po
	Meteorological Data at Ta Kwu Ling Weather Station

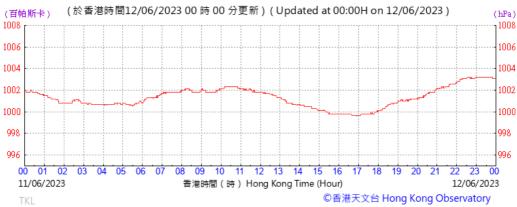
Ī	Scale		Project
		N.T.S	<sup>No.</sup> WMA20001
Ī	Date		Appendix
		Jun 23	G

consulting . testing . research

#### Temperature/Humidity:



Pressure:



Wind Direction:



Wind Speed:

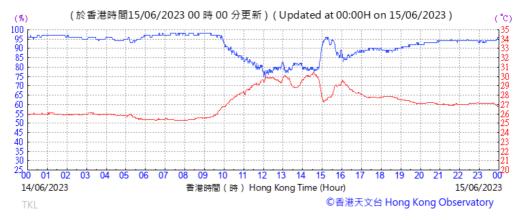


Title Service Contract No. NDO 07/2019
Environmental Team for Site Formation and Infrastructure
Works for Police Facilities in Kong Nga Po

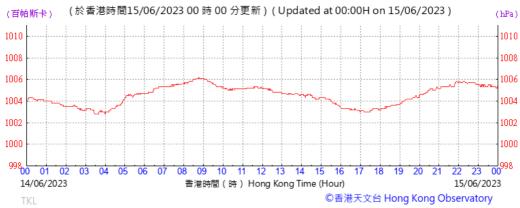
Meteorological Data at Ta Kwu Ling Weather Station

Scale		Project	Γ
	N.T.S	<sup>No.</sup> WMA20001	
Date		Appendix	
	Jun 23	G	

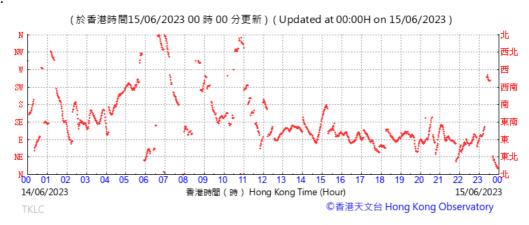
### Temperature/Humidity:



Pressure:



Wind Direction:



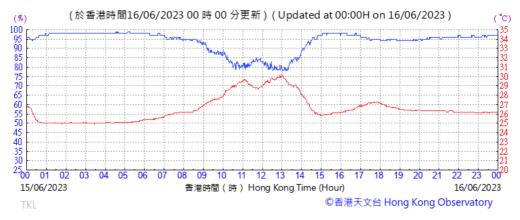
Wind Speed:



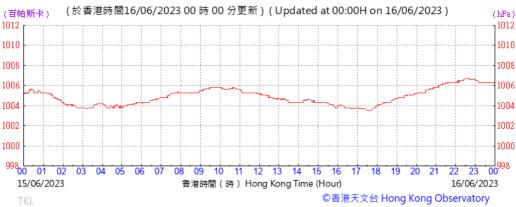
Title	Service Contract No. NDO 07/2019
	Environmental Team for Site Formation and Infrastructure
	Works for Police Facilities in Kong Nga Po
	Meteorological Data at Ta Kwu Ling Weather Station

Scale		Project	
	N.T.S	No. WMA20001	
Date		Appendix	
	Jun 23	G	

#### Temperature/Humidity:



Pressure:



Wind Direction:



Wind Speed:

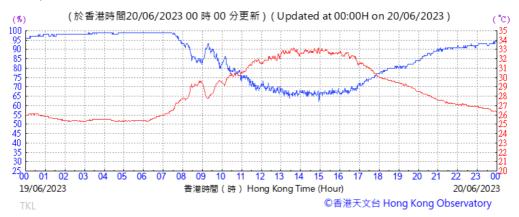


Title Service Contract No. NDO 07/2019
Environmental Team for Site Formation and Infrastructure
Works for Police Facilities in Kong Nga Po

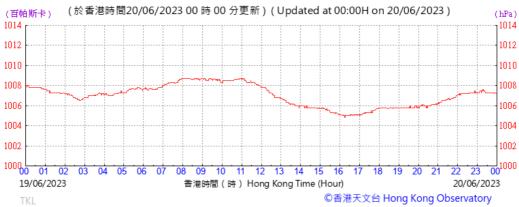
Meteorological Data at Ta Kwu Ling Weather Station

Scale		Project	Γ
	N.T.S	<sup>No.</sup> WMA20001	
Date		Appendix	
	Jun 23	G	

### Temperature/Humidity:



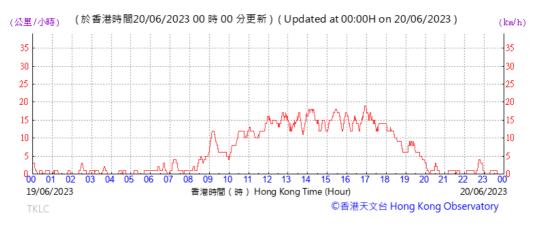
#### Pressure:



#### Wind Direction:

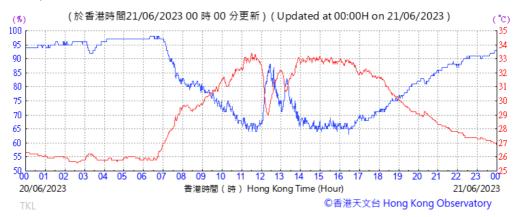


#### Wind Speed:

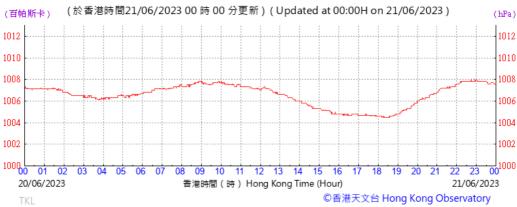


Environmental Team for Site Formation and Infrastructure  Works for Police Facilities in Kong Nga Po		No. WMA20001	WELLAB 匯力
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Meteorological Data at Ta Kwu Ling Weather Station	Jun 23	G	

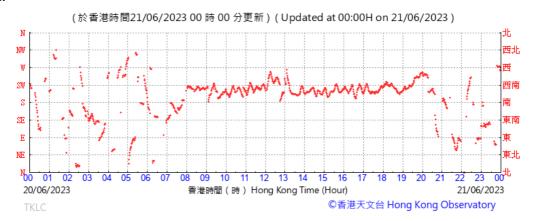
### Temperature/Humidity:



#### Pressure:



#### Wind Direction:



#### Wind Speed:

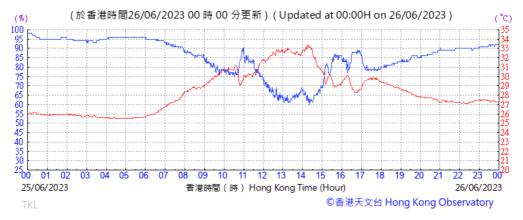


Title	Service Contract No. NDO 07/2019
	Environmental Team for Site Formation and Infrastructure
	Works for Police Facilities in Kong Nga Po
	Meteorological Data at Ta Kwu Ling Weather Station

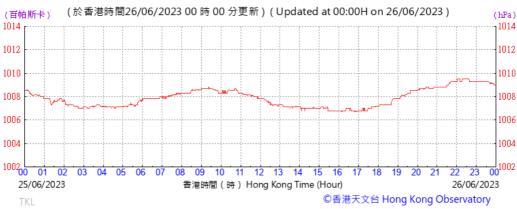
Scale		Project
	N.T.S	<sup>No.</sup> WMA20001
Date		Appendix
	Jun 23	G

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### Temperature/Humidity:



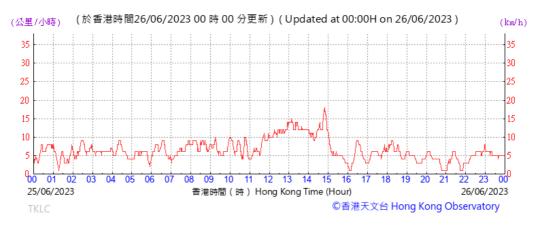
#### Pressure:



#### Wind Direction:



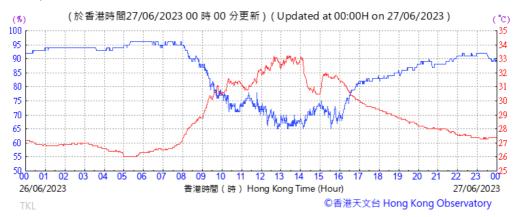
#### Wind Speed:



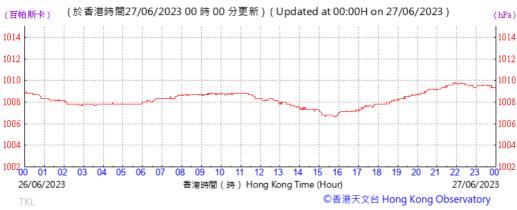
Environmental Team for Site Formation and Infrastructure  Works for Police Facilities in Kong Nga Po	N.T.S	No. WMA20001	WELLAB匯力
	Date	Appendix	consulting . testing . research
Meteorological Data at Ta Kwu Ling Weather Station	Jun 23	G	

### 27 May 2023

### Temperature/Humidity:



#### Pressure:



#### Wind Direction:



#### Wind Speed:



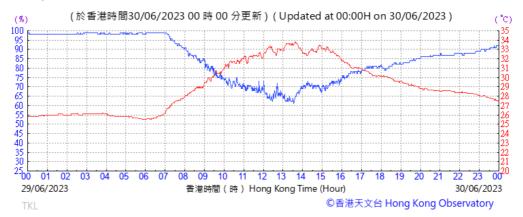
Title	Service Contract No. NDO 07/2019
	Environmental Team for Site Formation and Infrastructure
	Works for Police Facilities in Kong Nga Po
	Meteorological Data at Ta Kwu Ling Weather Station

Scale		Project
	N.T.S	<sup>No.</sup> WMA20001
Date		Appendix
	Jun 23	G

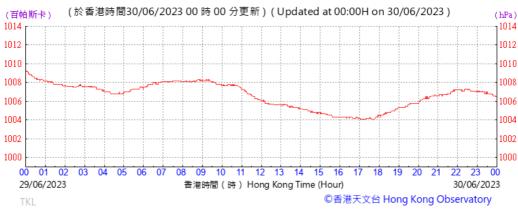


### 30 May 2023

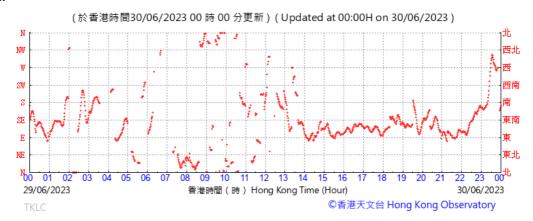
#### Temperature/Humidity:



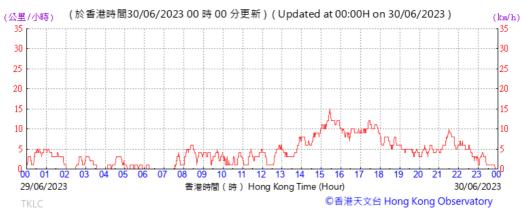
Pressure:



Wind Direction:



Wind Speed:



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

Meteorological Data at Ta Kwu Ling Weather Station

Scale		Project	
	N.T.S	<sup>No.</sup> WMA20001	
Date		Appendix	
	Jun 23	G	

### APPENDIX H1 ECOLOGICAL MONITORING RESULTS

## Photographic Records for Monthly Monitoring of Flora Species of Conservation Interest on 23<sup>rd</sup> June 2023

## 1. Keteleeria fortunei

Photo 1

23/06/2023

Description: Protective fence for *Keteleeria fortunei* are properly erected.

Photo 3



Description: General view of Keteleeria fortunei

Photo 2



Description: Protective fence for *Keteleeria fortunei* are properly erected.

Photo 4



Description: General view of Keteleeria fortunei

## Photographic Records for Monthly Monitoring of Flora Species of Conservation Interest on 23<sup>rd</sup> June 2023

## 2. Undersized seedling of Aquilaria sinensis

Photo 5



Description: Protective fence for undersized seedling of *Aquilaria sinensis* are properly erected.

Photo 6



Description: General view of undersized seedling of Aquilaria sinensis

#### Monthly Monitoring of Flora Species of Conservation Interest Service Contract No. NDO 07/2019

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

										Audit R	ef. No2	230623	
Contra	act	Service Contrac	et No. NDO 07	7/2019		Env. Te	am	W	ellab Lim	ited			
		Environmental	Team for Site	Formation and		Supervis	sor's Re	p. <u>A</u> l	ECOM				
		Infrastructure V	Vorks for Polic	ce Facilities in		IEC		A	cuity Sust	ainability	Consulti	ng Limited	
		Kong Nga Po											
Inspect	ed By	ET Auditor: lvy	Tam			Inspectio	n Date		23 June 2023				
		Supervisor's Rep	.: Mr. Andy C	heng		Time Per	iod		10:00 - 10	:30			
		IEC: Mr. Tandy	Tse										
Part A	Wea	ather											
Condit	ion	Sunny	Fine	Overcast	Drizzle		Rain	Sto	orm	Hazy			
Tempe		31 °C		1	<b>7.7. 7.0.</b> ()		T	T #00/					
Humid Wind	ity	High (RH>	90%)	Moderate (90%>l	Strong		Low (RF	1<50%)					
· · · · · ·		Cum	<b>V</b> Light	Breeze		or not obse	rved	Yes	No 1	Follow-up	N/C	Remarks	3
Part B													
1.	<u>Brainea ii</u>	<u>nsignis</u>											
1.1	Are the pla	ants' health condition	ons satisfactory	?				Ш	Ш	Ш	Ш		
1.2	Are transp	planted plants on sit	te protected care	efully?			$\checkmark$						
1.3	Are the ter	mporary protective	fence properly	erected and mainta	ained?		$\checkmark$						
1.4	Are the pla	ant protection zone	e set 1m from th	e plants?			$\checkmark$						
1.5	Are all gra	assed and planted a	rea kept free fro	om weeds/unwante	ed plants?		$\checkmark$						
1.6	Is compac	tion of the soil avo	ided for the plan	nts?			$\checkmark$						
1.7	Are litter/	unwanted material	removed within	n the planting area	.?		$\checkmark$						
1.8	Are equip	ment or stockpile p	placed outside th	ne protection zone?	?								
1.9		lebris or construction as this causes bark			l against the trunk		$\checkmark$						
1.10	Are fixing	s driven into plants	s avoided?				$\overline{\checkmark}$						
1.11	Are the pla	ants used for ancho	oring or winchin	ng purposes or for	the display of		$\checkmark$						
1.12		re lit below the bran lants avoided?	nches and petrol	l, oil or caustic sub	ostances stored		$\checkmark$						
1.13	Are all pla	ants kept free from	pest, disease or	fungal infection?			$\checkmark$						
1.14	Are there	enough area for gro	owth and develo	opment of plant roo	ots?		$\checkmark$						
1.15a	Is exposur	re of plant roots avo	oided?				$\checkmark$						

Note: Part of the construction site including the approved receptor site for Brainea insignis and Spiranthes sinensis was handed over to Architectural Services Department (ArchSD) on 23rd December 202. The post-transplantation maintenance and monitoring works for Brainea insignis and Spiranthes sinensis were conducted under Contract No. SSK509 (FEP no.: FEP-01/510/2016)) starting from April 2023.

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1.15b If not, were broken off or rotting of roots avoided?

### Monthly Monitoring of Flora Species of Conservation Interest Service Contract No. NDO 07/2019

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

		N/A or not observed	Yes	No	Follow-up	N/C	Remarks	
2.	Spiranthes sinensis							
2.1	Are the plants' health conditions satisfactory?						-	
2.2	Are transplanted plants on site protected carefully?			Ш		Ш		
2.3	Are the temporary protective fence properly erected and maintained?	$\checkmark$						
2.4	Are the plant protection zone set 1m from the plants?	$\checkmark$						
2.5	Are all grassed and planted area kept free from weeds/unwanted plants?	$\checkmark$						
2.6	Is compaction of the soil avoided for the plants?	$\checkmark$						
2.7	Are litter/ unwanted material removed within the planting area?	$\checkmark$						
2.8	Are equipment or stockpile placed outside the protection zone?	$\checkmark$						
2.9	Are soil, debris or construction materials deposited around and against th of a plant as this causes bark damage avoided?	e trunk						
2.10	Are fixings driven into plants avoided?	$\checkmark$						
2.11	Are the plants used for anchoring or winching purposes or for the display signs avoided?	of						
2.12	Are the fire lit below the branches and petrol, oil or caustic substances stonear the plants avoided?	ored						
2.13	Are all plants kept free from pest, disease or fungal infection?	$\checkmark$						
2.14	Are there enough area for growth and development of plant roots?	$\checkmark$						
2.15a	Is exposure of plant roots avoided?	$\checkmark$						
2.15b	If not, were broken off or rotting of roots avoided?	$\checkmark$						
3.	<u>Keteleeria fortunei</u>							
3.1	Are the trees' health conditions satisfactory?		$\checkmark$				except F-0072, F-0052 in the previous month)	dentified dead
3.2	Are existing trees to be retained on site protected carefully?		$\checkmark$					
3.3	Are the temporary protective fence properly erected and maintained?		$\checkmark$					
3.4	Are the trees protection zone set 1m from the trees?		<b>/</b>					
3.5	Are all grassed and planted area kept free from weeds/unwanted plants?	$\checkmark$						
3.6	Is compaction of the soil avoided for the trees?		$\checkmark$					
3.7	Are litter/ unwanted material removed within the planting area?		$\checkmark$					
3.8	Are equipment or stockpile placed outside the protection zone?		<b>✓</b>					
3.9	Are soil, debris or construction materials deposited around and against th of a trees as this causes bark damage avoided?	e trunk	$\checkmark$					
3.10	Are fixings driven into trees avoided?		$\checkmark$					
3.11	Are the trees used for anchoring or winching purposes or for the display of avoided?	of signs	$\checkmark$					
3.12	Are the fire lit below the branches and petrol, oil or caustic substances stonear the trees avoided?	ored	$\checkmark$					
3.13	Are all trees kept free from pest, disease or fungal infection?		$\checkmark$				except F-0081 (internal	decay)
3.14	Are there enough area for growth and development of tree roots?		<b>/</b>					
3.15a	Is exposure of tree roots avoided?	$\overline{\checkmark}$						
3.15b	If not, were broken off or rotting of roots avoided?							
3.16	Are wounds/mechanical injuries avoided on tree trunk?			$\Box$			except F-0002, F-0004, with hard pruned by other	F-0007 er parties
3.17	Are leaning of trees avoided?			$\overline{\Box}$				
3.18	Are dead/detached branches avoided?						except F-0002, F-00 with hard pruned by	04, F-0007 other parties
3.19	Are decay/cavity avoided on tree trunks?	$\Box$						

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### Monthly Monitoring of Flora Species of Conservation Interest Service Contract No. NDO 07/2019

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

		N/A or not observed		No	Follow-up	N/C	Remarks
4.	Aquilaria sinensis						
4.1	Are the trees' health conditions satisfactory?		$\checkmark$				
4.2	Are existing trees to be retained on site protected carefully?		$\checkmark$				
4.3	Are the temporary protective fence properly erected and maintained?		$\checkmark$				
4.4	Are the trees protection zone set 1m from the trees?		$\checkmark$				
4.5	$\label{thm:continuous} Are all \ grassed \ and \ planted \ area \ kept \ free \ from \ weeds/unwanted \ plants?$	$\checkmark$					
4.6	Is compaction of the soil avoided for the trees?		$\checkmark$				
4.7	Are litter/ unwanted material removed within the planting area?		$\checkmark$				
4.8	Are equipment or stockpile placed outside the protection zone?		$\checkmark$				
4.9	Are soil, debris or construction materials deposited around and against th of a trees as this causes bark damage avoided?	e trunk	$\checkmark$				
4.10	Are fixings driven into trees avoided?		$\checkmark$				
4.11	Are the trees used for anchoring or winching purposes or for the display avoided?	of signs	$\checkmark$				
4.12	Are the fire lit below the branches and petrol, oil or caustic substances stonear the trees avoided?	ored	$\checkmark$				
4.13	Are all trees kept free from pest, disease or fungal infection?		$\checkmark$				
4.14	Are there enough area for growth and development of tree roots?		$\checkmark$				
4.15a	Is exposure of tree roots avoided?		$\checkmark$				
4.15b	If not, were broken off or rotting of roots avoided?	$\checkmark$					
4.16	Are wounds/mechanical injuries avoided on tree trunk?		$\checkmark$				
4.17	Are leaning of trees avoided?		$\checkmark$				
4.18	Are dead/detached branches avoided?		$\checkmark$				
4.19	Are decay/cavity avoided on tree trunks?		$\checkmark$				

WELLAB Form 001

## Service Contract No. NDO 07/2019 Environmental Team for site Formation and Infrastructure Work for Police Facilities in

Signatures:			
CName Toplan (Date 2) 16/25	)	(Name: Ad Clay ) (Date: 27/t /242)	(Name: Tandy Tse ) (Date: 23/6/2023
Contractor's Representative  (Name Alex Liu (Date 23/6/2023)	)		

APPENDIX H2
IMPLEMENTATION SCHEDULE OF
MITIGATION MEASURES IN DETAILED
VEGETATION SURVEY REPORT AND
TRANSPLANTATION PROPOSAL FOR
AQUILARIA SINENSIS

The Permit Holder and any person constructing (or "operating" as the case may be) the Project shall fully implement all mitigation measures in this Plan/Report. Key measures are included in the Implementation Schedule (IS) below for focusing on key issues and easier checking. However, all measures in this Plan/Report,

whether included in the IS or not, shall be fully carried out.

Recommended Mitigation Measures	Objective of the Measures	Reference to paragraph(s) in this Detailed Vegetation	Implementation Status	Remarks
Identification of Plant Species of Conservation Importance to be Retained / Transplanted  To mark trees/plants proposed to be retained and to be transplanted on the layout plan prior to commencement of site construction works.	To identify the plant species of conservation importance and ensure no plant species of conservation importance / retained tree will be affected.	Refers to para(s) 4.11 of the	^	Detailed vegetation survey was conducted from 28th February to 6th March 2020 prior to commencement of site construction works. 2 individuals of <i>Aquilaria sinensis</i> were found within the work area of proposed Kong Nga Po Road upgrading works and 1 individual was found within the work area for site formation works. These 3 individuals of <i>Aquilaria sinensis</i> identified in works areas were transplanted to receptor site from 3rd to 19th October 2020 according
Protection of Plant Species of Conservation Importance prior to Site	To make sure that the flora species of conservation	Refers to para(s) 4.9 and 4.10 of	٨	to the approved transplantation proposal prior to commencement of site construction works.  a) The 3 individuals of <i>Aquilaria</i> sinensis identified in works areas

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Recommended Mitigation Measures	Objective of the Measures	Reference to paragraph(s) in this Detailed Vegetation Survey Report	Implementation Status	Remarks
Clearance / Transplantation Works	interest are not affected by the	the Detailed		were transplanted to receptor site
a) No site clearance shall be started at the		Vegetation		from 3 <sup>rd</sup> to 19 <sup>th</sup> October 2020
locations of flora species of conservation	Project	Survey Report		according to the approved
interest until the transplantation works				transplantation proposal prior to
completed.				commencement of site clearance
b) Set up buffer zone to enhance the				works.
protection of flora species of				b) No site clearance works was
conservation importance to be preserved				commenced before the transplantation
/ transplanted including the proposed				works completed.
location for transplantation when the site				
clearance works shall commence before				
the transplantation works completed.				
Temporary Protective Fence for Flora	To avoid potential impact on	Refers to para(s)	^	a) A temporary protective fence has been
Species of Conservation Interest /	flora species of conservation	4.4 and 4.11 of		properly erected enclosing the 3
Retained Tree	importance / retained tree from	the Detailed		individuals of Aquilaria sinensis.
a) To erect a temporary protective fence	construction activities such as	Vegetation		b) A protection zone at least 1m from
enclosing the flora species of	materials storage; To make	Survey Report		Aquilaria sinensis was set up and

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whether included in the IS or not, shall be fully carried out.

Recommended Mitigation Measures	Objective of the Measures	Reference to paragraph(s) in this Detailed Vegetation	Implementation Status	Remarks
		Survey Report		
conservation interest identified under the	sure that the flora species of			robust, bright-coloured fencing of
detailed vegetation survey.	conservation interest /			1.5m in height was also erected to
b) To set up a protection zone at least 1m	retained tree are not affected			protect the 3 individuals of Aquilaria
from the plant / retained tree and erect	by the construction activities			sinensis.
robust, bright-coloured fencing of 1.5m	of the Project			
in height.				
Maintenance of the Protection Zone for	To avoid potential impact on	Refers to para(s)	^	a) Post-transplantation monitoring was
Flora Species of Conservation Interest /	flora species of conservation	4.4 and 4.11 of		conducted once per week in the first
Retained Tree	importance / retained tree from	the Detailed		three months (October 2020 to
a) Monthly monitoring of flora species of	construction activities such as	Vegetation		January 2021) and once per month
conservation interest identified in the	materials storage; To make	Survey Report		during the 12-month establishment
detailed vegetation survey should be	sure that the flora species of			period and the post-establishment
conducted.	conservation interest /			period until the end of construction
b) To inspect the temporary protective	retained tree are not affected			phase of the Project. In addition,
fence whether it is properly erected and	by the construction activities			monthly monitoring of 3 individuals
maintained during construction.	of the Project			of Aquilaria sinensis was conducted
				during the construction phase by ET to

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Recommended Mitigation Measures	Objective of the Measures	Reference to paragraph(s) in this Detailed Vegetation Survey Report	Implementation Status	Remarks
				make sure that the flora species of conservation interest are not affected by the construction activities of the Project. No construction activity was observed within the area of 3 individuals of <i>Aquilaria sinensis</i> .  b) The temporary protective fence during the monthly monitoring was also inspected. Temporary protective fence was properly erected and maintained for the 3 individuals of <i>Aquilaria sinensis</i> .
Other Protection Measures for Flora Species of Conservation Interest / Retained Tree / Vegetated Areas  a) All works should be confined within the site boundary.	To avoid potential impact on Flora Species of Conservation Interest / Retained Tree / Vegetated Areas from	Refers to para(s) 4.11 of the Detailed Vegetation Survey Report	^	A 1.5m in height, robust, bright-coloured temporary protective fence and 1m protection zone has been properly set up enclosing the 3 individuals of <i>Aquilaria</i> sinensis. No construction activity was

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whether included in the IS or not, shall be fully carried out.

Recommended Mitigation Measures	Objective of the Measures	Reference to paragraph(s) in this Detailed Vegetation	Implementation Status	Remarks
		Survey Report		
b) Access of site staff should be controlled.				observed within the area of 3 individuals
c) Care should be taken to prevent	Project			of Aquilaria sinensis.
trees/plants being damaged by				The guidelines (a to j) have been
mechanical equipment or stockpile both				followed to protect the 3 individuals of
during site clearance works and				Aquilaria sinensis.
construction works.				
d) No fixings should be driven into				
trees/plants.				
e) No workshop, canteens, or similar				
should be installed beneath trees/plants,				
nor will equipment maintenance etc. be				
carried out under trees/plants.				
f) No excavation, including that for				
services or changes in ground level will				
take place within the spread of the crown				
of the trees / plants.				
g) No soil, debris or construction materials				

The Permit Holder and any person constructing (or "operating" as the case may be) the Project shall fully implement all mitigation measures in this Plan/Report. Key measures are included in the Implementation Schedule (IS) below for focusing on key issues and easier checking. However, all measures in this Plan/Report, whether included in the IS or not, shall be fully carried out.

Re	ecommended Mitigation Measures	Objective of the Measures	Reference to paragraph(s) in this Detailed Vegetation Survey Report	Implementation Status	Remarks
	should be deposited around and against				
	the trunk of a tree/plant as this causes				
	bark damage and compaction of the soil.				
h)	No fire should be lit below the branches				
	and no petrol, oil or caustic substances				
	stored near the trees/plants.				
i)	No trees/plants should be used for				
	anchoring or winching purposes or for				
	the display of signs.				
j)	Any damage or injury to the retained /				
	transplanted plants should be reported as				
	soon as possible for repair immediately.				

**Implementation status:** ^ Mitigation measure was fully and properly implemented

The Permit Holder and any person constructing (or "operating" as the case may be) the Project shall fully implement all mitigation measures in this Plan/Report. Key measures are included in the Implementation Schedule (IS) below for focusing on key issues and easier checking. However, all measures in this Plan/Report, whether included in the IS or not, shall be fully carried out.

<b>Recommended Mitigation Measures</b>	Objective of the Measures	Reference to	Implementation	Remarks
		paragraph(s) in this	Status	
		Transplantation		
		Proposal		
Identification of Plant Species of	To identify the plant species of	Refers to para(s) 5.1	^	Detailed vegetation survey was conducted
<b>Conservation</b> Importance to be	conservation importance and	of the Transplantation		from 28th February to 6th March 2020 prior to
Retained / Transplanted	ensure no plant species of	Proposal		commencement of site construction works. 2
To mark trees/plants proposed to be	conservation importance /			individuals of Aquilaria sinensis were found
retained and to be transplanted on the	retained tree will be affected.			within the work area of proposed Kong Nga
layout plan prior to commencement of				Po Road upgrading works and 1 individual
site construction works.				was found within the work area for site
				formation works. These 3 individuals of
				Aquilaria sinensis identified in works areas
				were transplanted to receptor site from 3 <sup>rd</sup> to
				19th October 2020 according to the approved
				transplantation proposal prior to
				commencement of site construction works.
Protection of Plant Species of	To make sure that the flora	Refers to para(s) 2.11	^	a) The 3 individuals of <i>Aquilaria sinensis</i>
Conservation Importance prior to	species of conservation	and 2.12 of the		identified in works areas were
Site Clearance / Transplantation	interest are not affected by the			transplanted to receptor site from 3 <sup>rd</sup> to

The Permit Holder and any person constructing (or "operating" as the case may be) the Project shall fully implement all mitigation measures in this Plan/Report. Key measures are included in the Implementation Schedule (IS) below for focusing on key issues and easier checking. However, all measures in this Plan/Report,

whether included in the IS or not, shall be fully carried out.

<b>Recommended Mitigation Measures</b>	Objective of the Measures	Reference to	Implementation Status	Remarks
		paragraph(s) in this	Status	
		Transplantation		
		Proposal		
Works	site clearance works of the	Transplantation		19th October 2020 according to the
a) No site clearance shall be started at	Project	Proposal		approved transplantation proposal prior
the locations of flora species of				to commencement of site clearance
conservation interest until the				works.
transplantation works completed.				b) No site clearance works was commenced
b) Set up buffer zone to enhance the				before the transplantation works
protection of flora species of				completed.
conservation importance to be				-
preserved / transplanted including				
the proposed location for				
transplantation when the site				
clearance works shall commence				
before the transplantation works				
completed.				
Temporary Protective Fence for	To avoid potential impact on	Refers to para(s) 2.7,	^	a) A temporary protective fence has been
Flora Species of Conservation	flora species of conservation	4.41 and 5.1 of the		properly erected enclosing the 3
Interest / Retained Tree	importance / retained tree from	Transplantation		individuals of Aquilaria sinensis.
a) To erect a temporary protective fence	construction activities such as	Proposal		-

The Permit Holder and any person constructing (or "operating" as the case may be) the Project shall fully implement all mitigation measures in this Plan/Report. Key measures are included in the Implementation Schedule (IS) below for focusing on key issues and easier checking. However, all measures in this Plan/Report, whether included in the IS or not, shall be fully carried out.

<b>Recommended Mitigation Measures</b>	Objective of the Measures	Reference to	Implementation	Remarks
		paragraph(s) in this	Status	
		Transplantation		
		Proposal		
enclosing the flora species of	materials storage; To make			b) A protection zone at least 1m from
conservation interest identified	sure that the flora species of			Aquilaria sinensis was set up and robust,
under the detailed vegetation survey.	conservation interest /			bright-coloured fencing of 1.5m in height
b) To set up a protection zone at least	retained tree are not affected			was also erected to protect the 3
1m from the plant / retained tree and	by the construction activities			individuals of Aquilaria sinensis.
erect robust, bright-coloured fencing	of the Project			
of 1.5m in height.				
Maintenance of the Protection Zone	To avoid potential impact on	Refers to para(s) 2.7,	^	a) Post-transplantation monitoring was
for Flora Species of Conservation	flora species of conservation	4.41 and 5.1 of the		conducted once per week in the first three
Interest / Retained Tree	importance / retained tree from	Transplantation		months (October 2020 to January 2021)
a) Monthly monitoring of flora species	construction activities such as	Proposal		and once per month during the 12-month
of conservation interest identified in	materials storage; To make			establishment period and the post-
the detailed vegetation survey	sure that the flora species of			establishment period until the end of
should be conducted.	conservation interest /			construction phase of the Project. In
b) To inspect the temporary protective	retained tree are not affected			addition, monthly monitoring of 3
fence whether it is properly erected	by the construction activities			individuals of Aquilaria sinensis was
and maintained during construction.	of the Project			conducted during the construction phase

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<b>Recommended Mitigation Measures</b>	Objective of the Measures	Reference to	Implementation	Remarks
		paragraph(s) in this	Status	
		Transplantation		
		Proposal		
				by ET to make sure that the flora species
				of conservation interest are not affected by
				the construction activities of the Project.
				No construction activity was observed
				within the area of 3 individuals of
				Aquilaria sinensis.
				b) The temporary protective fence during the
				monthly monitoring was also inspected.
				Temporary protective fence was properly
				erected and maintained for the 3
				individuals of Aquilaria sinensis.
Post-transplantation Monitoring	To allow early detection of the	Refers to para(s) 4.38	^	Post-transplantation monitoring was
a) Weekly post-transplantation	growth status of transplanted	to 4.40 and 4.42 of the		conducted once per week in the first three
monitoring of transplanted species	species, sign of construction	Transplantation		months (October 2020 to January 2021) and
in the first three months and	activity within and nearby the	Proposal		once per month during the 12-month
monthly afterwards.	receptor site, and any			establishment period and the post-
	environmental change of the			establishment period until the end of

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<b>Recommended Mitigation Measures</b>	Objective of the Measures	Reference to	Implementation	Remarks
		paragraph(s) in this	Status	
		Transplantation		
		Proposal		
	receptor site.			construction phase of the Project. No
				construction activity was observed within the
				area of 3 individuals of Aquilaria sinensis.
				Due to the poor health condition of
				transplanted Aquilaria sinensis, the
				monitoring frequency was increased to bi-
				weekly in the period between Nov 2021 to
				July 2022 upon recommended by ET and IEC.
<b>Maintenance of Transplanted Species</b>	To allow health growth of the	Refers to para(s) 4.43	^	Maintenance works were conducted
a) To keep the soil moist by watering	transplanted species.	to 4.46 of the		for the first year of establishment to
the receptor sites properly and		Transplantation		allow health growth of the
adequately.		Proposal		transplanted species. In view of the
b) To apply mulches on the soil surface				condition of transplanted individuals
over the plant root system, if				after the 12-month establishment
required.				period, maintenance works have been
c) To remove unwanted weeds found				extended during the Post-
in receptor sites.				establishment Period until the end of

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Recommended Mitigation Measures	Objective of the Measures	Reference to paragraph(s) in this Transplantation Proposal	Implementation Status	Remarks
				Construction Phase. Watering was conducted in daily practice subject to the site condition during the first three months after the transplantation and during dry season. Watering frequency was reduced to at least twice a week and adjusted based on the plant condition to keep the soil moist. Other maintenance works like use of mulch and weeding were also conducted if required.
Other Protection Measures for Flora Species of Conservation Interest / Retained Tree / Vegetated Areas  a) All works should be confined within the site boundary.  b) Access of site staff should be	To avoid potential impact on Flora Species of Conservation Interest / Retained Tree / Vegetated Areas from construction activities of the Project	Refers to para(s) 5.1 of the Transplantation Proposal	۸	A 1.5m in height, robust, bright-coloured temporary protective fence and 1m protection zone has been properly set up enclosing the 3 individuals of <i>Aquilaria sinensis</i> . No construction activity was observed within the area of 3 individuals of <i>Aquilaria sinensis</i> .

# Transplantation Proposal - Implementation Schedule (IS) for Aquilaria sinensis

The Permit Holder and any person constructing (or "operating" as the case may be) the Project shall fully implement all mitigation measures in this Plan/Report. Key measures are included in the Implementation Schedule (IS) below for focusing on key issues and easier checking. However, all measures in this Plan/Report, whether included in the IS or not, shall be fully carried out.

<b>Recommended Mitigation Measures</b>	Objective of the Measures	Reference to	Implementation	Remarks
		paragraph(s) in this	Status	
		Transplantation		
		Proposal		
controlled.				The guidelines (a to j) have been followed
c) Care should be taken to prevent				to protect the 3 individuals of <i>Aquilaria</i>
trees/plants being damaged by				sinensis.
mechanical equipment or stockpile				
both during site clearance works and				
construction works.				
d) No fixings should be driven into				
trees/plants.				
e) No workshop, canteens, or similar				
should be installed beneath				
trees/plants, nor will equipment				
maintenance etc. be carried out				
under trees/plants.				
f) No excavation, including that for				
services or changes in ground level				
will take place within the spread of				
the crown of the trees / plants.				
g) No soil, debris or construction				

# Transplantation Proposal - Implementation Schedule (IS) for Aquilaria sinensis

The Permit Holder and any person constructing (or "operating" as the case may be) the Project shall fully implement all mitigation measures in this Plan/Report. Key measures are included in the Implementation Schedule (IS) below for focusing on key issues and easier checking. However, all measures in this Plan/Report, whether included in the IS or not, shall be fully carried out.

Recommended Mitigation Measures	Objective of the Measures	Reference to paragraph(s) in this	Implementation Status	Remarks
		Transplantation		
		Proposal		
materials should be deposited				
around and against the trunk of a				
tree/plant as this causes bark				
damage and compaction of the soil.				
h) No fire should be lit below the				
branches and no petrol, oil or caustic				
substances stored near the				
trees/plants.				
i) No trees/plants should be used for				
anchoring or winching purposes or				
for the display of signs.				
j) Any damage or injury to the retained				
/ transplanted plants should be				
reported as soon as possible for				
repair immediately.				

**Implementation status:** ^ Mitigation measure was fully and properly implemented

#### APPENDIX I EVENT ACTION PLANS

## Appendix I:

### Table I-1: Event / Action Plan for Air Quality

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

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

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

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

**Table I-2: Event / Action Plan for Construction Noise** 

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

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

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

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

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

 $Abbreviations: ET-Environmental\ Team,\ IEC-Independent\ Environmental\ Checker,\ ER-Engineer's\ Representative$ 

#### APPENDIX J SUMMARY OF EXCEEDANCE

### Appendix J: Exceedance Report

## (A) Exceedance Report for Air Quality

Environmental Monitoring	Parameter	No. of non-project relate Exceedance		No. of Exceed to the Con Activities of	Cumulative No. of Exceedance	
Monitoring		Action Level	Limit Level	Action Level	Limit Level	recorded
Air Quality	1-hr TSP	0	0	0	0	0

### (B) Exceedance Report for Construction Noise

Environmental Monitoring	Parameter	No. of non-project relate Exceedance		No. of Exceedance related to the Construction Activities of this Contract		Cumulative No. of Exceedance
8		Action Level	Limit Level	Action Level	Limit Level	recorded
Noise	L <sub>eq(30 min.)</sub> dB(A)	0	0	0	0	7

APPENDIX K ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE (EMIS)

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

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

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

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

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

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

EIA Ref.	EM&A	Recommended Mitigation Measures	Objectives of the	Who to implement	Location of the	When to	Implementation
	Log	(What Measures)	recommended Measures	the measures?	measures	Implement the	Status
	Ref		& Main Concerns to	(Who)	(Where)	measures?	
			address (What			(When)	
			Requirements)				
		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	Minimise / control	Contractor	Within the Project	Construction Phase	
		The site practices outlined in ProPECC Note PN 1/94 should be	construction site runoff to		site / During		
		followed as far as practicable in order to minimise surface runoff	avoid pollution of water		construction phase		
		and the chance of erosion. The following measures are	courses				
		recommended:					
		Temporary site drainage facilities are to be designed and					ж
		implemented by the Contractor prior to commencement of					
		construction to convey surface runoff to storm drains					
		applying adequately designed silt/sand removal traps and					
		sediment basins.					
		Perimeter cut-off drains shall be installed in advance of					*
		any earthworks and site formation work to convey site					
		runoff from the works areas to the silt removal facilities.					
		Runoff into the excavation areas during rainstorm events					^
		shall be minimised as far as practicable. Any wastewater					
		pumped out of the excavation areas shall be treated to					
		remove suspended solids prior to discharge.					
		Maintenance and inspection of the drainage system and					*
		sediment removal facilities should be carried out regularly					
		to remove any sediment and blockages, especially when					

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

EIA Ref.	EM&A	Recommended Mitigation Measures	Objectives of the	Who to implement	Location of the	When to	Implementation
	Log	(What Measures)	recommended Measures	the measures?	measures	Implement the	Status
	Ref		& Main Concerns to	(Who)	(Where)	measures?	
			address (What			(When)	
			Requirements)				
		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.					
		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	Prevent accidental discharge	Contractor	Within the Project	Construction phase	
		In accordance with the Waste Disposal (Chemical Waste)	of chemicals into the		site / During		
		(General) Regulation (Cap 354C), the following measures should	surrounding environment		construction phase		
		be implemented:					
		The labelling and storage of chemicals should be in					^
		accordance with the Code of Practice on the Packaging,					
		Labelling and Storage of Chemical Wastes and maintained					
		at all times by the Contractor.					
		Oils and fuels should only be stored in designated areas					^
		which have appropriate pollution prevention control					

EIA Ref.	EM&A	Recommended Mitigation Measures	Objectives of the	Who to implement	Location of the	When to	Implementation
	Log	(What Measures)	recommended Measures	the measures?	measures	Implement the	Status
	Ref		& Main Concerns to	(Who)	(Where)	measures?	
			address (What			(When)	
			Requirements)				
		facilities such as oil and grease traps.					
		The maintenance of vehicles should only be undertaken in					^
		areas of the site served by appropriate pollution					
		prevention control facilities.					
		To prevent the spillage of fuels and solvents to nearby					^
		stormwater drains, all fuel tanks and storage areas should					
		be locked and sited on sealed areas of the site, within					
		bunded areas with a capacity equal to 110% of the storage					
		capacity of the largest container. The bund should be kept					
		free of surface water at all times and after each rainfall					
		event.					
5.6.1.4	4.2	Sewage from Construction Workforce	Prevent discharge of sewage	Contractor	Within the Project	construction phase	
		Portable toilets should be available throughout the construction	into the surrounding		site / During		^
		phase and regularly maintained, collected and disposed by a	environment		construction phase		
		licensed waste collector to a public sewage treatment works for					
		suitable treatment.					
5.6.1.5	4.2	Construction Works in Close Proximity to Inland	Minimise/ control	Contractor	Within the Project	construction phase	
		Watercourses	construction site discharges		site / During		
		Mitigation measures such as such as temporary diversions of	to avoid pollution of nearby		construction phase		
		existing drainage culverts/ watercourses before construction	watercourses				
		commences and during construction should be implemented, in					
		addition to those listed in ProPECC Note PN1/94 Construction					

EIA Ref.	EM&A	Recommended Mitigation Measures	Objectives of the	Who to implement	Location of the	When to	Implementation
	Log	(What Measures)	recommended Measures	the measures?	measures	Implement the	Status
	Ref		& Main Concerns to	(Who)	(Where)	measures?	
			address (What			(When)	
			Requirements)				
		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:					
		Stockpiling of construction materials and spoil, should be					N/A
		properly covered and located away from any natural					
		stream/river.					
		Construction works close to the inland waters should be					N/A
		carried out in dry season as far as practicable where the					
		flow in the surface channel or stream is low.					
		Removal of existing vegetation alongside the riverbanks					N/A
		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.					
Waste Manage	ment Implica	ations - Construction Phase					
7.5.1.1	6.2	Good Site Practice	Implement good site	Contractor	Project	Construction phase	
		Recommendations for good site practices during the construction	practices to minimize waste		construction site /		
		activities include:	generation		Throughout		
		Nomination of an approved person, such as a site			construction stage		*
		manager, to be responsible for good site practices,			/ Until completion		
		arrangements for collection and effective disposal to an			of all construction		

EIA Ref.	EM&A	Recommended Mitigation Measures	Objectives of the	Who to implement	Location of the	When to	Implementation
	Log	(What Measures)	recommended Measures	the measures?	measures	Implement the	Status
	Ref		& Main Concerns to	(Who)	(Where)	measures?	
			address (What			(When)	
			Requirements)				
		appropriate facility, of all wastes generated at the site			activities		
		Training of site personnel in proper waste management					*
		and chemical handling procedures					
		Provision of sufficient waste disposal points and regular					*
		collection of waste					
		Appropriate measures to minimise windblown litter and					^
		dust/odour during transportation of waste by either					
		covering trucks or by transporting wastes in enclosed					
		containers					
		Stockpiles of C&D materials should be kept covered by					^
		impervious sheets to avoid windblown dust					
		All dusty materials including C&D materials should be					^
		sprayed with water immediately prior to any loading					
		transfer operation so as to keep the dusty material wet					
		during material handling at the stockpile areas					
		Provision of wheel washing facilities before the trucks					^
		leaving the works area so as to minimise dust introduction					
		to public roads					
		Well planned delivery programme for off-site disposal					٨
		such that adverse environmental impact from transporting					
		the inert or non-inert C&D materials is not anticipated					
7.5.1.2	6.2	Waste Reduction Measures	Implement good	Contractor	Project	Construction phase	

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

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

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

EIA Ref.	EM&A	Recommended Mitigation Measures	Objectives of the	Who to implement	Location of the	When to	Implementation
	Log	(What Measures)	recommended Measures	the measures?	measures	Implement the	Status
	Ref		& Main Concerns to	(Who)	(Where)	measures?	
			address (What			(When)	
			Requirements)				
7.5.1.5	6.2	General Refuse	Implement good practices to	Contractor	Project	Construction phase	
		General refuse should be stored in enclosed bins or compaction	avoid odour nuisance or		construction site /		^
		units separated from inert C&D materials. A reputable waste	pest/vermin problem and		Throughout		
		collector should be employed by the Contractor to remove	waste impact.		construction stage		
		general refuse from the site, separately from inert C&D			/ Until completion		
		materials. Preferably an enclosed and covered area should be			of all construction		
		provided to reduce the occurrence of 'windblown' light material.			activities		
Land Contami	ination – Con	nstruction Phase					
8.6.1	7.2	In any case where contaminated soil is identified after the	Assessment is required for	Contractor	Project	Design phase	N/A
		commencement of works, a Contamination Assessment Plan	EPD approval in any case		construction site /		
		(CAP) is required to be prepared for EPD's endorsement prior to	where contaminated soil is		Before		
		the site investigation. The Contamination Assessment Report	identified		construction stage		
		(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.					
8.6.1	7.2	The following mitigation measures are proposed for	Minimise impacts resulting	Contractor	Project	Construction phase	

EIA Ref.	EM&A	Recommended Mitigation Measures	Objectives of the	Who to implement	Location of the	When to	Implementation
	Log	(What Measures)	recommended Measures	the measures?	measures	Implement the	Status
	Ref		& Main Concerns to	(Who)	(Where)	measures?	
			address (What			(When)	
			Requirements)				
		contaminated material excavation and transportation of	from excavation and		construction site /		
		contaminated materials (if any), in order to minimise the	transportation in the of		Throughout		
		potentially adverse effects health and safety of construction	contaminated materials		construction stage		
		workers and impacts arising from the disposal of potentially			/ Until completion		
		contaminated materials:			of all construction		N/A
		To minimise the chance for construction workers to come			activities		
		into contact with any contaminated materials, bulk					
		earth-moving excavation equipment should be employed;					N/A
		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;					N/A
		Stockpiling of contaminated excavated materials on site					
		should be avoided as far as possible;					N/A
		The use of any contaminated soil for landscaping purpose					
		should be avoided unless pre-treatment was carried out;					N/A
		Vehicles containing any excavated materials should be					
		suitably covered to reduce dust emissions and / or release					
		of contaminated wastewater;					N/A
		Truck bodies and tailgates should be sealed to stop any					

EIA Ref.	EM&A	Recommended Mitigation Measures	Objectives of the	Who to implement	Location of the	When to	Implementation
	Log	(What Measures)	recommended Measures	the measures?	measures	Implement the	Status
	Ref		& Main Concerns to	(Who)	(Where)	measures?	
			address (What			(When)	
			Requirements)				
		discharge;					N/A
		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;					N/A
		Speed control for trucks carrying contaminated materials					
		should be exercised;					N/A
		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					N/A
		Maintain records of waste generation, disposal quantities					
		and disposal arrangements.					
Ecological Imp	act						
9.7.1	8.3	Temporary Protective Fence for Flora Species of	To avoid potential impact on	Contractor	Project	Construction phase	
		Conservation Interest	flora species of conservation		construction site /		
		During construction phase, erection and maintenance of a	interest from construction		Throughout		*
		temporary protective fence enclosing the flora species of	activities such as materials		construction stage		
		conservation interest identified under the detailed vegetation	storage;		/ Until completion		
		survey is recommended.	To make sure that the flora		of all construction		
		Monthly monitoring of any other flora species of conservation	species of conservation		activities		

EIA Ref.	EM&A	Recommended Mitigation Measures	Objectives of the	Who to implement	Location of the	When to	Implementation
	Log	(What Measures)	recommended Measures	the measures?	measures	Implement the	Status
	Ref		& Main Concerns to	(Who)	(Where)	measures?	
			address (What			(When)	
			Requirements)				
		interest identified in the detailed vegetation survey should be	interest are not affected by				
		conducted during the construction phase.	the construction activities of				
			the project.				
Golden-headed	d Cisticola (I	Recommended Mitigation Measures from Baseline Survey	Report of Golden-headed	Cisticola)			
-	-	The following mitigation measures are proposed for minimizing	Construction noise	Contractor	Project area –	Construction phase	
		noise impacts induced by construction works:			areas adjacent to		
		Silencers or mufflers on well-maintained construction			sensitive receivers		N/A
		equipment should be utilized and properly maintained			/ During		
		during the construction program			construction phase		
		Noise enclosure or acoustic shed should be effectively					^
		utilized, where practicable					
		Machines or equipment known to emit noise or light					^
		strongly in one direction should, wherever possible, be					
		orientated the noise away from the adjacent habitat					
-	-	The following mitigation measures are proposed for minimizing	To minimize the light	Contractor	Project area –	Construction phase	
		light impacts:	disturbance to avifauna		areas adjacent to		
		Adjusting the outdoor lighting to lower intensity			sensitive receivers		^
		Use of directional lighting to avoid light spill into			/ During		^
		sensitive areas			construction phase		
		Control/timing of lighting periods of some facilities,					^
		particularly those close to the ecological sensitive					
		receivers					

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

EIA Ref.	EM&A	Recommended Mitigation Measures	Objectives of the	Who to implement	Location of the	When to	Implementation
	Log	(What Measures)	recommended Measures	the measures?	measures	Implement the	Status
	Ref		& Main Concerns to	(Who)	(Where)	measures?	
			address (What			(When)	
			Requirements)				
Landscape and	! Visual Impe	acts - Construction Phase					
Table 10.11	Table	CM01: Trees / woodland within the Project Site which are	Preserve and protect	Contractor	Project area /	Design and	*
	9.1	unaffected by the works shall be protected and preserved during	existing trees		During design	construction phase	
		the detailed design stage and construction phase. The tree			stage /		
		preservation proposals shall be coordinated with the layout and			construction phase		
		design of the engineering and architectural works at detailed			/ Establishment		
		design stage for further retention of individual trees. The			Period		
		preservation of existing tree shall provide instant greening and					
		screening effect for proposed works.					
		Tree protection works will be undertaken in accordance with					
		DEVB TC(W) 7/2015 on "Tree Preservation" and tree risk					
		assessment in accordance with "Guidelines for Tree Risk					
		Assessment and Management Arrangement" by DEVB.					
Table 10.11	Table	CM02: If removal of trees unavoidable due to construction	Preserve and protect	Contractor	Project area /	Design and	^
	9.1	impacts, trees will be transplanted where technically feasible in	existing trees		During design	construction phase	
		accordance with "Guidelines on Tree Transplanting" by DEVB			stage /		
		and HQ/GN/13 and HQ/GN/13 – Interim Guidelines for			construction phase		
		Tree Transplanting Works under Highways Department's			/ Establishment		
		Vegetation Maintenance Ambit where applicable.			Period		
Table 10.11	Table	CM03: Construction area control, where possible, to ensure that	Minimise landscape and	Contractor	Project area /	Construction phase	٨

EIA Ref.	EM&A	Recommended Mitigation Measures	Objectives of the	Who to implement	Location of the	When to	Implementation
	Log	(What Measures)	recommended Measures	the measures?	measures	Implement the	Status
	Ref		& Main Concerns to	(Who)	(Where)	measures?	
			address (What			(When)	
			Requirements)				
	9.1	the landscape and visual impacts arising from the construction	visual impacts.		During design		
		activities are minimised. This includes the reduction of the extent			stage /		
		and location of working areas to avoid sensitive LRs, siting of			construction phase.		
		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.					
Table 10.11	Table	CM04: Replanting of existing / disturbed vegetation shall be	Maximise the mitigation	Contractor	Project area /	Construction phase	N/A
	9.1	undertaken as soon as technically feasible during the	effect of the planting to		During design		
		construction phase. The priority shall be areas at the periphery of	minimise landscape and		stage /		
		the site to ensure that proposed planting fulfils its role in	visual impacts.		construction phase		
		mitigating the predicted impacts including screening views of the			/ Establishment		
		proposals as early as possible during the operation phase.			Period		
Table 10.11	Table	CM05: Decorative screen hoarding will be erected along areas of	Minimise landscape and	Contractor	Project area –	Construction phase	^
	9.1	the construction works site boundary where the works site	visual impacts.		areas adjacent to		
		borders publically accessible routes and/or is close to visually			sensitive receivers		
		sensitive receivers (VSRs) to screen undesirable views of the			/ During		
		works site. It is proposed that the screening be compatible with			construction phase.		
		the surrounding environment and where possible, non-reflective,					
		recessive colours be used.					

EIA Ref.	EM&A	Recommended Mitigation Measures	Objectives of the	Who to implement	Location of the	When to	Implementation
	Log	(What Measures)	recommended Measures	the measures?	measures	Implement the	Status
	Ref		& Main Concerns to	(Who)	(Where)	measures?	
			address (What			(When)	
			Requirements)				
Landscape and	d Visual Impo	acts (Recommended Mitigation Measures from Landscape	e and Visual Mitigation Pla	an)			
-	-	Tree protection and preservation	To avoid potential impact on	CEDD's and	CEDD: Along	Design and	*
		a. The tree preservation proposals shall be coordinated with the	retained tree from	ArchSD's Contractors	KNP Road where	construction phase	
		layout and design of the engineering and architectural works at	construction activities such		applicable and	of CEDD's and	
		the detailed design stage for further retention of individual trees.	as materials storage; To		slopes within KNP	ArchSD's Contracts	
		b. During construction period, retained trees will be protected	make sure that the retained		Police Facilities		
		from impact from construction activity as per General	tree are not affected by the		Site		
		Specification for Civil Engineering Works (2006 Edition),	construction activities of the		ArchSD: Within		
		Section 26 – Preservation and Protection of Trees and Guidelines	Project		KNP Police		
		on Tree Preservation during Development.			Facilities Site		
-	-	Tree transplantation	To preserve the trees with	CEDD's Contractors	The location of	Construction Stage	^
		a. If removal of trees unavoidable due to construction impacts,	conservation interest which		three Aquilaria	of CEDD's	
		trees will be transplanted where technically feasible in	are unavoidably affected by		sinensis at Site	contracts	
		accordance with "Guidelines on Tree Transplanting" by DEVB	the construction activities.		Portion B and D,		
		and HQ/GN/13 and HQ/GN/13 - Interim Guidelines for Tree			and the receptor		
		Transplanting Works under Highways Department's Vegetation			site for the		
		Maintenance Ambit where applicable.			transplanted trees		
					opposite Portion		
					B1 of the site.		
-	-	Work area and temporary works area	To minimize the landscape	CEDD's and	CEDD: Along	Construction	^

EIA Ref.	EM&A	Recommended Mitigation Measures	Objectives of the	Who to implement	Location of the	When to	Implementation
	Log	(What Measures)	recommended Measures	the measures?	measures	Implement the	Status
	Ref		& Main Concerns to	(Who)	(Where)	measures?	
			address (What			(When)	
			Requirements)				
		a. Reduction of the extent and location of working areas to avoid	and visual impacts by	ArchSD's Contractors	KNP Road where	Stage of CEDD's	
		sensitive LRs	construction area control		applicable and	and ArchSD's	
		b. Siting of offices or temporary structures so that they are not			slopes within KNP	Contracts	^
		visually prominent			Police Facilities		
		c. Consideration of detailed schedules to shorten the construction			Site		^
		period			ArchSD: Within		
		d. Temporary landscape treatments are considered to be adopted			KNP Police		^
		such as applying hydro-seeding on temporary stockpiles and			Facilities Site		
		areas of earthworks to alleviate the potential impacts and					
		minimise soil erosion.					
-	-	Advance implementation of mitigation planting	To mitigate the predicted	CEDD's and	Whole project site	Construction Stage	N/A
		a. Replanting of existing / disturbed vegetation shall be	impacts including screening	ArchSD's Contractors	area, priority given	of CEDD's and	
		undertaken as soon astechnically feasible during the construction	views of the proposals as		to periphery of the	ArchSD's Contracts	
		phase.	early as possible during the		site		
			operation phase.				
-	-	Decorative screen hoarding	To screen undesirable views	CEDD's and	Along areas of the	Construction Phase	۸
		a. Decorative screen hoarding will be erected along areas of the	of the works site.	ArchSD's Contractors	construction works	CEDD's and	
		construction works site boundary where the works site borders			site boundary	ArchSD's Contracts	
		publically accessible routes and/or is close to visually sensitive			where the works		
		receivers (VSRs)			site borders		
		b. It is proposed that the screening be compatible with the			publically		^

EIA Ref.	EM&A	Recommended Mitigation Measures	Objectives of the	Who to implement	Location of the	When to	Implementation
	Log	(What Measures)	recommended Measures	the measures?	measures	Implement the	Status
	Ref		& Main Concerns to	(Who)	(Where)	measures?	
			address (What			(When)	
			Requirements)				
		surrounding environment and where possible, non-reflective,			accessible routes		
		recessive colours be used.			and/or is close to		
					visually sensitive		
					receivers (VSRs)		
-	-	Detail design considerations	To reduce the area allowed	CEDD's Detailed	CEDD: Along	Design Stage of	N/A
		a. Detailed design of development components should reduce	for any development to a	Designers /	KNP Road where	CEDD's and	
		landscape footprint and visibility of structures.	practical minimum	Consultants	applicable and	ArchSD's Contracts	
				ArchSD's	slopes within KNP		
				Detailed Designers /	Police Facilities		
				Consultants	Site		
					ArchSD: Within		
					KNP Police		
					Facilities Site		
-	-	Aesthetically pleasing design and responsive design of	a. To reduce the visibility of	ArchSD's Detailed	Within KNP Police	Design Stage	N/A
		buildings and structures	the development	Designers /	Facilities Site	ArchSD's Contract	
		a. The form, textures, finishes and colours of the proposed	components	Consultants			
		development components should be compatible with the existing	b. To further improve visual				
		surroundings. Light earthy tone colours such as shades of green,	amenity				
		grey, brown and off-white may be utilised where technically	c. To reduce the mass of				
		feasible to reduce the visibility of the development components,	development				
		including all roadwork, buildings and noise barriers etc	d. To minimise the 'wall				

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

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

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

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

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

### 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

Ref*	Proposed	Location/Working	Anticipated	Recommended Mitigation Measures	Photo Records (Partial)
	Construction	Period	Major		
	Method**		Impacts		
EIA	Reinforced	Kong Nga Po Road	Air	• Dusty materials that exceeded 20 bags	
3.91;	Concrete			will be stored in area sheltered on top	
EM&A	Structure			and the three sides or covered entirely	
Log	Construction			by impervious sheeting	
2.2	(Bridge				
	Deck)				
					02.06.2023
					D. I. W. D. I.
ELA			W	. 0.11	By sub-contractor at KNP road
EIA			Waste water	• Soil berm and retention pit will be	
5.6.1.2; EM&A			pollution control	provided for the control of water outflow	
Log			Control	<ul> <li>Desilting/sedimentation devices will be</li> </ul>	
4.2				provided for wastewater treatment prior	
7.2				to discharge	
				Designated location for residual	
				concrete washout	
				Concrete Washout	50,06,7023
					By main contractor at KNP road

Ref*	Proposed	Location/Working	Anticipated	Recommended Mitigation Measures	Photo Records (Partial)
	Construction	Period	Major		
	Method**		Impacts		
EIA	(Cont')	(Cont')	Noise	• Well-planning of concreting works to	
4.4.6;	Reinforced	Kong Nga Po Road		prevent working in restricted hours	
EM&A	Concrete			Deploy Quality Powered Mechanical	
Log	Structure			Equipment (QPME) if possible	
3.2	Construction				
EIA	(Bridge		Working in	Valid construction noise permit should	
4.4.6;	Deck)		Restricted	be obtained and displayed on site	TO THE PARTY OF TH
EM&A			Hours	• In case of non-compliance with the	
Log				construction noise criteria, more	
3.2				frequent monitoring and action should	
				be carried out	Environmental Construction Permit Noise Permit
					29,06.2022
					By main contractor at KNP road

Ref*	Proposed Construction Method**	Location/Working Period	Anticipated Major Impacts	Recommended Mitigation Measures	Photo Records (Partial)
EIA 7.5.1.4; EM&A Log 6.2	(Cont') Reinforced Concrete Structure Construction (Bridge Deck)	(Cont') Kong Nga Po Road	Chemicals for concreting works	<ul> <li>Chemical for concreting works should be stored in designated area with proper labelling and packing</li> <li>Designated location for residual concrete washout</li> </ul>	By sub-contractor at KNP Road
EIA 3.91; EM&A Log 2.2	Slope Upgrading Works	Kong Nga Po Main Site Kong Nga Po Road	Dust impact from soil nail works	<ul> <li>Three side enclosure with top shelter for cement mixing works</li> <li>Water spraying on soil nailing works</li> <li>Dusty materials exceeding 20 bags shall be stored in area sheltered on top and the three sides or covered entirely by impervious sheeting</li> </ul>	By sub-contractor at KNP Road

Ref*	Proposed Construction	Location/Working Period	Anticipated Major	Recommended Mitigation Measures	Photo Records (Partial)
	Method**		Impacts		
EIA 5.6.1.2; EM&A Log 4.2	(Cont') Slope Upgrading Works	(Cont') Kong Nga Po Main Site Kong Nga Po Road	Water	<ul> <li>Deploy desilting/sedimentation devices for wastewater treatment prior to discharge</li> <li>Establish soil berm with retention pit to control water outflow</li> </ul>	26.06.2023
EIA 4.4.6; EM&A Log 3.2			Noise	<ul> <li>Regular inspection and maintenance of plant and equipment in good condition</li> <li>Provide noise barriers for soil nailing works where near the sensitive receiver</li> </ul>	By main contractor at KNP Road  24.66.2023  By sub-contractor at KNP Road

Ref*	Proposed Construction Method**	Location/Working Period	Anticipated Major Impacts	Recommended Mitigation Measures	Photo Records (Partial)
EIA 10.11, EM&A Log 9.4	(Cont') Slope Upgrading Works	(Cont') Kong Nga Po Main Site Kong Nga Po Road	Ecology Concern	<ul> <li>Provide training to frontline workers for the conservative species</li> <li>Provision of protective fence for the conservative species</li> <li>Regular inspection for concerned vegetation</li> </ul>	By main contractor at KNP Main Site
EIA Table 10.11 EM&A Table 9.1			Landscape and visual impact	<ul> <li>Properly fenced off the conservative species</li> <li>Preservation of existing trees will be undertaken in accordance with DEVB TC(W) 7/2015 and Guidelines for Tree Risk Assessment and Management Arrangement</li> </ul>	01.06.2023  By main contractor at KNP Road

Ref*	Proposed	Location/Working	Anticipated	Recommended Mitigation Measures	Photo Records (Partial)
	Construction	Period	Major		
	Method**		Impacts		
EIA	Road and	Kong Nga Po Main	Air	• Use of regular water spraying (once	The state of the s
3.91;	Associated	Site	Dust impact	every 1.25 hours or 8 times per day) at	## 17 mm 17
EM&A	Works	Kong Nga Po Road	from	all active works area exposed site	The second secon
Log			excavation	surfaces and unpaved roads, particularly	
2.2			activities	during dry weather	THE REAL PROPERTY OF THE PARTY
			and earth	Regular inspection and maintenance of	
			moving	plant and equipment in good condition	TOTAL CONTROL CONTRO
				Regularly clean up stockpiles and debris	The state of the s
				to avoid accumulation of materials	12.06.2023
					By main contractor at KNP Road
EIA			Water	Provide desilting/sedimentation devices	
5.6.1.2;				for wastewater treatment before	
EM&A				discharge	
Log					<b>一种大大大大大大大大大大大大大大大大大大大大大大大大大大大大大大大大大大大大</b>
4.2					TO OCH THE OWN
					M-2 wrong M-3 Al Aris of Lake
					Sixing Sixing
					, -4,
					(9 (v) (17.05.2023
					By main contractor at KNP Road

Ref*	Proposed	Location/Working	Anticipated	Recommended Mitigation Measures	Photo Records (Partial)
	Construction	Period	Major		
	Method**		Impacts		
EIA	(Con't)	(Con't)	Noise from	• Enclose the noisy part of machineries	
4.4.6;	Road and	Kong Nga Po Main	roadworks	with noise isolating mats during hard	
EM&A	Associated	Site		surface breaking	
Log 3.2	Works	Kong Nga Po Road			19.06.2025
					By sub-contractor at KNP Road
EIA			Chemical	• Drip tray and chemical spillage kit shall	
7.5.1.4; EM&A Log 6.2			Waste	be provided on site	泉油(Dissel Oil) 東油(Dissel Oil) 東東山(Dissel Oil)
	(Con't)	(Con't)			
	Road and	Kong Nga Po Main			
	Associated Works	Site Kong Nga Po Road			25.05.2023
					By main contractor at KNP Road

Ref*	Proposed	Location/Working	Anticipated	Recommended Mitigation Measures	Photo Records (Partial)
	Construction	Period	Major		
	Method**		Impacts		
EIA			Landscape	• Properly fenced off the conservative	
Table			and visual	species	
10.11			impact	• Properly implement temporary traffic	
EM&A				arrangement which control construction	
Table				area to minimize landscape and visual	
9.1				impacts	
					24.06.2028
					By main contractor at KNP Road

APPENDIX L WASTE GENERATION IN THE REPORTING MONTH

### Environmental Permit No.: EP-510/2016

# Monthly Summary Waste Flow Table for <u>2020</u>

		Actual	Quantities of In	nert C&D Waste	Generated Mo	nthly		Actual Quantitie	es of C&D Waste	Generated Montl	ıly
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metal	Paper/Cardboard Packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. General Refuse
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
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

### Environmental Permit No.: EP-510/2016

# Monthly Summary Waste Flow Table for 2021

		Actual	Quantities of In	nert C&D Waste	Generated Mor	nthly		Actual Quantitie	es of C&D Waste	Generated Month	ıly
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metal	Paper/Cardboard Packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. General Refuse
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
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

### Environmental Permit No.: EP-510/2016

# Monthly Summary Waste Flow Table for <u>2022</u>

		Actual	Quantities of In	nert C&D Waste	Generated Mon	nthly		Actual Quantitie	es of C&D Waste	Generated Montl	nly
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metal	Paper/Cardboard Packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. General Refuse
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
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

### Environmental Permit No.: EP-510/2016

# Monthly Summary Waste Flow Table for 2023

		Actual	Quantities of In	nert C&D Waste	Generated Mon	nthly		Actual Quantitie	es of C&D Waste	Generated Montl	nly
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metal	Paper/Cardboard Packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. General Refuse
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
Cumulative up to 2022	851.89581	0.00000	334.98767	399.67493	105.38185	5.61413	0.00000	0.00000	0.00000	0.00000	6.23723
Jan	1.74468	N/A	0.00000	0.00000	1.66413	0.00000	0.00000	0.00000	0.00000	0.00000	0.08055
Feb	6.16174	N/A	0.00000	0.37018	5.71394	0.00000	0.00000	0.00000	0.00000	0.00000	0.07762
Mar	1.48006	N/A	0.00000	0.00000	1.41025	0.00000	0.00000	0.00000	0.00000	0.00000	0.06981
Apr	0.64705	N/A	0.00000	0.00000	0.59785	0.00000	0.00000	0.00000	0.00000	0.00000	0.04921
May	0.61516	N/A	0.00000	0.00000	0.48302	0.00000	0.00000	0.00000	0.00000	0.00000	0.13215
Jun	0.93964	N/A	0.00000	0.00000	0.89660	0.00000	0.00000	0.00000	0.00000	0.00000	0.04303
Sub-Total	863.48415	0.00000	334.98767	400.04510	116.14764	5.61413	0.00000	0.00000	0.00000	0.00000	6.68960
Jul	0.00000	N/A									
Aug	0.00000	N/A									
Sep	0.00000	N/A									
Oct	0.00000	N/A									
Nov	0.00000	N/A									
Dec	0.00000	N/A									
Total	863.48415	0.00000	334.98767	400.04510	116.14764	5.61413	0.00000	0.00000	0.00000	0.00000	6.68960

### Environmental Permit No.: EP-510/2016

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

Contracto No.: ND/2018/01

#### 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

<sup>\*</sup>The quantity of Inert Materials reused in the contract to be updated upon surveying record

### APPENDIX M COMPLAINT LOG

### Appendix M - Complaint Log

**Reporting month: June 2023** 

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	19 <sup>th</sup> August 2020	The complainant complained about the construction noise nuisance of the Kong Nga Po Road and requested noise monitoring and mitigation measures to lower the noise level.	According to the results from regular noise monitoring, no Limit Level Exceedance was recorded at sensitive receivers since the commencement of the construction of the Project. In addition, there was no environmental deficiency regarding construction noise impact recorded during site inspection. It is considered that no adverse construction noise impact was brought to the nearby sensitive receivers due to the site works in July and August 2020.  Upon receipt of the complaint, the Contractor had undertaken the follow up action as follow:  • Erect noise isolating mat at Portion B1 to reduce noise nuisance arising from the site  Nevertheless, the Contractor was reminded to fully implement the relevant noise mitigation measures according to the EM&A Manual on site, such as:  • Selection of quieter plant;  • Provision of sufficient noise mitigation measures (e.g. movable noise barrier, noise enclosure. acoustic shed, noise insulating fabric etc.) for the site activities on nearby NSRs where appropriate.  • To strengthen site supervision and provide regular training to the workers to increase awareness of their environmental responsibilities and minimize the noise impact	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.  According to EM&A Manual of the Project, the	
					complaint was referred to the ET for investigation. Adhoc 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.	
C-002	EP3/N07/RN/ 21538-20	Kong Nga Po Road	22 <sup>nd</sup> September 2020	The complainant complained about the polluting effluent discharged from construction site, leading to flooding and pollution	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.	Closed
				problem.	In order to avoid any circumstances that may lead to the complaint, ET and IEC have recommended enhancement on water quality mitigation measures. The Contractor had undertaken the follow up actions and additional mitigation measures on drainage system to minimize the water quality impact arising from the construction works as follow:  • Provision of soil berm at edge near retaining wall DAM Bay 43-46  • Setting up of wastewater treatment facilities near wheel washing bay	

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

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

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	28 <sup>th</sup> October 2020	The complainant complained about the noise generated from the construction activities at Slope Feature A that caused annoyance to his family.	According to the results from regular noise monitoring, no Limit Level exceedance was recorded at sensitive receivers during the time of complaint. In addition, there was no environmental deficiency regarding construction noise impact was recorded during site inspection. In view of the above, it is considered that no adverse construction noise impact was brought to the nearby sensitive receivers due to the site works.  Upon receipt of the complaint, the Contractor had undertaken the follow up action as follow:  Setting up of double layers of noise barrier to block the transmission of noise from breaking point to Noise Sensitive Receivers;  Conducting internal noise monitoring to ensure the noise mitigation measures are properly implemented; and  To check and maintain the noise insulating fabric enclosed the noisy part of the breaker.  Nevertheless, the Contractor was reminded to fully implement the relevant noise mitigation measures according to the EM&A Manual on site, such as  To frequently check and maintain the acoustic materials wrapped on noisy part of PME and ensure no gaps between noise barriers;  To proactively identify any potential construction noise impact to NSRs and provide sufficient mitigation measures if necessary;  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
					<ul> <li>increase awareness of their environmental responsibilities and minimize the noise impact to the nearby residents during working hours as well as restricted hours;</li> <li>To provide notification to nearby villagers in Kong Nga Po for potential noisy works at works area</li> </ul>	
C-006	N/A	Portion C at Kong Nga Po Road	30 <sup>th</sup> 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	30 <sup>th</sup> 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	19 <sup>th</sup> April 2021	The complainant complained about suspected dumping soil at nullah, causing blockage and flooding near lamp post BD2370.	According to the finding of <i>ad-hoc</i> 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.  Existing U-channel near slope toe had been covered	Closed

Complaint Log Ref.	EPD Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
					and surface runoff was guided to sedimentation tank by submersible pump. No discharge was taken place due to dry season and excavation was not a wastewatergenerated activity.	
					Upon receipt of the complaint, the Contractor had undertaken the follow up action as follow:  • Excavated slop had been covered by erosion mat  • Strictly implemented trip ticket system to monitor the C&D waste disposal  • Deployed sufficient submersible pump and wastewater treatment facilities for the surface runoff treatment	
C-009	N/A	Kong Nga Po Road (Feature A)	22 <sup>nd</sup> October 2021	The complainant complained about noise generated from rock breaking activities at Construction Site caused nuisance to his family and the village.	In addition, Contractor has also undertaken the follow up action as follow:  • The hammer of excavator had been wrapped with	Closed

Complaint Log Ref.	EPD Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
					<ul> <li>To frequently check and maintain the acoustic materials wrapped on noisy part of PME and ensure no gaps between noise barriers;</li> <li>To proactively identify any potential construction noise impact to NSRs and provide sufficient mitigation measures if necessary;</li> <li>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</li> <li>To provide notification to nearby villagers in Kong Nga Po for potential noisy works at works area.</li> </ul>	
C-010	N/A	Kong Nga Po Road	18 <sup>th</sup> 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	impact to NSRs and corresponding mitigation	Closed

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

Complaint Log Ref.	EPD Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
					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	22 <sup>nd</sup> December 2021	The complainant complained about soil / muddy water discharging out from construction site near 警察訓練學校at Kong Nga Po Road	Internal movement of excavated materials by dump truck were carried out by ND/2018/01 at 3NW-C/C37 near Lamp Post BD2369 and RD-A near Lamp Post BD2356, and both near the Police Dog Unit and Force Search Unit Training School as mentioned in the complaint.  The following was observed during the investigation:  • wheel washing facilities have been provided for vehicles and plants leaving the works areas;  • the section before the site exits have been paved with backfall to prevent the wheel washing water from entering the public road;  • frontline worker was carrying out public road washing for public cleanliness in the perspective of the general public;  • no earth, mud or muddy water were deposited on roads.  Enhancement measures have been carried out RD-A to restore the pavement quality and further prevent the wheel washing water from entering the public road.	Closed
C-012	N/A	Works Area Near Lamp Post	3 <sup>rd</sup> May 2022	The complainant complained about the following issues:	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	Closed

Complaint Log Ref.	EPD Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
		GD0460 at Kong Nga Po Road		<ul> <li>Noise from construction activities that caused nuisance to public</li> <li>Vibration may cause damage to nearby structure</li> <li>Suspected muddy water discharged into private drainage</li> </ul>	during the investigation as below:  Noise & Vibration  - Additional noise barrier has been erected for the pre-boring works to minimize the noise transmitted	

Complaint Log Ref.	EPD Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
					<ul> <li>Leq,T = 58.7dB(A) that no exceedance of noise level from the pre-boring works.</li> <li>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.</li> <li>Muddy Water Discharge</li> <li>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.</li> </ul>	
C-013	N/A	Works Area Near Lamp Post BD2355 at Kong Nga Po Road	23 <sup>rd</sup> 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:  - no vibration was noticed during the site inspection at Works Area "RD-A" for the pre-boring works on 15 June 2022  - 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 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
					<ul> <li>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</li> <li>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</li> </ul>	
C-014	N/A	Works Area Near Lamp Post GD0460 at Kong Nga Po Road	17 <sup>th</sup> 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.  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.  In addition, the suspected complaint location is an existing low-lying area even before the 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.	Closed

Complaint Log Ref.	EPD Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
					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.	
C-015	EP3/N07/RN/03386- 23	Construction sites along the Kong Nga Po Road	7 <sup>th</sup> Feb 23	The complainant complained about the sand and mud brought onto the traffic road by the dump trucks due to improper wheel washing before leaving the construction sites along the Kong Nga Po Road.	According to the investigation, Kong Nga Po Road involves different road users besides the construction site under Contract No. ND/2018/01 including some workshops and container yards while they also have interfaces with the public traffic road and vehicle inand-out activities.  Referring to the site inspection, no sand and mud at the site exit points were observed. Wheel washing measure was provided and wheel washing has been implementing at site exit points. As a preventive measures, workers performed road washing regularly to maintain cleanliness at interfaces.  Based on the site condition and observations abovementioned, the complaint is considered non-project-related.	Closed
C-016	N/A	Works area "RD-D" at Kong Nga Po Road	6 <sup>th</sup> Mar 23	The complainant complained about dust generated from construction activities without proper dust suppression measures	Site clearance and materials exportation works were conducting at the time of the complaint. The works were commenced on 2 March 2023 and completed on 8 March 2023.  1) Water spraying has been implementing at the site clearance areas during the works for dust suppression.  2) The surface maintained wet and no construction dust was observed during inspection.  3) the operator has controlled the dropping height from which the materials dropped into the dump bodies of	Closed

Complaint Log Ref.	EPD Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
					the dump truck to a practical minimum to prevent construction dust generation.  According to the video provided by the complainant, the complaint is project related.	
C-017	N/A	Works area "Feature M" at Kong Nga Po Road	16 <sup>th</sup> Mar 23	The complainant complained about dust generated from construction sites	1 0	Closed

Complaint Log Ref.	EPD Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
C-018	EP3/N07/RN/06950- 23	Works area at RD-C1 at Kong Nga Po Road	15 <sup>th</sup> Mar 23	The complainant complained about noise generated from construction activities	Sheet piles removal works under the Contract No. ND/2018/01 at works area of RD-C1 was commenced on 9 March 2023 and completed on 18 March 2023. Noise mitigation measures have been implemented during the works:  1) The view from the suspected location of complaint to noise source point of the sheet piles removal works has been blocked by the physical structure.  2) Self-monitoring on noise level at the suspected location of complaint has been conducted on 15 March 2023 during the sheet piles removal works. No Limit Level, 75B(A) exceedance was recorded.	Closed
C-019	N/A	Works Area – Feature M at Kong Nga Po Road	16 <sup>th</sup> June 2023	Public complaint via 1823 received by DSD on 16 June 2023 and referred to CEDD on 21 June 2023. The complainant concerned the muddy water discharge from outfall and potential impact to the downstream natural stream during heavy rain.	<ol> <li>The complaint is not project-related due to the investigation results as follow: -         <ol> <li>manholes have been covered and no rain water can enter the drainage system at Feature M.</li> <li>the level of manholes opening is higher than the backfill level of the platform and no surface runoff can enter the drainage system at Feature M.</li> <li>no muddy water or surface runoff entering the drainage system at Feature M was observed.</li> </ol> </li> <li>the treatment of surface runoff at Feature M has followed the Temporary Drainage Management Plan (TDMP) rev. H that the surface runoff is diverted into and captured at the retention pit and then pumped into the Wastewater Treatment Plant at Abutment B for treatment before discharging into the existing catch pit.</li> </ol> <li>the existing catch pit used for discharging the treated effluent is not connected to the newly</li>	Closed

Complaint Log Ref.	EPD Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
					constructed outfall.	
					6) monthly sampling and testing for discharged	
					effluent from the wastewater treatment plant has	
					been conducted on 30 June 2022 and no exceedance was recorded.	
					exceedance was recorded.	

**Cumulative Complaint Log** 

Reporting Period	Total no. of Complaint Received	
This reporting month	1	
From 3 <sup>rd</sup> July 2020 to end of the reporting month	19	

### APPENDIX N SUMMARY OF SUCCESSFUL PROSECUTION

### Appendix N - Summary of Successful Prosecution

Date of Successful Prosecution	Details of the Successful Prosecution	Status	Follow Up	Total no. Received in this Reporting Month	Total no. Received since Project Commencement