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Report No.: 0064/18/ED/0616A

MONTHLY EM&A REPORT

September 2021

Client : Civil Engineering and Development
Department, HKSAR

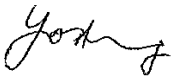
Contract No. : NDO 03/2018

Contract Name : Road Widening and Retrofitting Noise Barriers
on Tai Po Road (Sha Tin Section)

Report No. : 0064/18/ED/0616A

Prepared by : Tommy Ho

Reviewed by : Rex Chow

Certified by : 

David Hung
Environmental Team Leader
Fugro Technical Services Limited



Our ref: PL-202110009

Unit 2813, Level 28,
Tower I, Metroplaza,
223 Hing Fong Road, Kwai Fong,
N.T., Hong Kong.

Attention: Mr. Joseph YAN

13 October 2021

Dear Joseph,

NE/2017/05

**Road Widening and Retrofitting Noise Barriers on Tai Po Road (Sha Tin Section)
Monthly EM&A Report for September 2021**

I refer to the email of the ET regarding to the captioned Monthly EM&A Report with report No. 0064/18/ED/0616A, I have no adverse comment on it and verify this monthly report according to section 1.9 of the Environmental Permit with Permit No. EP- 463/2013/B

Yours faithfully,

A handwritten signature in black ink, appearing to be 'Li Wai Ming Kevin'.

Li Wai Ming Kevin
Independent Environmental Checker

cc. CRE – Mr. YU Albert (by email only: albert.yu@aecom.com)
CEDD – Mr. YAN Joseph (by email only: jkcyan@cedd.gov.hk)



FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre

5 Lok Yi Street, Tai Lam

Tuen Mun, NT

Hong Kong

Date 15 October 2021

Our Ref. MCL/ED/0400/2021/C

The EIA Ordinance Register Office
Environmental Protection Department
27/F, Southorn Centre,
130 Hennessy Road, Wan Chai, Hong Kong
Attn: Ms. LAU Yee Ching, Eva

BY HAND & E-MAIL

Dear Ms. Lau,

Contract No. NE/2017/05

Road Widening and Retrofitting Noise Barriers on Tai Po Road (Sha Tin Section)

Environmental Permit: EP-463/2013B

Submission of Monthly EM&A Report September 2021 (0064/18/ED/0616A)

Pursuant to EP-463/2013/B Condition 3.4, we hereby submit three hardcopies and two e-copy of the monthly EM&A Report (0064/18/ED/0616A) for your retention. This monthly EM&A Report has been certified by ETL and verified by IEC accordingly.

Thank you for your attention, should there be any comments or queries, please contact our Environmental Team Leader David Hung at 3565-4371.

Yours faithfully,
for and on behalf of
FUGRO TECHNICAL SERVICES LIMITED

David Hung
Environmental Team Leader

c.c.	CEDD	Attn: Mr. Joseph Yan / Mr. Kevin Yip (by E-mail)
	AECOM	Attn: Mr. Albert Yu / Mr. Andrew Cheng / Mr. Jacky Tse / Mr. Eric Yau (by E-mail)
	IEC	Attn: Mr. Kevin Li / Mr. Tandy Tse (by E-mail)
	CCZJV	Attn: Mr. Anthony Poon / Ms. Kimberly Wong (by E-mail)

Encl.

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EXECUTIVE SUMMARY

- i. The Civil Engineering and Development Department HKSAR has appointed Fugro Technical Services Limited (FTS) to undertake the Environmental Team services for the Project and implement the EM&A works.
- ii. This Monthly EM&A report presents the environmental monitoring and audit works for the period between 1 September 2021 and 30 September 2021. As informed by the Contractor, major activities in the reporting month were summarized as below table:

Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
<ul style="list-style-type: none"> • Tree Works (Including Preservation / Felling / Pruning / Transplantation) • Noise Barrier Foundation and Erection Works • Sheet Pile and Road Reconstruction Works • Road Maintenance Works 	<ul style="list-style-type: none"> • Tree Works (Including Preservation / Felling / Pruning / Transplantation) • Noise Barrier Foundation and Erection Works • Sheet Pile and Road Reconstruction Works • Road Maintenance Works 	<ul style="list-style-type: none"> • Trial Pits Excavation • Tree Works (Including Preservation / Felling / Pruning / Transplantation) • Construction / Diversion of Underground Utilities, Including ELS Works and Sheet Piling • Retaining and Lagging Wall Construction Works • Construction of Cycle Track Subway, Pump Room and Stem Wall Construction Works • Construction Work for Temporary Site Access Relocation for SR6 Construction Works • Pre Bore H Pile Construction Works • Profile Barrier and Stem Wall Construction Works • Construction Works for N263 Bridge Deck Widening • ELS Works at SHA for Widening of SR3 • Piezometer for Underground Water Pressure Measurement • Road Maintenance Works 	<ul style="list-style-type: none"> • Trial Pits Excavation • Tree Works (Including Preservation / Felling / Pruning / Transplantation) • Noise Barrier Foundation Works • Mini Pile Construction Works • Road Maintenance Works 	<ul style="list-style-type: none"> • Trial Pits Excavation • Tree Works (Including Preservation / Felling / Pruning / Transplantation) • Noise Barrier Foundation Works • Mini Pile Construction Works • Stem Wall and Drainage Construction Works • Construction work at Slope and Sheet Pile Works • Road Maintenance Works

Breaches of the Action and Limit Levels

- iii. 24-hour and 1-hour TSP impact monitoring were carried out in the reporting month, no Action / Limit Level exceedance was recorded during the period.
- iv. Day time construction noise monitoring was carried out in the reporting month, no Action / Limit Level exceedance was recorded during the period.

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- v. Regular night time noise monitoring was carried out on 2, 9, 16, 23 and 29 September 2021 respectively and no exceedance case was recorded between 2300 and 0700 of the next day during the reporting month.

Complaint, Notification of Summons and Successful Prosecution

- vi. One complaint was received in the reporting period. Drainage Services Department (DSD) issued a notice (Ref: MS 8/0/CE2815/0 pt.6) to the Engineer's Representative (AECOM) after their morning inspection on 1st September 2021 concerning the improperly treated water being discharged from the construction site near Fung Wo Estate of the Project to nearby public stormwater drainage system, and of the consequence of contaminating the watercourse at Shing Mun River.

Reporting Changes

- vii. There was no reporting change in the reporting month.

Future Key Issues

- viii. The key issues to be considered in the coming reporting month include:

Potential environmental impacts arising from the above construction activities are mainly associated with construction dust, construction noise, water quality, waste management and landscape and visual impact.



1. INTRODUCTION

1.1 Background

1.1.1 Contract No. NE/2017/05 – Road Widening and Retrofitting Noise Barriers on Tai Po Road (Sha Tin Section) (TPR-ST) (hereafter referred as “the Contract”), is the Works Contract involved the construction of road widening and retrofitting noise barriers on TPR-ST.

1.1.2 The Works of road widening on TPR-ST is classified as a designated project (DP) under the Part I of Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499). The scale and scope of DP is classified as below:

- Widening and reconstruction of an approximate 1.2 km long of the existing Tai Po Road (Sha Tin Section) from dual 2-lane to dual 3-lane carriageway; and improvement of the existing Sha Tin Rural Committee Road and its junctions.

1.1.3 The Environmental Monitoring and Audit (EM&A) programme under this Contract is governed by the Environmental Permit (EP) (EP No: EP-463/2013/B) and the updated EM&A Manual (Reference No.: 0064/18/ED/0122D). The Works to be executed under this Contract and corresponding EPs include but not be limited to the following main items:

(i) Road widening works of TPR-ST:

- a. widening of TPR-ST of about 1.1 kilometres between Sha Tin Rural Committee Road (STRCR) and Fo Tan Road from dual two-lane to dual three-lane;
- b. modification to the existing diamond interchange at TPR-ST / STRCR (STRCR Interchange);
- c. provision of two pedestrian lifts, re-provision of staircase and cycle track ramp at the modified STRCR Interchange;
- d. modification of existing cycle track subway no. NS30 near Sha Tin Plaza;
- e. modification of the existing footbridge no. NF40 across TPR-ST near Wo Che Street;
- f. modification of the existing footbridge no. NF66 near Fung Wo Lane;
- g. installation of noise mitigation measures between Citylink Plaza and Mei Wo House of Wo Che Estate;
- h. associated drainage works, waterworks, street lighting works and traffic control and surveillance system (TCSS).

(ii) Retrofitting of noise barriers along TPR-ST:

- (a) western section between Citylink Plaza and Scenery Court;
- (b) eastern section between Mei Wo House of Wo Che Estate and Fo Tan Road; and
- (c) associated drainage works, waterworks and street lighting works.

(iii) Associated street furniture, road marking, traffic signs, directional signs, services and utilities, and

(iv) Associated landscaping works.

1.1.4 The location and boundary of the site is shown in **Figure 1**.



1.1.5 This Monthly EM&A report is required under EP-463/2013/B Condition 3.4. It is to report the results and findings of the EM&A programme required in the updated EM&A Manual.

1.1.6 This is the 34th monthly EM&A Report which summarized the impact monitoring results and audit findings for the construction of the road widening and retrofitting noise barriers on Tai Po Road (Sha Tin Section) (TPR-ST) (hereafter referred as “the Project”) within the period between 1st September 2021 and 30th September 2021.

1.2 Project Organization

1.2.1 The project proponent was the Civil Engineering and Development Department, HKSAR (CEDD). AECOM Asia Co. Ltd. (AECOM) was commissioned by CEDD as the Engineer for the Project. Acuity Sustainability Consulting Limited – Nature & Technologies (HK) Limited Joint Venture was commissioned as the Independent Environmental Checker (IEC). China railway – China Railway First Group – Zhen Hua Engineering Joint Venture (CCZJV) was appointed as the main contractor for the construction works under the contract NE/2017/05. Fugro Technical Services Limited (FTS) was appointed as the Environmental Team (ET) by CEDD to implement the EM&A programme for the Project.

1.2.2 The organization structure is shown in **Appendix B**. The key personnel contact names and numbers for the Project are summarized in **Table 1.1**.

Table 1.1 Contact Information of Key Personnel

Party	Position	Name	Telephone
Project Proponent (CEDD)	Senior Engineer	Mr. Joseph Yan	3152 3470
Engineer’s Representative (AECOM)	Chief Resident Engineer	Mr. Albert Yu	2276 0618
IEC (Acuity Sustainability Consulting Limited – Nature & Technologies (HK) Limited Joint Venture)	Independent Environmental Checker	Mr. Kevin Li	9779 2247
Main Contractor (CCZJV)	Site Agent	Mr. Anthony Poon	9811 5135
	Environmental Officer	Ms. Kimberly Wong	5222 4603
ET (FTS)	Environmental Team Leader	Mr. David Hung	3565 4371



1.3 Construction Programme and Activities

1.3.1 The construction of the Project commenced on 29 November 2018 and is expected to complete in 2023. The construction programme is shown in **Appendix A**.

1.3.2 A summary of the major construction activities undertaken in the reporting month were shown in below table:

Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
<ul style="list-style-type: none"> • Tree Works (Including Preservation / Felling / Pruning / Transplantation) • Noise Barrier Foundation and Erection Works • Sheet Pile and Road Reconstruction Works • Road Maintenance Works 	<ul style="list-style-type: none"> • Tree Works (Including Preservation / Felling / Pruning / Transplantation) • Noise Barrier Foundation and Erection Works • Sheet Pile and Road Reconstruction Works • Road Maintenance Works 	<ul style="list-style-type: none"> • Trial Pits Excavation • Tree Works (Including Preservation / Felling / Pruning / Transplantation) • Construction / Diversion of Underground Utilities, Including ELS Works and Sheet Piling • Retaining and Lagging Wall Construction Works • Construction of Cycle Track Subway, Pump Room and Stem Wall Construction Works • Construction Work for Temporary Site Access Relocation for SR6 Construction Works • Pre Bore H Pile Construction Works • Profile Barrier and Stem Wall Construction Works • Construction Works for N263 Bridge Deck Widening • ELS Works at SHA for Widening of SR3 • Piezometer for Underground Water Pressure Measurement • Road Maintenance Works 	<ul style="list-style-type: none"> • Trial Pits Excavation • Tree Works (Including Preservation / Felling / Pruning / Transplantation) • Noise Barrier Foundation Works • Mini Pile Construction Works • Road Maintenance Works 	<ul style="list-style-type: none"> • Trial Pits Excavation • Tree Works (Including Preservation / Felling / Pruning / Transplantation) • Noise Barrier Foundation Works • Mini Pile Construction Works • Stem Wall and Drainage Construction Works • Construction work at Slope and Sheet Pile Works • Road Maintenance Works

1.4 Status of Environmental Licenses, Notifications and Permits

1.4.1 A summary of the relevant environmental licenses, permits and/or notifications on environmental protection for this Contract is presented in **Table 1.2**.



Table 1.2 Relevant Environmental Licenses, Permits and/or Notifications

Environmental License / Permit / Notification	Reference Number	Valid From	Valid Till
Environmental Permit for whole project	EP-463/2013/B	20/12/2016	Nil
Receipt of the notification of construction dust production	Form NA	27/7/2018	Nil
Construction Waste Disposal Account	7031619	17/8/2018	Nil
Chemical Waste Producer Registration	5318-758-C4314-01	06/11/2018	Nil
Effluent Discharge License (Zone 1 – 5)	WT00032446-2018	09/11/2018	30/11/2023
Effluent Discharge License (Shui Chong Street)	WT00033829-2019	25/06/2019	30/06/2024
Construction Noise Permit for Road Closure – General Night Works (Zone 1 – 5)	GW-RN0239-21	12/05/2021	11/11/2021
Construction Noise Permit for Drilling and Grouting Works for 11kV Cable Trench (Zone 4)	GW-RN0364-21	07/06/2021	06/09/2021
Construction Noise Permit for Sheet Pile Removal and Road (Surface Drain) Reconstruction Works (Zone 1 – 2)	GW-RN0365-21	08/06/2021	06/09/2021
Construction Noise Permit for the Operation of Water Pump (Zone 1 – 5)	GW-RN0433-21	01/07/2021	30/09/2021
Construction Noise Permit for Road Closure, Cross Road Beams Erection (Zone 3, under STRCR)	GW-RN0459-21	17/07/2021	30/09/2021
Construction Noise Permit for Road Closure, Road Maintenance and Modification Works (Zone 3)	GW-RN0598-21	22/08/2021	17/11/2021
Construction Noise Permit for Road Closure, General Night Works (Zone 1 – 5)	GW-RN0600-21	22/08/2021	19/02/2022
Construction Noise Permit for Road Closure, Lane Shifting Works (Zone 1 – 2)	GW-RN0636-21	05/09/2021	30/11/2021
Construction Noise Permit for Road Closure, Sheet Pile Removal and Road Reconstruction Works (Zone 1 – 2)	GW-RN0642-21	08/09/2021	06/12/2021



2. AIR QUALITY

2.1 Monitoring Requirement

In accordance with the updated EM&A Manuals, 24-hour & 1-hour Total Suspended Particulates (TSP) level at the designated air quality monitoring station are required. Impact 24-hour and 1-hour TSP monitoring should be carried out at least once every 6 days. The Action and Limit Levels of the air quality monitoring are given in **Appendix C**.

2.2 Monitoring Equipment

The 24-hour and 1-hour TSP air quality monitoring was performed using High Volume Air Samplers (HVS) and portable TSP Monitors located at each of the designated monitoring station respectively.

Table 2.1 and 2.2 summarizes the equipment used in air quality monitoring.

Table 2.1 24-hour TSP Monitoring Equipment

Item	Location	Brand	Model	Equipment	Serial Number
1	AMS 5	*Sibata	Model LD-3B	Sibata Portable TSP Monitors	892187
2	AMS 7A	*Sibata	Model LD-5R	Sibata Portable TSP Monitors	892185
3	AMS 14	*Sibata	Model LD-3B	Sibata Portable TSP Monitors	882189
4	AMS 15	*Sibata	Model LD-5R	Sibata Portable TSP Monitors	882149

*Notes: As electricity supply is not available and accessible for the High Volume Samplers (HVS) at AMS 5, 7A, 14 and 15 portable Laser Particle Photometer Monitors will be utilized for 24-hour TSP monitoring instead of High Volume samplers (HVS). The correlation between HVS and the portable Laser Particle Photometer Monitors are presented in Appendix D.

Table 2.2 1-hour TSP Monitoring Equipment

Item	Location	Brand	Model	Equipment	Serial Number
1	AMS 5	Sibata	Model LD-3B	Sibata Portable TSP Monitors	892187
2	AMS 7A	Sibata	Model LD-5R	Sibata Portable TSP Monitors	892185
3	AMS 14	Sibata	Model LD-3B	Sibata Portable TSP Monitors	882189
4	AMS 15	Sibata	Model LD-5R	Sibata Portable TSP Monitors	882149

2.3 Monitoring Methodology

2.3.1 24-hour TSP air quality monitoring by High Volume Air Samplers (HVS)

HVS Installation

The following guidelines were adopted during the installation of HVS:

- Sufficient support is provided to secure the samplers against gusty wind.
- No two samplers are placed less than 2 meters apart.
- The distance between the sampler and an obstacle, such as buildings, is at least twice the height that the obstacle protrudes above the sampler.
- A minimum of 2 meters of separation from walls, parapets and penthouses is required for rooftop samples.
- A minimum of 2 meters separation from any supporting structure, measured horizontally is required.
- No furnaces or incineration flues are nearby.



- Airflow around the samplers is unrestricted.
- The samplers are more than 20 meters from the drip line.
- Any wire fence and gate, to protect the sampler, should not cause any obstruction during monitoring.

Filters Preparation

Fiberglass filters (provided by the HOKLAS accredited laboratory) shall be used (Note: these filters have a collection efficiency of larger than 99% for particles of 0.3 μm diameter). A HOKLAS accredited laboratory (Fugro Technical Services Limited) is responsible for the preparation of 24-hr conditioned and pre-weighed filter papers for monitoring team.

All filters are equilibrated in the conditioning environment for 24 hours before weighing. The conditioning environment temperature is around 25°C and not variable by more than $\pm 3^\circ\text{C}$; the relative humidity (RH) is < 50% and not variable by more than $\pm 5\%$. A convenient working RH is 40%.

Operating / Analytical Procedures

Operating / analytical procedures for the air quality monitoring are highlighted as follows:

- Prior to the commencement of the dust sampling, the flow rate of the HVS are properly set (between 0.6 m^3/min and 1.7 m^3/min) in accordance with the EM&A manual. The flow rate shall be indicated on the flow rate chart.
- The power supply shall be checked to ensure the samplers worked properly.
- On sampling, the samplers shall be operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air quality monitoring station.
- The filter holding frame is then removed by loosening the four nuts and carefully a weighted and conditioned filter is centered with the stamped number upwards, on a supporting screen.
- The filter shall be aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter. Then the filter holding frame is tightened to the filter holder with swing bolts. The applied pressure should be sufficient to avoid air leakage at the edges.
- The shelter lid shall be closed and secured with the aluminum strip.
- The timer is then programmed. Information shall be recorded on the record sheet, which included the starting time, the weather condition and the filter number (the initial weight of the filter paper can be found out by using the filter number).
- After sampling, the filter shall be removed and sent to laboratory for weighing. The elapsed time is also recorded.
- Before weighing, all filters are equilibrated in a conditioning environment for 24 hours. The conditioning environment temperature should be between 25°C and 30°C and not vary by more than $\pm 3^\circ\text{C}$; the relative humidity (RH) should be < 50% and not vary by more than $\pm 5\%$. A convenient working RH is 40%. Weighing results are returned to MCL for further analysis of TSP concentrations collected by each filter.

2.3.2 24-hour TSP air quality monitoring by portable Laser Particle Photometer Monitors

Operating / Analytical Procedures

The measuring procedures of the 24-hr dust meter are in accordance with the Manufacturer's instruction Manual as follows:

- Pull up the air sampling inlet cover
- Change the Mode 0 to BG once
- Push Start/Stop switch once
- Turn the knob to SENSI.ADJ and press it
- Push Start/Stop switch once
- Return the knob to the position MEASURE slowly
- Push the timer set switch to set measuring time
- Remove the cap and make a measurement

Calculation of the value of 24-hr TSP concentration is given by the average of 24 calculated 1-hr TSP concentration, where the calculated 1-hr TSP concentration is given by the product of the direct reading and the K-factor based on the correlation results between the direct reading meter and high volume sampler.

2.3.3 1-hour TSP air quality monitoring

Operating / Analytical Procedures

The measuring procedures of the 1-hr dust meter are in accordance with the Manufacturer's instruction Manual as follows:

- Pull up the air sampling inlet cover
- Change the Mode 0 to BG once
- Push Start/Stop switch once
- Turn the knob to SENSI.ADJ and press it
- Push Start/Stop switch once
- Return the knob to the position MEASURE slowly
- Push the timer set switch to set measuring time
- Remove the cap and make a measurement

2.4 Maintenance / Calibration

2.4.1 24-hour TSP air quality monitoring

The following maintenance / calibration are required for the HVS:

- The high volume motors and their accessories are properly maintained. Appropriate maintenance such as routine motor brushes replacement and electrical wiring checking are made to ensure that the equipment and necessary power supply are in good working condition.
- All HVS shall be calibrated (five point calibration) using Calibration Kit upon installation and thereafter in every 3 months.
- A copy of the calibration certificates for the HVS and calibrator are provided in **Appendix D**.



2.4.2 1-hour TSP air quality monitoring

The portable TSP monitor should be calibrated at 1 year intervals.

2.5 Monitoring Locations

2.5.1 The Impact Air Monitoring Stations to be monitored should be selected based on the prevailing wind direction and their proximity to the active construction works. According to the Hong Kong Observatory, wind direction in September 2021 are north, north east and east. The most updated locations are summarized in **Table 2.3** and shown in **Figure 2a**.

Table 2.3 Location of Air Quality Monitoring Station

Monitoring Station	Location	Land uses
AMS 5	Tin Liu	Residential Village
AMS 7A	Sheung Wo Che	Residential Village
AMS 14	Ha Wo Che	Residential Village
AMS 15	Ha Wo Che	Residential Village

2.6 Results and Observations

2.6.1 The schedule of air quality monitoring in reporting month is provided in **Appendix E**.

2.6.2 No Action / Limit Level exceedance was recorded for 24-hr and 1-hr TSP at AMS 5, 7A, 14 and 15 in the reporting month.

2.6.3 During the reporting month, major dust sources include trial pits excavation, sheet pile and mini pile construction works, road reconstruction and maintenance works were observed in the site. Other factors such as road traffic along Tai Po Road may affect the monitoring results.

2.6.4 The weather conditions during the monitoring are provided in **Appendix K**.

2.6.5 The monitoring data of 24-hr and 1-hr TSP are summarized in **Table 2.4 and 2.5**. Detailed monitoring data are presented in **Appendix F**.

Table 2.4 Summary of 24-hr TSP Monitoring Results

Parameter	Monitoring Station	Average ($\mu\text{g}/\text{m}^3$)	Range ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
24-hr TSP in $\mu\text{g}/\text{m}^3$	AMS 5	72	48 – 86	156	260
	AMS 7A	58	46 – 76	171	
	AMS 14	66	48 – 89	174	
	AMS 15	67	47 – 81	172	

Table 2.5 Summary of 1-hr TSP Monitoring Results

Parameter	Monitoring Station	Average ($\mu\text{g}/\text{m}^3$)	Range ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
1-hr TSP in $\mu\text{g}/\text{m}^3$	AMS 5	88	63 – 118	340	500
	AMS 7A	73	49 – 115	344	
	AMS 14	82	61 – 119	350	
	AMS 15	80	57 – 102	350	

2.6.6 The Event and Action Plan for air quality is given in **Appendix H**.



3. NOISE

3.1 Monitoring Requirement

3.1.1 In accordance with the updated EM&A Manuals, L_{eq} (30min) monitoring is conducted for at least once a week during the construction phase between 0700 and 1900 on normal weekdays at the designated monitoring locations.

3.2 Monitoring Equipment

3.2.1 The sound level meter used in noise monitoring will comply with the International Electrotechnical Commission Publication 651:1979 (Type 1) and 804:1985 (Type 1) specifications as referred to in the Technical Memorandum issued under the Noise Control Ordinance (NCO).

3.2.2 Sound level calibrator will be used for the on-site calibration of the meter. This calibrator complies with the IEC Publication 942 (1988) Class 1 and ANSI S1.40 - 1984. Noise measurements were only accepted to be valid if the calibration levels from before and after the measurement agree to within 1.0dB.

3.2.3 Measurements shall be recorded to the nearest 0.1dB. Sound level meters are programmed to measure A-weighted equivalent continuous sound pressure level at 30-minute intervals between 0700 and 1900 on normal weekdays at least once a week when construction activities are underway.

Table 3.1 summarizes the noise monitoring equipment model being used for this project.

Table 3.1 Noise Monitoring Equipment

Item	Brand	Model	Equipment	Serial Number
1	Casella	CEL-63X Series	Integrating Sound Level Meter	1488271
2	Casella	CEL-63X Series	Integrating Sound Level Meter	1488293
3	Casella	CEL-63X Series	Integrating Sound Level Meter	1488295
4	Casella	CEL-63X Series	Integrating Sound Level Meter	1488304
5	Casella	CEL-120 Series	Calibrator	1677126
6	Casella	CEL-120 Series	Calibrator	2383886
7	Casella	CEL-120 Series	Calibrator	5230736
8	Casella	CEL-120 Series	Calibrator	5230758

3.3 Monitoring Parameters and Frequency

Table 3.2 presents the noise monitoring parameters and frequencies.

Table 3.2 Monitoring Parameters and Frequencies of Noise Monitoring

Parameter	Frequency and Period
L_{Aeq} (30min) L_{10} and L_{90} will be recorded for reference	At each station at 0700-1900 hours on normal weekdays at a frequency of once a week



3.4 Monitoring Methodology

3.4.1 The monitoring procedures are as follows:

- The monitoring station is set at a point 1m from the exterior of the sensitive receivers building façade and set at a position 1.2m above the ground.
- The battery condition is checked to ensure good functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time are set as follows:
 - frequency weighting : A
 - time weighting : Fast
 - measurement time : Weekly 30 minutes between 0700-1900 on normal weekdays
- Prior to and after noise measurement, the meter shall be calibrated using the calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement is more than 1.0 dB, the measurement will be considered invalid and repeat of noise measurement is required after re-calibration or repair of the equipment.
- Noise monitoring should be 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.
- Noise measurement should be paused during periods of high intrusive noise if possible and observation shall be recorded when intrusive noise is not avoided.
- At the end of the monitoring period, the Leq, L10 and L90 are recorded. In addition, site conditions and noise sources are recorded on a standard record sheet.

3.5 Maintenance / Calibration

3.5.1 Maintenance and Calibration procedures are as follows:

- The microphone head of the sound level meter and calibrator should be cleaned with a soft cloth at quarterly intervals.
- The sound level meter and calibrator should be calibrated annually by a HOKLAS laboratory.
- Relevant calibration certificates are provided in **Appendix D**.

3.6 Monitoring Locations

3.6.1 According to the updated EM&A Manual, 25 noise monitoring locations were included during the noise monitoring. The monitoring locations are summarized in **Table 3.3** and shown in **Figure 2b**.



Table 3.3 Location of Noise Monitoring Station

Monitoring Station	Location	Land Uses	Type of Measurement
NMS1	Scenery Court	Residential	Façade
NMS2	Villa Le Parc	Residential	Façade
NMS3	Hilton Plaza	Residential	Façade
NMS4	Tin Liu	Residential Village	Façade
NMS5A	Wai Wah Centre	Residential	Façade
NMS6A	Wai Wah Centre	Residential	Façade
NMS7	Tin Liu	Residential Village	Façade
NMS8	Shatin Plaza	Residential	Façade
NMS9	Lek Yuen Estate	Residential	Façade
NMS10A	Shatin Tsung Tsin School	School	Façade
NMS11	Sheung Wo Che	Residential Village	Façade
NMS12	SKH Holy Spirit Primary School	School	Façade
NMS13	Lek Yuen Estate	Residential	Façade
NMS14	Sheung Wo Che	Residential Village	Façade
NMS15	Ha Wo Che	Residential Village	Façade
NMS16	Ha Wo Che	Residential Village	Façade
NMS17	Shatin Pui Ying College	School	Façade
NMS18	Ha Wo Che	Residential Village	Façade
NMS19	Wo Che Estate	Residential	Façade
NMS20	Wo Che Estate	Residential	Façade
NMS23	Pai Tau	Residential Village	Façade
NMS24	Shatin Plaza	Residential	Façade
NMS25A	Sheung Wo Che	Residential Village	Façade
NMS26	Wo Che Estate	Residential	Façade
NMS27	Jockey Club Ti-I College	School	Façade

3.7 Results and Observations

- 3.7.1 The schedule of noise monitoring in reporting month is provided in **Appendix E**.
- 3.7.2 The exam schedules of the schools and Arrangements on Deferral of Class Resumption for All Schools are provided in **Appendix E**.
- 3.7.3 During the monitoring month, road traffic along Tai Po Road was observed which may affect the monitoring results.
- 3.7.4 According to the onsite observation, no raining was observed and no wind speed over 5 m/s was measured during the noise monitoring. The weather conditions during the monitoring month are provided in **Appendix K**.
- 3.7.5 The day time noise monitoring data are summarized in **Table 3.4**. Detailed monitoring data are presented in **Appendix G**.



Table 3.4 Summary of Day Time Noise Impact Monitoring Results

Monitoring Station	Leq (30min) Range, dB(A)	Leq (30min) Limit Level, dB(A)
	Construction Noise Level	
NMS1	63.6 – 67.0	75
NMS2	53.9 – 54.9	75
NMS3	65.6 – 68.7	75
NMS4	63.4 – 65.6	75
NMS5A	69.1 – 71.8	75
NMS6A	72.9 – 74.0	75
NMS7	63.3 – 68.9	75
NMS8	64.5 – 67.7	75
NMS9	61.8 – 65.9	75
NMS10A	62.3 – 63.5	70 ^[2,3]
NMS11	56.4 – 57.9	75
NMS12	63.6 – 64.3	70 ^[2,3]
NMS13	59.9 – 62.2	75
NMS14	61.8 – 64.8	75
NMS15	58.4 – 64.0	75
NMS16	62.7 – 63.8	75
NMS17	60.0 – 62.3	70 ^[2,3]
NMS18	60.2 – 63.4	75
NMS19	64.2 – 66.6	75
NMS20	60.2 – 64.4	75
NMS23	62.5 – 67.1	75
NMS24	64.1 – 68.1	75
NMS25A	59.3 – 66.5	75
NMS26	68.6 – 70.7	75
NMS27	64.2 – 66.0	70 ^[2,3]

Note: 1. Leq (30min) was measured at day-time (0700-1900) on normal weekdays.
 2. 70 dB(A) for school normal day. 65 dB(A) during the examination period.
 3. The school calendar are provided in **Appendix E**.

3.7.6 Regular night time noise monitoring were conducted on 2, 9, 16, 23 and 29 September 2021 and the results are summarized in **Table 3.5**. Detailed monitoring data are presented in **Appendix G**.



Table 3.5 Summary of Night Time Noise Impact Monitoring Results

Monitoring Station	Leq (15min) Range, dB(A)	Leq (15min) Limit Level, dB(A)	Leq (15min) Baseline, dB(A)
	Construction Noise Level		
NMS1	56.9 – 59.8	55	61.4
NMS2	51.1 – 53.2	55	49.7
NMS3	61.6 – 68.6	55	70.9
NMS4	59.0 – 62.5	55	62.6
NMS5A	49.8 – 68.0 ^{[2][4]}	55	67.9
NMS6A	63.0 – 68.9	55	71.5
NMS7	46.1 – 58.8 ^[2]	55	59.0
NMS8	58.7 – 62.4	55	64.4
NMS9	50.0 – 54.4 ^[2]	55	53.5
NMS11	50.9 – 54.9	55	53.2
NMS13	53.8 – 56.1 ^[2]	55	57.3
NMS14	50.4 – 54.1 ^[2]	55	54.1
NMS15	54.9 – 58.4	55	58.8
NMS16	51.7 – 59.2 ^[2]	55	60.1
NMS18	54.6 – 59.8	55	63.2
NMS19	59.4 – 61.2	55	61.7
NMS20	53.6 – 57.2	55	57.7
NMS23	47.9 – 57.9 ^[2]	55	59.9
NMS24	47.9 – 57.3 ^[2]	55	58.0
NMS25A	52.0 – 58.0	55	59.7
NMS26	49.4 – 61.0 ^[2]	55	61.2

- Note: 1. Leq (15min) was measured at night-time (2300-0700).
 2. If measured noise level (Leq) > limit level, Corrected noise level (CNL) is calculated as:

$$10 \times \log \left[\left(10^{\frac{\text{Measured noise level, Leq}}{10}} \right) - \left(10^{\frac{\text{Baseline noise level}}{10}} \right) \right]$$

 3. Detailed analysis of each monitoring location is provided in **Appendix G**.
 4. Exceedance due to traffic vehicle noise was observed on 2, 16 and 29 September 2021.

- 3.7.7 Day time construction noise monitoring was carried out in the reporting month, no Action / Limit Level exceedance was recorded during the period. For night time noise monitoring, no exceedance case was recorded between 2300 and 0700 of the next day due to construction during the reporting month.
- 3.7.8 The Action and Limit Levels for noise impact monitoring have been set and are presented in **Appendix C**.
- 3.7.9 The Event and Action Plan for noise is given in **Appendix H**.



4. LANDSCAPE AND VISUAL

4.1 Audit Requirements

4.1.1 In accordance with the EM&A Manual, the landscape and visual mitigation measures during the construction phase are primarily due to those associated temporary works for the construction of retrofitting noise barriers/enclosures. To ensure compliance with the intended aims of the measures, weekly site inspections are undertaken throughout the construction period.

4.1.2 According to the updated EM&A Manual, measures to mitigate landscape and visual impacts during construction should be checked to ensure compliance with the intended aims of the measures. The progress of the engineering works shall be regularly reviewed onsite to identify the earliest practical opportunities for the landscape works to be undertaken. The ET shall report on the Contractor's compliance on a weekly basis.

4.2 Results and Observations

4.2.1 Site audits were carried out to monitor and audit the implementation of landscape and visual mitigation measures. The summary of the site audits are given in **Appendix M**.

4.2.2 No non-compliance of the landscape and visual impact was recorded in the reporting month.



5. WASTE MANAGEMENT

5.1 Audit Requirements

5.1.1 The effective management of waste arising during the construction phase will be monitored through the site audit programme. Regular audits and site inspections should be carried out to ensure that the recommended good site practices and other mitigation measures are implemented by the Contractor.

5.1.2 The audit should look at all aspects of on-site waste management practices including the waste generation, storage, recycling, transport and disposal. The aims of waste audit are:

- to ensure the waste arising from the works are handled, stored, collected, transferred and disposed of in an environmentally acceptable manner;
- verify the implementation status and evaluate the effectiveness of the mitigation measures; and
- to encourage the reuse and recycling of material.

5.2 Results and Observations

5.2.1 C&D materials and wastes sorting were carried out on site. Receptacles were available for C&D wastes and general refuse collection.

5.2.2 The amount of wastes generated by the site activities in the reporting month is shown in **Appendix I**.



6. SITE INSPECTION

6.1 Site Inspection

- 6.1.1 Site inspections were carried out weekly to monitor the implementation of proper environmental pollution control and mitigation measures for the Project. A summary of the mitigation measures implementation schedule is provided in **Appendix J**.
- 6.1.2 In the reporting month, 5 site inspections were carried out on 2, 9, 16, 24 and 29 September 2021. The site inspection held on 24 September 2021 was joint inspection with the IEC, ER, the Contractor and the ET during the reporting period.
- 6.1.3 The follow-up actions requested by ET and IEC during the site inspections were completed, reported by the Contractor. All the rectifications during the reporting period were fulfilled with the requirement of Proposal of Site Inspection, Deficiency and Remedial Action. No outstanding issues were reported during the reporting month. Details of observations recorded during the site inspections are summarized in **Appendix M**.



7. ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE

7.1 Environmental Exceedance

- 7.1.1 24-hour and 1-hour TSP impact monitoring were carried out in the reporting month, no Action / Limit Level exceedance was recorded during the period.
- 7.1.2 Day time construction noise monitoring was carried out in the reporting month, no Action / Limit Level exceedance was recorded during the period. Regular night time noise monitoring was carried out on 2, 9, 16, 23 and 29 September 2021 respectively and no exceedance case was recorded between 2300 and 0700 of the next day during the reporting month.

7.2 Complaints, Notification of Summons and Prosecution

- 7.2.1 One complaint was received in the reporting period. Drainage Services Department (DSD) issued a notice (Ref: MS 8/0/CE2815/0 pt.6) to the Engineer's Representative (AECOM) after their morning inspection on 1st September 2021 concerning the improperly treated water being discharged from the construction site near Fung Wo Estate of the Project to nearby public stormwater drainage system, and of the consequence of contaminating the watercourse at Shing Mun River. The letter of concern was referred to Environmental Team (ET) on 2nd September 2021 at 3:24 p.m. for investigation.
- 7.2.2 According to the Main Contractor and AECOM, the major construction work at Zone 5 south boundary was mini-piling works (at the end of August). Two piling machines were operating either individually or simultaneously. There are approximate 130 nos. of pile planned to be installed, and mini-piling works are scheduled to be finished in January 2022. Originally, one WetSep (TW-WS1) and two sedimentation tanks (ST1 and ST2) were provided for handling the wastewater generated from the piling works and site surface runoff at the zone 5 south boundary. According to the information report and photo records provided by the Main Contractor, the sedimentation tanks (ST1 and ST2) were filled with muddy water and silt on 1st September 2021.

ET inspected the area at Zone 5 south boundary on 2nd, 9th, 16th and 29th September 2021. Observation, reminders and follow-up action were proposed and monitored by the ET on handling the wastewater generated from piling works and site surface run-off. Moreover, EPIs from EPD conducted the site inspection on 9th and 29th September 2021. The two inspection conducted by the EPIs focused on reviewing the general site condition, wastewater treatment facilities set-up, mitigation measures for preventing muddy water formation, handling the wastewater and surface run-off. Observation, recommendations and reminders proposed by the EPIs and ET are grouped and shown in **Appendix M**.

Rectification have been reported by the Main Contractor according to the observation and recommendation from ET and EPIs on 8th, 17th and 27th September 2021. During the 2nd joint site inspection, EPIs agreed the piling works can be restarted. However, EPIs reminded that the 2nd piling machine can only be operated until the 2nd WetSep is functioned properly and the effluent quality is acceptable. EPIs mentioned that follow-up inspection expected to be conducted in early or mid-October, focus on inspecting the wastewater treatment efficiency for piling works, paving of the soil surface, mitigation measures for handling the surface run-off. EPIs also mentioned that surprise inspection may be conducted in the future. According to the AECOM, the piling work was restarted on 30th September 2021.



According to this incident, the Main Contractor was reminded by ET to analyze and review the efficiency of the wastewater treatment system according to the construction activities regularly. The Contractor should provide regular maintenance, water quality testing and related checklist for ET and IEC review during the site inspection. The Main Contractor and related Sub-Contractor was reminded by ET and AECOM that the discharge of effluent needs to fulfil the requirement stated in the Water Discharge License (No. WT00032446 – 2018). AECOM and ET requested the Main Contractor to update the Temporary Drainage Management Plan according to the latest work activities. ET also requested the Main Contractor to update the description of the wastewater mitigation measures inside the Environmental Management Plan (EMP) and Environmental Management Report (EMR) and strictly implement to prevent similar case happen in the future.

7.2.3 Cumulative complaint log, summaries of complaints, notification of summons and successful prosecutions are presented in **Appendix L**.

8. IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES

8.1 Implementation Status

- 8.1.1 The Contractor has implemented environmental mitigation measures and requirements as stated in the EIA Review Report, the EP and the updated EM&A Manuals. The implementation status of the mitigation measures during the reporting month is summarized in **Appendix J**.
- 8.1.2 According to the environmental audit performed in the reporting month, the following recommendations were made:

Air Quality Impact

- The stockpile of excavated soil waiting for backfilling should be covered with tarpaulin (Zone 4, NF40).
- NRMM labels should be provided for on-site machineries (Zone 4, SB).
- Decolourized NRMM label should be replaced with a new one and displayed at a conspicuous position (Zone 3, South Boundary, SR3).

Construction Noise Impact

- No specific observation was identified in the reporting month.

Water Quality Impact

- Soil runoff to the u-channel should be concerned and enhanced the mitigation measures. The function of the on-site u-channel should be checked and de-silted regularly to avoid silt accumulation, channel blockage, or muddy water outflow at the discharge point (Zone 3, S06, Tank TP401).
- The contractor should review the sedimentation tanks treatment efficiency for handling the muddy water generated from pilling works. Although alum was added into the sedimentation tank, there was insufficient time for reaction and settling. Muddy water was observed at the public drainage system outside the site entrance. The public drainage should be cleaned immediately and avoid muddy water discharge (Zone 3, S05, near site entrance).
- According to the contractor, the pilling works were stopped during the ET site walk. However, ET strongly advises the contractor to review the sedimentation tanks treatment efficiency for handling the muddy water generated from pilling works (either single or double machine operation). A poor condition was observed at multiple sedimentation tanks, which were filled with concentrated muddy water and silt. A proper rectification is needed to prevent any muddy water from entering the public drainage system. Moreover, the on-site drainage channel was filled with rock and silt. Cleaning, de-silting and mitigation measures are needed to ensure no muddy water outflow to the cycling track or enter into the public drainage system (Zone 5 South Boundary, near NF66).
- Surface runoff trap should be deeper or added with sedimentation tank to collect the surface water incoming from the highway (Zone 5 SB).
- The mitigation measures for the discharge points and manholes should be enhanced with sandbags or cement bunding to prevent muddy water inflow (Zone 5 SB).
- Slope should be covered with tarpaulin to avoid erosion, minimized the area exposed and prevented muddy water runoff to the u-channel (Zone 5 SB).
- Gully that are next to the unpaved area or soil surface should be blocked to prevent muddy water entering (Zone 5 SB).
- U-channel should be cleaned and desilted regularly. Moreover, particular attention should be paid for the water collection efficiency under normal construction work activities and adverse weather condition for preventing muddy water overflow to the cycling track (Zone 5 SB).
- The pH meter of the WetSep was observed as malfunction. The contractor should repair the pH meter and ensure the pH of the water discharge is fulfilled the requirement listed in the water discharge license (Zone 5 SB).
- WetSepts and sedimentation tanks for muddy water treatment should be closed to the pilling location. It is for ensuring the treatment efficiency is acceptable (Zone 5 SB).



- The silt trap for collecting muddy water should be reviewed to ensure the pump, muddy water outfall location are appropriate, also have enough capacity and depth (Zone 5, SB).
- Two gullies that are next to the highway were covered with sandbag. However, tarpaulin should be provided for temporary coverage to prevent silt from entering. Another two gullies that are closed to the piling work location, unpaved area and soil surface are blocked (Zone 5, SB).
- The pH meter in the left WetSep have been fixed. However, the pH meter of the right WetSep needs to be installed and ensure it is function properly. A checklist should also be provided for recording the pH value of the water being discharged (Zone 5, SB).
- U-channel have been cleaned. However, cement bunding/sandbag/paved/soil cleaning should be provided to prevent soil runoff to the discharge point (Zone 5, SB).
- Stagnant water should be cleaned before rainfall to avoid site surface water overflow at the site boundary (Zone 3, South Boundary, S06).
- Stockpile of excavated material should be covered with tarpaulin before rainfall, also prevent washing of the materials and muddy water from entering the highway (Zone 3, South Boundary, S06).
- The soil surface next to the gullies should be paved or covered with tarpaulin to prevent muddy water formation. Housekeeping should also be maintained (Zone 5 South Boundary and near the TPT4 sedimentation tank).
- Sedimentation tanks and wastewater treatment systems should be maintained and review regularly. Desilting of the sedimentation tank and silt trap should be performed regularly (Zone 5 South Boundary S3E1).
- The second WetSep (TW-WS2) should ensure it is functioning properly (either with maintenance or replacement) before operating the second piling machine. Routine pH monitoring and record in the checklist are also needed to ensure the effluent is fulfilled the requirement stated in the Water Discharge License (WT00032446-2018) (Zone 5 South Boundary S3E1).

Chemical and Waste Management

- Drip tray filled with chemical and rainwater should be cleaned with a chemical absorbent pad and treated as chemical waste. A drip tray should be provided for the chemical container to prevent soil contamination. The chemical storage tank should also be clearly labeled in English and Chinese following the requirement listed in the Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C, Part IV, Section 12) (Zone 3, South Boundary, S06).

Land Contamination

- No specific observation was identified in the reporting month.

Landscape and Visual Impact

- No specific observation was identified in the reporting month.

General Condition

- No specific observation was identified in the reporting month.

Permit / Licenses

- A copy of the environmental permits should be displayed at the site entrance for public information at all time. The contractor should ensure the permits being displayed are the most updated one (Zone 3, South Boundary, SR6).



9. FUTURE KEY ISSUES

9.1 Construction Programme for the Next Month

During the coming reporting month, the principal work activities within the site include:

- (1) Tree Preservation, Felling, Pruning, Transplantation in Zone 1, 2, 3, 4 and 5.
- (2) Road Surface Maintenance in Zone 1, 2, 3, 4 and 5.
- (3) Noise Barrier Foundation Works in Zone 1, 2, 4 and 5.
- (4) Noise Barrier Erection Works in Zone 1 and 2.
- (5) Road Reconstruction Works, Sheet Pile Removal and Lane Shifting Works in Zone 1 and 2.
- (6) Trial Pits Excavation in Zone 3, 4 and 5.
- (7) Construction, Diversion of Underground Utilities, including ELS works and Sheet Piling in Zone 3 and 5.
- (8) Retaining Wall Construction Works in Zone 3.
- (9) Construction of Cycle Track Subway, Pump Room and Stem Wall Construction Works in Zone 3.
- (10) Demolition of Existing Parapet and Lagging Wall Construction Works in Zone 3.
- (11) Construction work for Temporary Site Access Relocation in Zone 3.
- (12) Pre Bore H Pile Construction Works and Steel Works Installation for Lift in Zone 3.
- (13) Profile Barrier, Stem Wall Construction Works and Foundation Works for SR2 in Zone 3.
- (14) Construction Works for N263 Bridge Deck Widening and SR6 Temporary Widening in Zone 3.
- (15) ELS Works at SHA for Widening of SR3 in Zone 3.
- (16) Piezometer for underground water pressure measurement in Zone 3.
- (17) NF40 and N66 Footbridge Construction Works in Zone 4.
- (18) Mini Pile Construction Works in Zone 4 and 5.
- (19) Erection of 7m Height Fencing in Zone 4.
- (20) Stem Wall and Drainage Construction Works in Zone 5.

9.2 Key Issues for the Coming Month

- 9.2.1 Potential environmental impacts arising from the above construction activities are mainly associated with construction dust, construction noise, water quality, waste management and landscape and visual impact.

9.3 Monitoring Schedules for the Next Month

- 9.3.1 The tentative schedules for environmental monitoring in the coming month are provided in **Appendix E**.



10. CONCLUSIONS

- 10.1.1 24-hour and 1-hour TSP impact monitoring were carried out in the reporting month, no Action / Limit Level exceedance was recorded during the period.
- 10.1.2 Day time construction noise monitoring was carried out in the reporting month, no Action / Limit Level exceedance was recorded during the period.
- 10.1.3 Regular night time noise monitoring was carried out on 2, 9, 16, 23 and 29 September 2021, respectively and no exceedance case was recorded between 2300 and 0700 of the next day during the reporting month.
- 10.1.4 5 site inspections were carried out on 2, 9, 16, 24 and 29 September 2021. Recommendations on mitigation measures on water quality, chemical and waste management were given to the Contractor for remediating the deficiencies identified during the site inspections.
- 10.1.5 One complaint was received in the reporting period. Drainage Services Department (DSD) issued a notice (Ref: MS 8/0/CE2815/0 pt.6) to the Engineer's Representative (AECOM) after their morning inspection on 1st September 2021 concerning the improperly treated water being discharged from the construction site near Fung Wo Estate of the Project to nearby public stormwater drainage system, and of the consequence of contaminating the watercourse at Shing Mun River.

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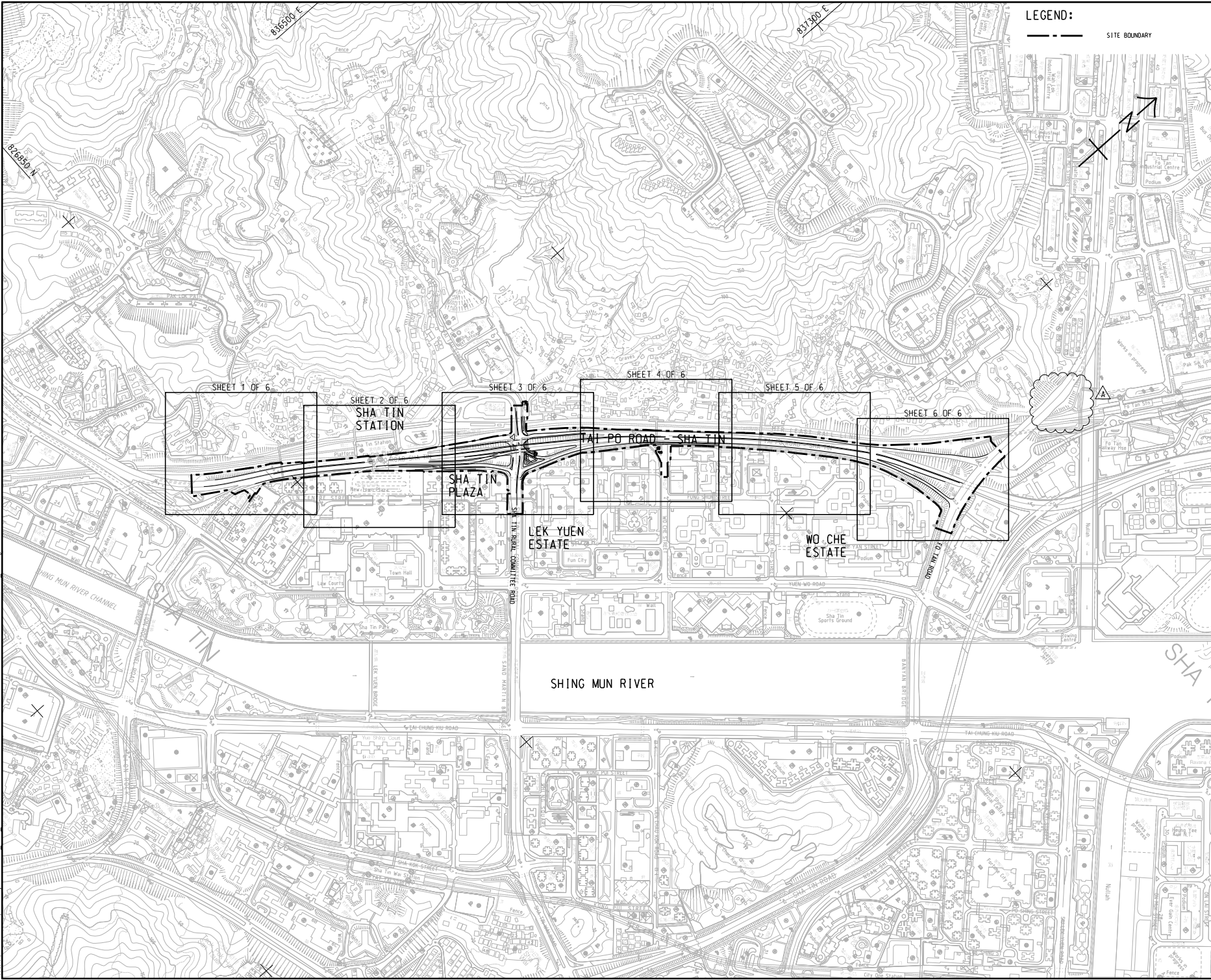
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
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Figure 1

Project General Layout

2/27/2018
 PLOT FILE BY: aecom/06/10/15
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 Project Management: H.H.K.
 Designers: F.B.C. Checked: C.W.N. Approved: C.W.N.
 BO AT 594mm x 841mm
 CNY



LEGEND:
 --- SITE BOUNDARY



PROJECT
 ROAD WIDENING AND RETROFITTING NOISE BARRIERS ON TAI PO ROAD (SHA TIN SECTION)

CLIENT
 土木工務發展局
 Civil Engineering and Development Department

CONSULTANT
 AECOM Asia Company Ltd.
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SUB-CONSULTANTS
 分門工程師有限公司

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NO.	DATE	DESCRIPTION	CHK.
A	FEB. 18	TENDER ADDENDUM NO.2	BBC
B	JAN. 18	TENDER DRAWING	BCC
IR	DATE	DESCRIPTION	CHK.
	日期	內容摘要	檢核

STATUS
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 A1 : 4000
 DIMENSION UNIT
 METRES
KEY PLAN
 圖例
 FIGURE 1.1a

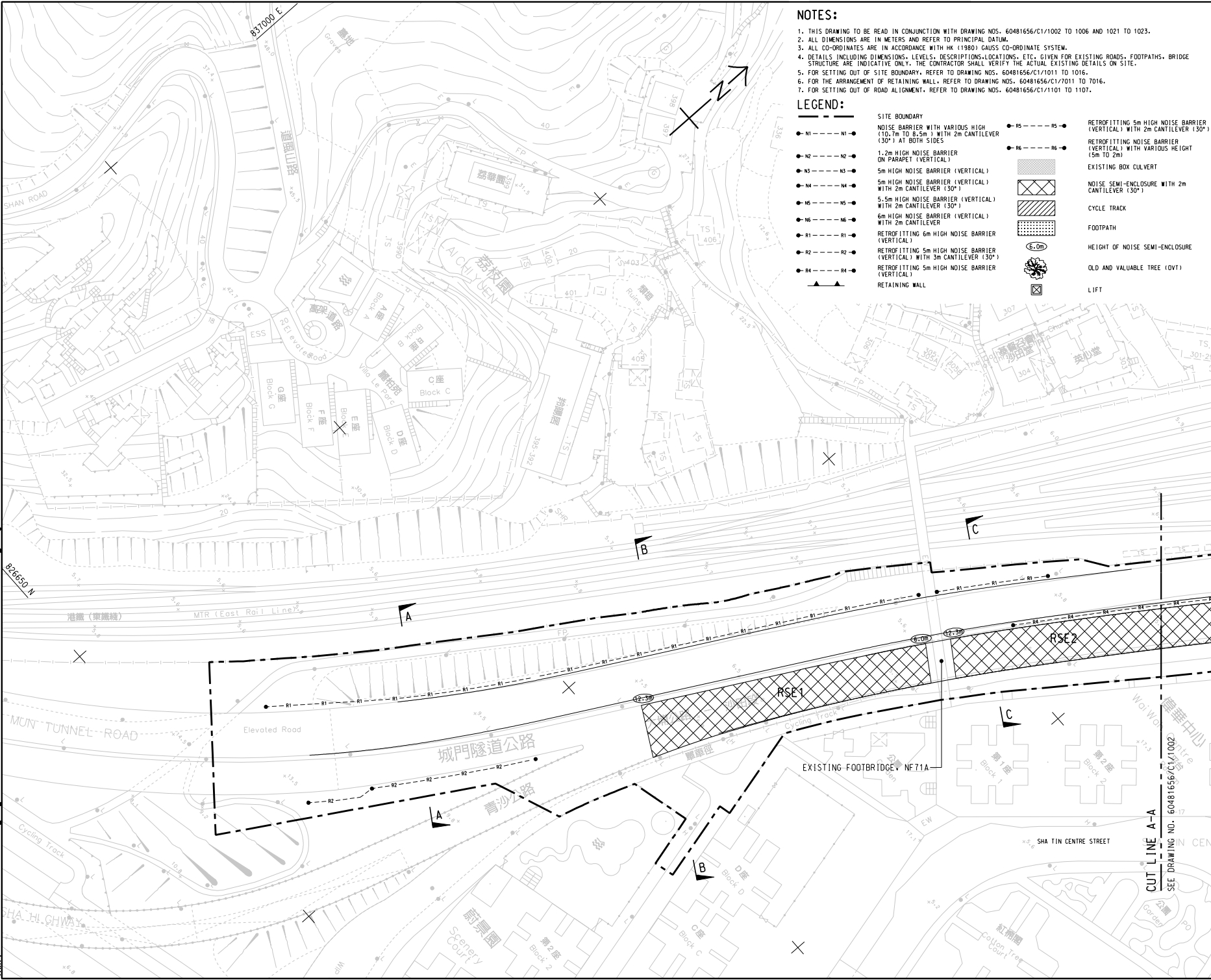
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 NE/2017/05

SHEET TITLE
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KEY PLAN
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SHEET NUMBER
 圖則編號
 60481656/C1/1000A

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Project Management: HSKB
 Designer: FLMC
 Checked: BCS
 Approved: CWN
 ISO A1 84mm x 61mm
 49/12/18
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NOTES:

- THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60481656/C1/1002 TO 1006 AND 1021 TO 1023.
- ALL DIMENSIONS ARE IN METERS AND REFER TO PRINCIPAL DATUM.
- ALL CO-ORDINATES ARE IN ACCORDANCE WITH HK (1980) GAUSS CO-ORDINATE SYSTEM.
- DETAILS INCLUDING DIMENSIONS, LEVELS, DESCRIPTIONS, LOCATIONS, ETC. GIVEN FOR EXISTING ROADS, FOOTPATHS, BRIDGE STRUCTURE ARE INDICATIVE ONLY. THE CONTRACTOR SHALL VERIFY THE ACTUAL EXISTING DETAILS ON SITE.
- FOR SETTING OUT OF SITE BOUNDARY, REFER TO DRAWING NOS. 60481656/C1/1011 TO 1016.
- FOR THE ARRANGEMENT OF RETAINING WALL, REFER TO DRAWING NOS. 60481656/C1/1011 TO 1016.
- FOR SETTING OUT OF ROAD ALIGNMENT, REFER TO DRAWING NOS. 60481656/C1/1101 TO 1107.

LEGEND:

● N1 --- N1 ●	NOISE BARRIER WITH VARIOUS HIGH (10.7m TO 8.5m) WITH 2m CANTILEVER (30°) AT BOTH SIDES	● R5 --- R5 ●	RETROFITTING 5m HIGH NOISE BARRIER (VERTICAL) WITH 2m CANTILEVER (30°)
● N2 --- N2 ●	1.2m HIGH NOISE BARRIER ON PARAPET (VERTICAL)	● R6 --- R6 ●	RETROFITTING NOISE BARRIER (VERTICAL) WITH VARIOUS HEIGHT (5m TO 2m)
● N3 --- N3 ●	5m HIGH NOISE BARRIER (VERTICAL)	[Cross-hatch pattern]	EXISTING BOX CULVERT
● N4 --- N4 ●	5m HIGH NOISE BARRIER (VERTICAL) WITH 2m CANTILEVER (30°)	[Diagonal hatch pattern]	NOISE SEMI-ENCLOSURE WITH 2m CANTILEVER (30°)
● N5 --- N5 ●	5.5m HIGH NOISE BARRIER (VERTICAL) WITH 2m CANTILEVER (30°)	[Dotted pattern]	CYCLE TRACK
● N6 --- N6 ●	6m HIGH NOISE BARRIER (VERTICAL) WITH 2m CANTILEVER	[Stippled pattern]	FOOTPATH
● R1 --- R1 ●	RETROFITTING 6m HIGH NOISE BARRIER (VERTICAL)	6.0m	HEIGHT OF NOISE SEMI-ENCLOSURE
● R2 --- R2 ●	RETROFITTING 5m HIGH NOISE BARRIER (VERTICAL) WITH 3m CANTILEVER (30°)	[Tree symbol]	OLD AND VALUABLE TREE (OVT)
● R4 --- R4 ●	RETROFITTING 5m HIGH NOISE BARRIER (VERTICAL)	[Square symbol]	LIFT
▲ --- ▲	RETAINING WALL		



PROJECT
18

ROAD WIDENING AND RETROFITTING NOISE BARRIERS ON TAI PO ROAD (SHA TIN SECTION)



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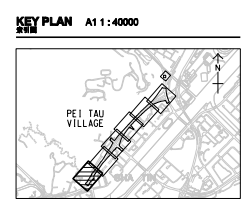
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STATUS

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KEY PLAN: A1: 4000



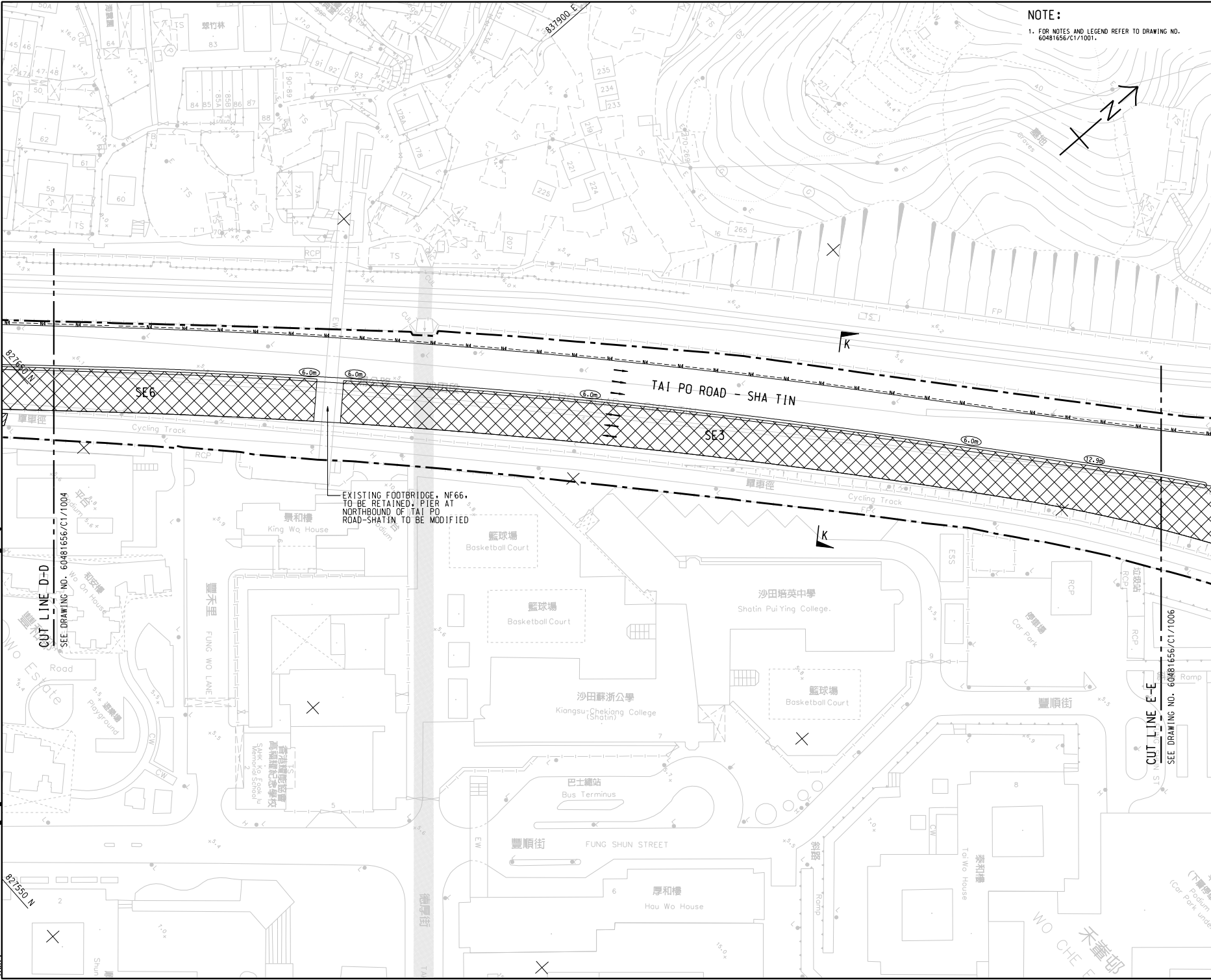
CONTRACT NO.
NE/2017/05

SHEET TITLE
GENERAL LAYOUT PLAN
FIGURE 1.1 b

SHEET NUMBER
1 OF 6

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49/12/2018
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 Project Management: In-House
 Designer: FLM/C
 Checker: BCS
 Approved: CWN
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NOTE:
1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60481656/CT11001.

AECOM

PROJECT
ROAD WIDENING AND RETROFITTING NOISE BARRIERS ON TAI PO ROAD (SHA TIN SECTION)

CLIENT
土木工務拓展署
Civil Engineering and Development Department

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.	BY
-	JAN. 18	TENDER DRAWING	BCC	

STATUS

SCALE
A1: 600
A1: 4000

DIMENSION UNIT
METRES



CONTRACT NO.
NE/2017/05

SHEET TITLE
GENERAL LAYOUT PLAN
FIGURE 1.1b

SHEET NUMBER
60481656/CT11005

SHEET 5 OF 6

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FUGRO TECHNICAL SERVICES LIMITED

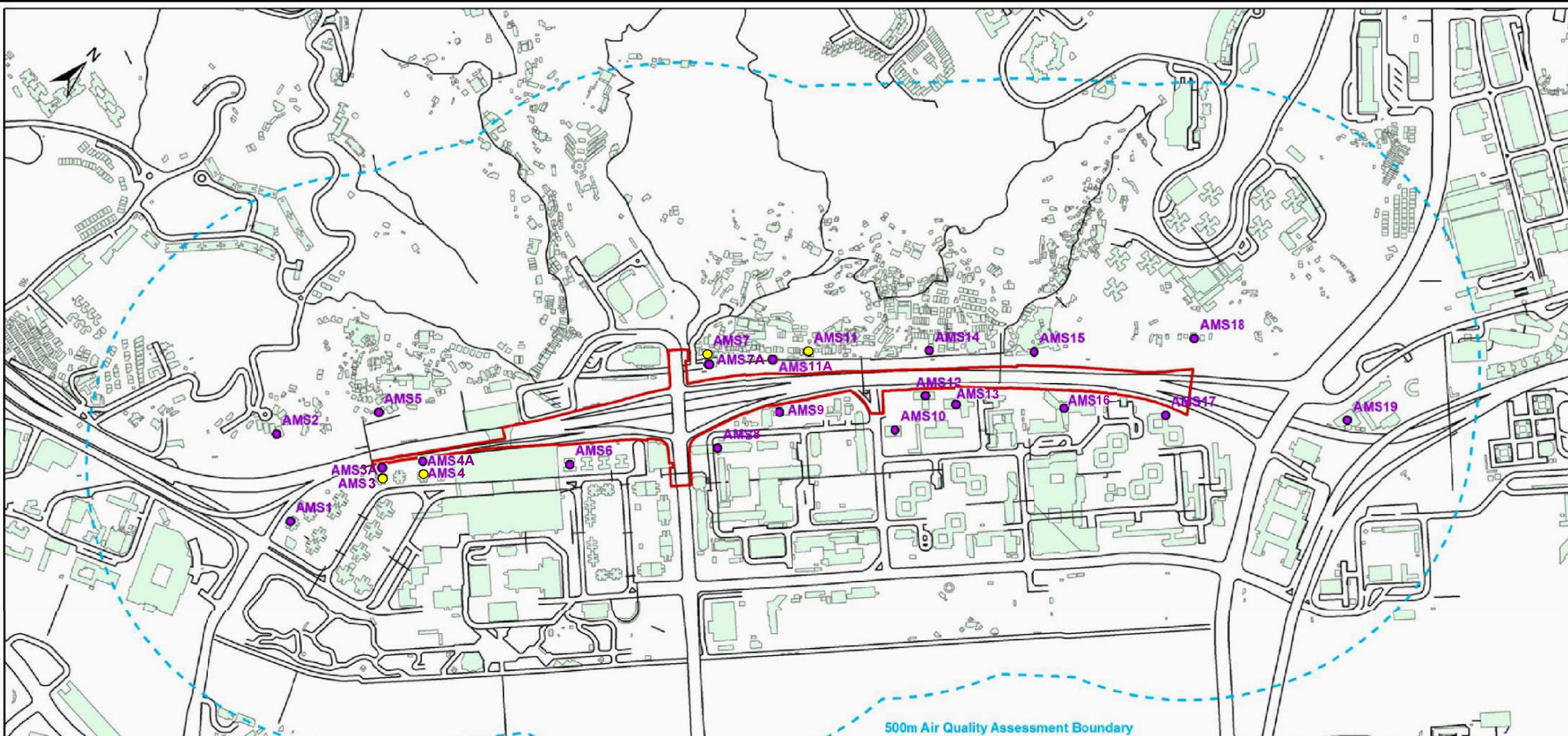
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Figure 2a

Air Monitoring Locations



- Legend**
- Original Locations in EIA Review Report Proposed to be Relocated
 - Proposed Construction Dust Monitoring Locations
- AMS1 Scenery Court
AMS2 Villa Le Parc
AMS3A Wai Wah Centre (Site Boundary)
AMS4A Wai Wah Centre (Site Boundary)
AMS4 Wai Wah Centre (Site Boundary)
AMS5 Tin Liu
AMS6 Shatin Plaza
AMS7A Sheung Wo Che
AMS8 Lek Yuen Estate
AMS9 Shatin Tsung Tsin School
AMS10 Shatin Police Station
AMS11A Sheung Wo Che
AMS12 Fung Wo Estate
AMS13 Fung Wo Estate
AMS14 Ha Wo Che
AMS15 Ha Wo Che
AMS16 Shatin Pui Ying College
AMS17 Wo Che Estate
AMS18 Tin Cheung Terrace
AMS19 Jockey Club T-I College

0 75 150 300 Meters

Figure 2a Air Quality Monitoring Locations



FUGRO TECHNICAL SERVICES LIMITED

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Figure 2b

Noise Monitoring Locations

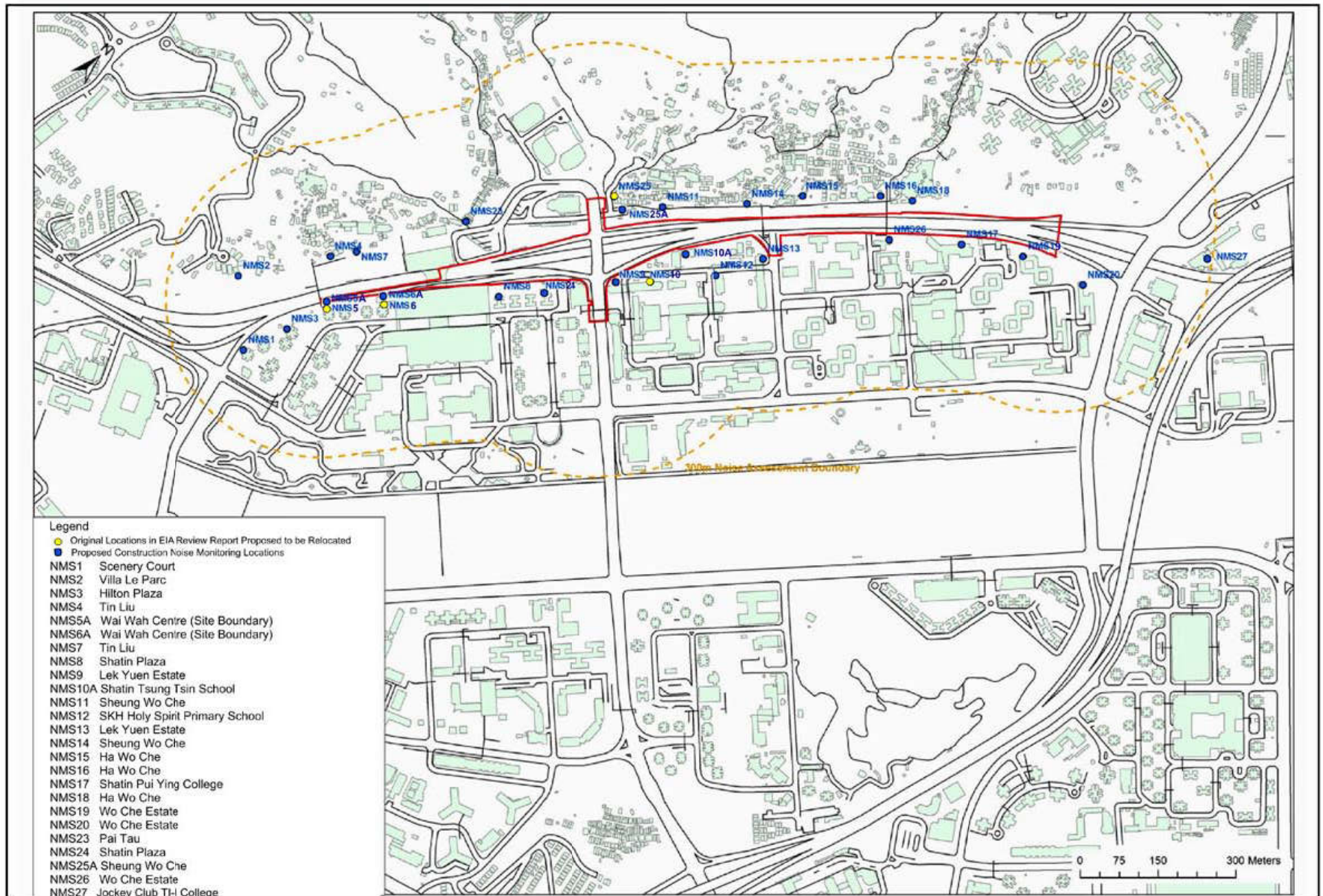


Figure 2b Noise Monitoring Locations

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Appendix A

Construction Programme

Activity ID		Activity Name		Original Duration	Remaining Duration	3MRP Start	3MRP Finish	AP11 Start	AP11 Finish	2021					
										Aug 38	Sep 39	Oct 40	Nov 41	Dec 42	
Contract NE/2017/05 Road Widening and Retrofitting Noise Barriers on Tai Po Road (Sha Tin)															
PROJECT KEY DATES															
PROJECT COMPLETION															
KEY1130	Contract Completion of Section 3		0	0		18-Oct-21*									Contract Completion of Section 3
PRELIMINARIES & GENERAL REQUIREMENT															
GENERAL SUBMISSION															
SUB1403	ITP's for Lighting Luminaires and System		0	0	31-Aug-21*		30-Apr-21								ITP's for Lighting Luminaires and System
SUB1405	All Lighting Designs		0	0	31-Aug-21*		30-Apr-21								All Lighting Designs
SUB1410	Combined Services Drawings (CSD)		0	0	31-Aug-21*		30-Apr-21								Combined Services Drawings (CSD)
DESIGN SUBMISSION															
NOISE MITIGATION MEASURES															
DES1260	Re-submit Foundation Design of Noise Mitigation Measures in Zone 3 w/Design Certificate		23	12	29-Mar-21 A	11-Sep-21	31-Mar-21	22-Apr-21							Re-submit Foundation Design of Noise Mitigation Measures in Zone 3 w/Design Certificate
DES1270	PM Consent for Construction		28	28	11-Sep-21	09-Oct-21	11-May-21	08-Jun-21							PM Consent for Construction
DES1290	PM review & comment		28	11	07-Aug-19 A	11-Sep-21	31-Aug-19	27-Sep-19							PM review & comment
DES1300	Re-submit Superstructure Design of Noise Mitigation Measures in Zone 1 & 2 w/Design Certificate		20	20	12-Sep-21	02-Oct-21	12-May-21	01-Jun-21							Re-submit Superstructure Design of Noise Mitigation Measures in Zone 1 & 2 w/Design Certificate
DES1310	PM Consent for Construction		28	28	02-Oct-21	30-Oct-21	01-Jun-21	29-Jun-21							PM Consent for Construction
DES1330	PM review & comment		28	11	07-Aug-19 A	11-Sep-21	31-Aug-19	27-Sep-19							PM review & comment
DES1340	Re-submit Superstructure Design of Noise Mitigation Measures in Zone 3 w/Design Certificate		21	21	12-Sep-21	03-Oct-21	12-May-21	02-Jun-21							Re-submit Superstructure Design of Noise Mitigation Measures in Zone 3 w/Design Certificate
DES1350	PM Consent for Construction		28	28	03-Oct-21	31-Oct-21	02-Jun-21	30-Jun-21							PM Consent for Construction
DES1370	PM review & comment		28	11	07-Aug-19 A	11-Sep-21	31-Aug-19	27-Sep-19							PM review & comment
DES1380	Re-submit Superstructure Design of Noise Mitigation Measures in Zones 4 & 5 w/Design Certificate		20	20	12-Sep-21	02-Oct-21	12-May-21	01-Jun-21							Re-submit Superstructure Design of Noise Mitigation Measures in Zones 4 & 5 w/Design Certificate
DES1390	PM Consent for Construction		28	28	02-Oct-21	30-Oct-21	01-Jun-21	29-Jun-21							PM Consent for Construction
REMAINING WORKS															
DES1490	PM review & comment		28	1	25-Jan-19 A	31-Aug-21	04-Aug-19	01-Sep-19							PM review & comment
DES1500	Re-submit Foundation Design of Pedestrian Lift 1 & 2, Lift 2 Staircase, Cycle Track Ramp & Sign Gantry w/Design Certificate		35	1	13-Apr-20 A	02-Sep-21	02-Jun-20	07-Jul-20							Re-submit Foundation Design of Pedestrian Lift 1 & 2, Lift 2 Staircase, Cycle Track Ramp & Sign Gantry w/Design Certificate
DES1510	PM Consent for Construction		28	28	02-Sep-21	30-Sep-21	02-May-21	30-May-21							PM Consent for Construction
DES1530	PM review & comment		28	1	02-Jan-19 A	31-Aug-21	31-Jan-19	27-Feb-19							PM review & comment
DES1540	Re-submit Design of Watermain & Irrigation System w/Design Certificate		32	1	02-Jan-19 A	31-Aug-21	02-Apr-19	03-May-19							Re-submit Design of Watermain & Irrigation System w/Design Certificate
DES1560	Prepare & submit Design of E&M System (E&M & Road Lighting) w/Design Certificate		35	35	31-Aug-21	04-Oct-21	30-Apr-21	03-Jun-21							Prepare & submit Design of E&M System (E&M & Road Lighting) w/Design Certificate
DES1570	PM review & comment		28	28	05-Oct-21	01-Nov-21	04-Jun-21	01-Jul-21							PM review & comment
DES1580	Re-submit Design of E&M System (E&M & Road Lighting) w/Design Certificate		32	32	03-Nov-21	04-Dec-21	03-Jul-21	03-Aug-21							Re-submit Design of E&M System (E&M & Road Lighting) w/Design Certificate
DES1590	PM Consent for Construction		28	28	05-Dec-21	01-Jan-22	04-Aug-21	31-Aug-21							PM Consent for Construction
SUBLETTING & PROCUREMENT SCHEDULE															
SUBLETTING															
SPS1180	Flexible Surfacing		30	15	31-Oct-20 A	22-Sep-21	13-Jul-21	11-Aug-21							Flexible Surfacing
SPS1190	Road Marking and Road Studs		30	23	30-Nov-20 A	22-Sep-21	13-Jul-21	11-Aug-21							Road Marking and Road Studs
SPS1210	Drainage (PC pipe, manhole & gully) and Duct		30	5	31-Mar-20 A	04-Sep-21	01-May-21	30-May-21							Drainage (PC pipe, manhole & gully) and Duct
SPS1230	Sub-base and Concrete pavement		30	15	31-Oct-20 A	22-Sep-21	12-May-21	11-Jun-21							Sub-base and Concrete pavement
SPS1300	Traffic Sign, Sign gantry and Road Sign		30	0	30-Oct-20 A	19-Aug-21 A	02-Sep-21	01-Oct-21							Traffic Sign, Sign gantry and Road Sign
SPS1380	Road Barrier, Parapet, Kerb and Civil Work for Road Lighting and TCSS		30	0	31-Aug-20 A	19-Aug-21 A	12-May-21	11-Jun-21							Road Barrier, Parapet, Kerb and Civil Work for Road Lighting and TCSS

Remaining Level of Effort
 Remaining Work
 ◆ Milestone
 ◆ Baseline Milestone
 Actual Level of Effort
 Critical Remaining Work
◆ Milestone
 Actual Work
 Primary Baseline

ROAD WIDENING & RETROFITTING NOISE BARRIERS ON TAI PO ROAD (SHA TIN SECTION)
3 Months Rolling Programme (31/8/21)
 Page 1 of 7

Date	Revision	Checked	Approved
06-Sep-21	3MRP DWP 2108	Tim	

Activity ID	Activity Name	Original Duration	Remaining Duration	3MRP Start	3MRP Finish	AP11 Start	AP11 Finish	2021						
								Aug 38	Sep 39	Oct 40	Nov 41	Dec 42		
SPS1410	Pedestrian Lift (Lift Cars, E&M, Panel, Lourve & Signature)	30	0	30-May-20 A	24-Aug-21 A	05-Jul-21	03-Aug-21							
SPS1440	Drainage for Noise Mitigation Measures	30	5	31-Mar-20 A	04-Sep-21	30-Apr-21	29-May-21							
SPS1450	Other Works (Mis. Metal Work, Finishing, Brickwork, etc)	30	5	09-Jul-21 A	30-Oct-21	01-Jun-21	30-Jun-21							
WORK BETWEEN SHING MUN TUNNELS ROAD AND FOOT BRIDGE NF71A (ZONE 1)														
PRELIMINARIES WORKS														
SUMMARY PROGRAMME														
Z1SU1030	Zone 1 Stage 1 RSE1 CM foundation	328	63	28-Dec-19 A	16-Nov-21	31-Dec-19	05-Feb-21							
Z1SU1032	Zone 1 Stage 1 R1 structure R1-01 to 08	268	75	28-Jul-20 A	29-Nov-21	31-Jul-20	26-Jun-21							
Z1SU1034	Zone 1 Stage 1 R2 structure	435	202	20-Feb-20 A	10-May-22	20-Mar-20	07-Sep-21							
Z1SU1040	Zone 1 Stage 2 RES1 SB foundation	194	194	09-Nov-21	08-Jul-22	08-Sep-21	09-May-22							
Z1SU1042	Zone 1 Stage 2 R1 structure R1-09 to 17	249	249	30-Nov-21	03-Oct-22	25-Sep-21	28-Jun-22							
NOISE BARRIER AND SEMI-ENCLOSURE														
PILE FOUNDATION WORKS														
SOUTHBOUND														
Z1_1540	RSE1_mini piles for RSE1-51P to 56P (40rr ver)	120	120	09-Nov-21	06-Apr-22	08-Sep-21	04-Feb-22							
PILE CAP AND FOOTING														
NORTHBOUND														
Z1_1000	R1_ELS for footing/cap construction R1-01 to R1-08 (110m_1 side)	30	10	19-Oct-20 A	10-Sep-21	31-Oct-20	04-Dec-20							
Z1_1002	R1_footing construction R1-01, R1-03 to R1-08 (7nr)	147	59	27-Nov-20 A	22-Nov-21	21-Dec-20	24-Jun-21							
Z1_1004	R1_pile cap construction R1-02P (1nr)	21	6	27-Jan-21 A	29-Nov-21	16-Jun-21	12-Jul-21							
Z1_1011	R1_ELS for footing/cap construction R1-09 to R1-17 (120m_1 side)	33	33	30-Nov-21	10-Jan-22	25-Sep-21	04-Nov-21							
CENTRAL BARRIER														
Z1_1130	RSE1_ELS for footing construction RSE1-01 to RSE1-07 (83m_2 side)	46	9	02-Sep-20 A	10-Sep-21	29-Oct-20	22-Dec-20							
Z1_1147	RSE1_footing/cap construction RSE1-01P to RSE1-05 (5nr)	105	26	02-Nov-20 A	02-Oct-21	30-Nov-20	10-Apr-21							
Z1_1150	RSE1_backfill & remove ELS	14	4	29-Apr-21 A	09-Nov-21	02-Jul-21	19-Jul-21							
SOUTHBOUND														
Z1_1070	R2_ELS for footing/cap construction R2-01 to R2-06P (68m_2 side)	38	15	04-Sep-20 A	17-Sep-21	08-May-21	24-Jun-21							
Z1_1092	R2_footing/cap construction R2-01 to R2-06P(6nr)	126	50	23-Oct-20 A	18-Nov-21	23-Apr-21	23-Sep-21							
Z1_1100	R2_backfill & remove ELS	12	11	15-Dec-20 A	01-Dec-21	08-Sep-21	23-Sep-21							
STRUCTURE STEEL FRAME														
CENTRAL BARRIER														
Z1_1190	RSE1_erec steel posts PC1 to PC22 (22nr)	6	5	25-May-21 A	16-Nov-21	19-Jul-21	27-Jul-21							
ROADWORKS AND REMAINING WORKS														
ROADWORKS														
CENTRAL BARRIER														
Z1_1240	Drainage construction MR01 to MR04 38m	24	24	02-Oct-21	01-Nov-21	02-Jun-21	02-Jul-21							
GEOTECHNICAL WORKS														
NORTHBOUND														
Z1_1320	Zone 1_fill replacement by no-fines concrete 7SW-D/FF156 (open excavation) NB_R1	52	52	30-Nov-21*	04-Feb-22	05-Aug-21	07-Oct-21							
WORK BETWEEN FOOT BRIDGE NF71A AND CITYLINE PLAZA (ZONE 2)														
PRELIMINARIES WORKS														
SUMMARY PROGRAMME														
Z2SU1000	Construction Zone 2_Stage 1 RSE2 CM foundation	594	75	21-Nov-19 A	29-Nov-21	08-Aug-19	10-Aug-21							

- Remaining Level of Effort
- Remaining Work
- ◆ Milestone
- Actual Level of Effort
- Critical Remaining Work
- ◆ Baseline Milestone
- Actual Work
- Primary Baseline

ROAD WIDENING & RETROFITTING NOISE BARRIERS ON TAI PO ROAD (SHA TIN SECTION)
3 Months Rolling Programme (31/8/21)
Page 2 of 7

Date	Revision	Checked	Approved
06-Sep-21	3MRP DWP 2108	Tim	

Activity ID	Activity Name	Original Duration	Remaining Duration	3MRP Start	3MRP Finish	AP11 Start	AP11 Finish	2021						
								Aug 38	Sep 39	Oct 40	Nov 41	Dec 42		
Z3_2960	UU_HKBN-slew cable for RW1 & 2 CH1500-1580 80m	9	1	27-Apr-21 A	24-Sep-21	24-May-21	02-Jun-21							
Z3_3080	UU_CLP-abandoned 11kv cable for SR6 CH1850-1950 100m	19	19	06-Dec-21	30-Dec-21	28-Sep-21	21-Oct-21							
Z3_3100	UU_HKBN-slew cable for N262 CH1800-1810 10m	1	1	31-Aug-21	31-Aug-21	12-Jun-21	12-Jun-21							
Z3_5680	UU_Construct combine UU trough between cycle track and RW1 Stage 1	75	19	08-Jun-20 A	22-Sep-21	31-Jul-20	29-Oct-20							
Z3_5685	UU_Construct combine UU trough between RW1 to SR3 Stage 2	60	21	08-Jun-20 A	24-Sep-21	02-Jun-21	13-Aug-21							
WIDENING FOR NORTH HOLLOW ABUTMENT (N264)														
Z3_4210	C01_column construction	28	28	26-Nov-21	31-Dec-21	31-Jul-21	02-Sep-21							
Z3_4240	N264_temporary protection MTRC cable	42	42	26-Nov-21	18-Jan-22	31-Jul-21	18-Sep-21							
MODIFICATION OF BRIDGE N263														
RECONSTRUCTION ABUTMENT WALL AT NHA														
Z3_4140	NAW-1_ELS, excavation & pile cap construction	60	24	23-Oct-20 A	28-Sep-21	30-Nov-20	10-Feb-21							
Z3_4142	Demolish part of existing North Hollow Abutment wall for construction new wall	45	27	22-Apr-21 A	02-Oct-21	30-Apr-21	24-Jun-21							
Z3_4180	NAW-2_ELS, excavation & pile cap construction	60	24	28-Sep-20 A	28-Sep-21	31-Oct-20	12-Jan-21							
Z3_4190	NAW_construct new abutment wall (North side)	60	60	29-Sep-21	09-Dec-21	31-May-21	11-Aug-21							
Z3_4195	NAW_construct new abutment wall (Remaining)	75	75	04-Oct-21	03-Jan-22	02-Jul-21	28-Sep-21							
MODIFICATION EXISTING PIER WALL OF N263														
Z3_3900	SAW-1_ELS & pile cap construction	30	0	13-Mar-21 A	06-Aug-21 A	31-Mar-21	10-May-21							
Z3_3945	SAW_construct new abutment wall (Remaining)	100	0	27-Feb-21 A	17-Aug-21 A	01-Jun-21	28-Sep-21							
MODIFICATION EXISTING SOUTH HOLLOW ABUTMENT WALL														
Z3_3950	SHA_piling works for pier SHA 6 nos. Socket H-pile	48	48	06-Sep-21*	04-Nov-21	06-Sep-21	04-Nov-21							
Z3_3960	SHA_ELS & pile cap construction	45	45	04-Nov-21	29-Dec-21	04-Nov-21	29-Dec-21							
DECK CONSTRUCTION OF BRIDGE N263														
Z3_3880	N263_erec temporary working platform for deck construction (widen Area)	35	11	31-Mar-21 A	03-Jan-22	09-Jun-21	01-Sep-21							
MODIFICATION OF BRIDGE N262														
Z3_3510	C02_piling works 4nr mini pile	16	0	23-Jun-21 A	09-Aug-21 A	14-Jul-21	31-Jul-21							
Z3_3540	C03_piling works 7nr mini pile	24	0	05-Jun-21 A	09-Aug-21 A	15-Jun-21	13-Jul-21							
NEW SLIP ROAD 2														
Z3_5350	SR2-1_ELS & pile cap construction	30	30	31-Aug-21	07-Oct-21	01-Jun-21	07-Jul-21							
Z3_5416	SR2-2A/B_ELS & pile cap construction	30	30	07-Oct-21	12-Nov-21	08-Jul-21	11-Aug-21							
LIFT TOWER 1														
Z3_3600	L1-PC1_piling works 4nr socket H-pile	32	32	30-Sep-21*	09-Nov-21	06-Sep-21	16-Oct-21							
Z3_3610	L1-PC1_ELS & pile cap construction	60	60	09-Nov-21	21-Jan-22	16-Oct-21	28-Dec-21							
LIFT TOWER 2 & STAIRCASE														
Z3_3690	Lift Tower 2_erec steel structure	28	28	30-Sep-21*	04-Nov-21	02-Jul-21	03-Aug-21							
Z3_3700	Lift Tower 2_external finishing	45	45	04-Nov-21	29-Dec-21	04-Aug-21	25-Sep-21							
Z3_3710	Lift Tower 2_lift installation	75	75	04-Nov-21	07-Feb-22	04-Aug-21	02-Nov-21							
Z3_3802	Lift Tower 2_Pier 2 column construction	21	21	05-Nov-21	30-Nov-21	30-Jul-21	23-Aug-21							
Z3_3804	Lift Tower 2_Pier 1 column construction	21	21	05-Nov-21	30-Nov-21	30-Jul-21	23-Aug-21							
Z3_3820	Staircase_staircase construction between Pier 3 and Pier 2	30	30	30-Nov-21	07-Jan-22	24-Aug-21	28-Sep-21							
Z3_3830	Staircase_bridge deck construction between Pier 2 and Pier 1	30	30	30-Nov-21	07-Jan-22	24-Aug-21	28-Sep-21							
NEW SLIP ROAD 5														
Z3_5490	SR5-3_piling works 21nr mini pile	84	81	25-Aug-21 A	06-Dec-21	21-Jun-21	28-Sep-21							
Z3_5500	SR5-3_ELS & pile cap construction	35	35	06-Dec-21	19-Jan-22	29-Sep-21	10-Nov-21							

- Remaining Level of Effort
- Remaining Work
- ◆ Milestone
- ◆ Baseline Milestone
- Actual Level of Effort
- Critical Remaining Work
- Actual Work
- Primary Baseline

ROAD WIDENING & RETROFITTING NOISE BARRIERS ON TAI PO ROAD (SHA TIN SECTION)
3 Months Rolling Programme (31/8/21)
Page 4 of 7

Date	Revision	Checked	Approved
06-Sep-21	3MRP DWP 2108	Tim	

Activity ID	Activity Name	Original Duration	Remaining Duration	3MRP Start	3MRP Finish	AP11 Start	AP11 Finish	2021						
								Aug 38	Sep 39	Oct 40	Nov 41	Dec 42		
Z3_5540	SR5-2_ELS & pile cap construction	45	45	06-Dec-21	31-Jan-22	29-Sep-21	22-Nov-21							
RETAINING WALL & SUBWAY														
RETAINING WALL NO.1														
Z3_4555	RW1_Diversion existing CLP cable	14	14	31-Aug-21*	15-Sep-21	17-May-21	02-Jun-21							
Z3_4560	RW1_ELS works for Bay 101 to Bay 104 (56m_2 side)	31	6	22-May-21 A	04-Oct-21	03-Jun-21	10-Jul-21							
Z3_4570	RW1_base slab construction for Bay 101 to Bay 104	32	8	25-May-21 A	05-Oct-21	23-Jun-21	30-Jul-21							
Z3_4580	RW1_retaining wall construction for Bay 101 to Bay 104	40	10	04-Jun-21 A	25-Oct-21	13-Jul-21	27-Aug-21							
Z3_4590	RW1_remove ELS & backfill for Bay 101 to Bay 104	10	10	27-Nov-21	09-Dec-21	22-Sep-21	04-Oct-21							
Z3_4600	RW1_demolish existing retaining structure between Bay 105 and Bay 107	45	27	02-Jul-21 A	02-Oct-21	30-Apr-21	24-Jun-21							
Z3_4610	RW1_ELS works for Bay 105 to Bay 107 (29m_2 side)	16	11	26-Feb-21 A	16-Oct-21	12-Jul-21	29-Jul-21							
Z3_4620	RW1_base slab construction for Bay 105 to Bay 107	24	16	14-Aug-21 A	04-Nov-21	31-Jul-21	27-Aug-21							
Z3_4630	RW1_retaining wall construction for Bay 105 to Bay 107	30	30	04-Nov-21	09-Dec-21	28-Aug-21	04-Oct-21							
RETAINING WALL NO.6														
Z3_1218_1020	RW6_retaining wall construction for Bay 601 to Bay 606	72	36	11-Mar-21 A	13-Oct-21	31-Mar-21	30-Jun-21							
Z3_1218_1030	RW6_remove ELS & backfill for Bay 601 to Bay 606	8	8	09-Dec-21	17-Dec-21	31-Aug-21	09-Sep-21							
Z3_1218_1050	RW6_base slab construction for Bay 613 & Bay 614	16	16	31-Aug-21	17-Sep-21	30-Apr-21	20-May-21							
Z3_1218_1060	RW6_retaining wall construction for Bay 613 to 614	24	24	15-Oct-21	11-Nov-21	10-Jul-21	07-Aug-21							
RETAINING WALL NO.7														
Z3_1218_2000	RW7_ELS works for Bay 706 to Bay 711 (54m_2 side)	30	30	01-Nov-21	06-Dec-21	02-Jul-21	06-Aug-21							
Z3_1218_2010	RW7_base slab construction for Bay 706 to Bay 711	42	42	18-Nov-21	10-Jan-22	20-Jul-21	07-Sep-21							
Z3_1218_2050	RW7_base slab construction for Bay 701 & Bay 704	32	30	31-May-21 A	07-Oct-21	30-Apr-21	08-Jun-21							
Z3_1218_2060	RW7_retaining wall construction for Bay 701 to Bay 704	48	48	07-Oct-21	03-Dec-21	09-Jun-21	05-Aug-21							
MODIFY EXISTING RETAINING WALL SR3														
Z3_4920	SR3_ELS works for Bay SR301 to Bay SR306 (67m_1 side)	19	19	31-Aug-21	22-Sep-21	05-Nov-20	26-Nov-20							
Z3_4940	SR3_base slab construction for Bay SR301 to Bay SR306	42	42	23-Sep-21	12-Nov-21	24-May-21	14-Jul-21							
Z3_4950	SR3_retaining wall construction for Bay SR301 to SR306	60	60	23-Oct-21	04-Jan-22	22-Jun-21	01-Sep-21							
Z3_5020	SR3_ELS works for Bay SR307 to Bay SR311 (60m_1 side)	17	0	18-Dec-20 A	12-Aug-21 A	02-Feb-21	24-Feb-21							
Z3_5040	SR3_base slab construction for Bay SR307 to Bay SR311	35	0	08-Mar-21 A	26-Aug-21 A	24-Jun-21	05-Aug-21							
Z3_5050	SR3_retaining wall construction for Bay SR307 to SR311	50	30	17-May-21 A	17-Dec-21	14-Jul-21	10-Sep-21							
MODIFY EXISTING RETAINING WALL SR4														
Z3_5090	SR4_retaining wall construction for Bay SR401 to SR405	50	40	31-Oct-20 A	20-Oct-21	31-Oct-20	31-Dec-20							
Z3_5100	SR4_remove ELS & backfill for Bay SR401 to SR405	10	10	20-Oct-21	01-Nov-21	19-Jun-21	02-Jul-21							
Z3_5130	SR4_retaining wall construction for Bay SR406 to SR409	40	32	01-Feb-21 A	26-Nov-21	02-Jun-21	21-Jul-21							
Z3_5140	SR4_remove ELS & backfill for Bay SR406 to SR409	10	10	26-Nov-21	08-Dec-21	31-Jul-21	12-Aug-21							
MODIFY EXISTING SUBWAY NS30														
Z3_4542	Demolish existing subway & construct NS30	160	48	02-Dec-20 A	28-Oct-21	01-Feb-21	19-Aug-21							
WORK BETWEEN FOOTBRIDGE NF40 AND NF66 (ZONE 4)														
PRELIMINARIES WORKS														
SUMMARY PROGRAMME														
Z4SU1005	Zone 4 Stage 1 NB & SB foundation	434	238	06-Mar-20 A	21-Jun-22	31-Mar-20	16-Sep-21							
Z4SU1100	Zone 4 NF66 Construction	220	120	20-Jul-20 A	24-Jan-22	31-Aug-20	31-May-21							
Z4SU1110	Zone 4 NF40 Construction	387	187	12-Oct-19 A	20-Apr-22	06-Jan-20	28-Apr-21							
UTILITIES DIVERSION														

- Remaining Level of Effort
- Remaining Work
- Milestone
- Actual Level of Effort
- Critical Remaining Work
- Baseline Milestone
- Actual Work
- Primary Baseline

ROAD WIDENING & RETROFITTING NOISE BARRIERS ON TAI PO ROAD (SHA TIN SECTION)
3 Months Rolling Programme (31/8/21)
Page 5 of 7

Date	Revision	Checked	Approved
06-Sep-21	3MRP DWP 2108	Tim	

Activity ID	Activity Name	Original Duration	Remaining Duration	3MRP Start	3MRP Finish	AP11 Start	AP11 Finish	2021					
								Aug 38	Sep 39	Oct 40	Nov 41	Dec 42	
NORTHBOUND													
Z4_1280	UU_CATV-slew cable for N4 CH2190-2400 210m	25	25	18-Nov-21	16-Dec-21	11-Aug-21	08-Sep-21						
Z4_1300	UU_HKT-slew cable for N4 & NF66 CH2320-2360 40m	5	5	31-Aug-21	04-Sep-21	30-Apr-21	06-May-21						
NOISE BARRIER AND SEMI-ENCLOSURE													
PILE FOUNDATION WORKS													
NORTHBOUND													
Z4_1520	N4_mini piles for N4-12 to N4-27 (126nr ver)	128	128	06-Sep-21*	11-Feb-22	31-May-21	01-Nov-21						
SOUTHBOUND													
Z4_1540	SE6_mini piles for S6E1-58 to S6E1-69 (70nr ver)	140	20	05-Jun-20 A	24-Sep-21	28-Sep-20	19-Mar-21						
PILE CAP AND FOOTING													
SOUTHBOUND													
Z4_1122	SE6_ELS for footing/cap construction S6E1-51P to S6E1-57 (86m_2 side)	48	16	12-Mar-21 A	18-Sep-21	09-Jun-21	06-Aug-21						
Z4_1126	SE6_footing/cap construction S6E1-51P to S6E1-57 (6nr)	42	21	13-May-21 A	16-Oct-21	21-Jun-21	10-Aug-21						
Z4_1130	SE6_ELS for cap construction S6E1-58 to S6E1-69 (145m_2 side)	40	33	26-Apr-21 A	30-Oct-21	21-Jun-21	07-Aug-21						
Z4_1140	SE6_footing/cap construction S6E1-58 to S6E1-69 (12nr)	84	77	18-Jun-21 A	18-Jan-22	10-Aug-21	19-Nov-21						
BRIDGE AND STRUCTURE WORKS													
MODIFICATION WORKS FOR NF40													
NF40_1080	Construct pile cap & part of new column	60	24	15-Feb-21 A	29-Sep-21	01-Mar-21	14-May-21						
NF40_1090	Construct temporary support tower & jack up NF40	60	60	29-Sep-21	10-Dec-21	31-May-21	11-Aug-21						
MODIFICATION WORKS FOR NF66													
NF66_1020	Construct the new column & columnhead	60	24	08-Feb-21 A	05-Oct-21	06-Feb-21	24-Apr-21						
NF66_1030	Erection temporary support tower	60	60	31-Aug-21	11-Nov-21	26-May-21	05-Aug-21						
NF66_1040	Remove existing column	60	60	12-Nov-21	24-Jan-22	06-Aug-21	18-Oct-21						
WORK BETWEEN FOOTBRIDGE NF66 AND FO TAN ROAD (ZONE 5)													
PRELIMINARIES WORKS													
SUMMARY PROGRAMME													
Z5SU1005	Zone 5 Stage 1 NB & SB foundation	467	277	10-Feb-20 A	06-Aug-22	31-Mar-20	28-Oct-21						
PREPARATORY WORKS													
MODIFICATION EXISTING ROAD/TEMPORARY ROAD													
Z5_1730	Zone 5-1_remove existing central barrier	21	21	31-Aug-21	29-Sep-21	02-Jul-21	02-Aug-21						
UTILITIES DIVERSION													
NORTHBOUND													
Z5_1630	UU_HGC-slew cable for N4 CH2575-2650 75m	9	5	01-Feb-21 A	04-Sep-21	08-May-21	18-May-21						
Z5_1640	UU_NWT-slew cable for N4 CH2580-2650 70m	15	15	04-Sep-21	23-Sep-21	20-May-21	05-Jun-21						
NOISE BARRIER AND SEMI-ENCLOSURE													
PILE FOUNDATION WORKS													
SOUTHBOUND													
Z5_1170	SE3-1_site investigation for S3E1-51 to S3E1-72 (21nr)	55	0	05-May-20 A	17-Aug-21 A	15-Jul-20	16-Sep-20						
Z5_1180	SE3-1_mini piles for S3E1-51 to S3E1-72 (132nr ver)	132	123	24-Jul-21 A	01-Mar-22	02-Aug-21	10-Jan-22						
SOUTHBOUND SLIP ROAD													
Z5_1300	R4_mini piles for R4-10P (12nr raking, 11nr ver)	92	81	29-Jul-21 A	06-Dec-21	03-Jun-21	20-Sep-21						
PILE CAP AND FOOTING													
NORTHBOUND													

-  Remaining Level of Effort
-  Remaining Work
-  Milestone
-  Actual Level of Effort
-  Critical Remaining Work
-  Baseline Milestone
-  Actual Work
-  Primary Baseline

Date	Revision	Checked	Approved
06-Sep-21	3MRP DWP 2108	Tim	

Activity ID	Activity Name	Original Duration	Remaining Duration	3MRP Start	3MRP Finish	AP11 Start	AP11 Finish	2021						
								Aug 38	Sep 39	Oct 40	Nov 41	Dec 42		
Z5_1020	N4_ELS for footing/cap construction N4-29 to N4-53 (322m_2 side)	89	78	01-Feb-21 A	28-Dec-21	11-May-21	25-Aug-21							
Z5_1030	N4_cap/footing construction N4-29 to N4-53 (25nr)	147	132	27-Mar-21 A	23-May-22	25-May-21	17-Nov-21							
Z5_1050	N4_backfill & remove ELS	54	53	14-Apr-21 A	26-Jul-22	12-Feb-22	20-Apr-22							
SOUTHBOUND														
Z5_1230	SE3-2_ELS for footing construction S3E2-51 to S3E2-61P (131m_2 side)	73	62	20-Mar-21 A	15-Nov-21	31-Mar-21	02-Jul-21							
Z5_1245	SE3-2_footing/cap construction S3E2-51 to 61P (9nr)	189	168	13-May-21 A	25-Mar-22	24-May-21	07-Jan-22							
SOUTHBOUND SLIP ROAD														
Z5_1260	N3_ELS for footing construction N3-01 to N3-02 (30m_2 side)	17	9	01-Oct-20 A	09-Sep-21	26-Feb-21	17-Mar-21							
Z5_1270	N3_footing construction N3-01 to N3-02 (2nr)	42	21	24-Oct-20 A	06-Oct-21	08-Apr-21	31-May-21							
Z5_1280	N3_backfill & remove ELS	5	3	23-Jan-21 A	08-Oct-21	07-Apr-21	14-Apr-21							
Z5_1310	R4_ELS for footing/cap construction R4-01 to R4-12P (158m_1 side)	44	29	08-Sep-20 A	06-Dec-21	18-Mar-21	13-May-21							
Z5_1320	R4_cap/footing construction R4-01 to R4-12P (8nr)	168	118	08-Oct-20 A	05-May-22	21-May-21	09-Dec-21							
ROADWORKS AND REMAINING WORKS														
GEOTECHNICAL WORKS														
SOUTHBOUND SLIP ROAD														
Z5_1740	Zone 5_fill replacement by no-fines concrete 7SE-A/F166 (open excavation)	29	21	12-Mar-21 A	05-Aug-22	07-Apr-22	14-May-22							
PORTION E (ZONE 5)														
PRELIMINARIES WORKS														
SUMMARY PROGRAMME														
TPR NORTHBOUND														
PESU1000	Construction Zone 5 Portion E_Northbound structure	336	173	11-May-20 A	30-Mar-22	31-Jul-20	16-Sep-21							
NOISE BARRIER AND SEMI-ENCLOSURE														
PILE FOUNDATION WORKS														
NORTHBOUND SLIP ROAD														
Z5E_1200	N4 & R5_mini piles for N4-54P to R5-02P (16nr raking, 16nr ver)	64	45	09-Jul-21 A	25-Oct-21	24-May-21	07-Aug-21							
PILE CAP AND FOOTING														
NORTHBOUND SLIP ROAD														
Z5E_1020	R5_ELS for footing construction R5-02 to R5-07 (120m_1 side)	30	8	15-Apr-21 A	17-Sep-21	10-May-21	16-Jun-21							
Z5E_1030	R5_footing construction R5-03 to R5-07 (5nr)	63	55	04-Aug-21 A	24-Nov-21	16-Jun-21	30-Aug-21							
Z5E_1040	R5_backfill & remove ELS	30	30	24-Nov-21	31-Dec-21	30-Aug-21	06-Oct-21							
Z5E_1080	R6_backfill & remove ELS	13	13	24-Nov-21	09-Dec-21	29-Sep-21	16-Oct-21							
Z5E_1210	N4 & R5_ELS for pile cap construction N4-54P to R5-02P (15m_1 side)	5	5	25-Oct-21	30-Oct-21	09-Aug-21	13-Aug-21							
Z5E_1220	N4 & R5_cap/footing construction N4-52 to R5-02P (6nr)	63	63	30-Oct-21	15-Jan-22	14-Aug-21	29-Oct-21							
ROADWORKS AND REMAINING WORKS														
GEOTECHNICAL WORKS														
NORTHBOUND SLIP ROAD														
Z5E_1150	Zone 5 Portion E_fill replacement by no-fines concrete 7SE-A/F163 (open excavation)	50	24	10-Sep-20 A	16-Feb-22	09-Dec-20	09-Feb-21							
Z5E_1160	Zone 5 Portion E_fill replacement by no-fines concrete 7SE-A/FR136 (open excavation)	50	20	03-Jun-21 A	04-Oct-21	10-May-21	10-Jul-21							
Z5E_1170	Zone 5 Portion E_fill replacement by no-fines concrete 7SE-A/F133 (open excavation)	38	8	10-Feb-20 A	08-Sep-21	11-Sep-20	28-Oct-20							

- Remaining Level of Effort
- Remaining Work
- Milestone
- Actual Level of Effort
- Critical Remaining Work
- Baseline Milestone
- Actual Work
- Primary Baseline

ROAD WIDENING & RETROFITTING NOISE BARRIERS ON TAI PO ROAD (SHA TIN SECTION)
3 Months Rolling Programme (31/8/21)
 Page 7 of 7

Date	Revision	Checked	Approved
06-Sep-21	3MRP DWP 2108	Tim	

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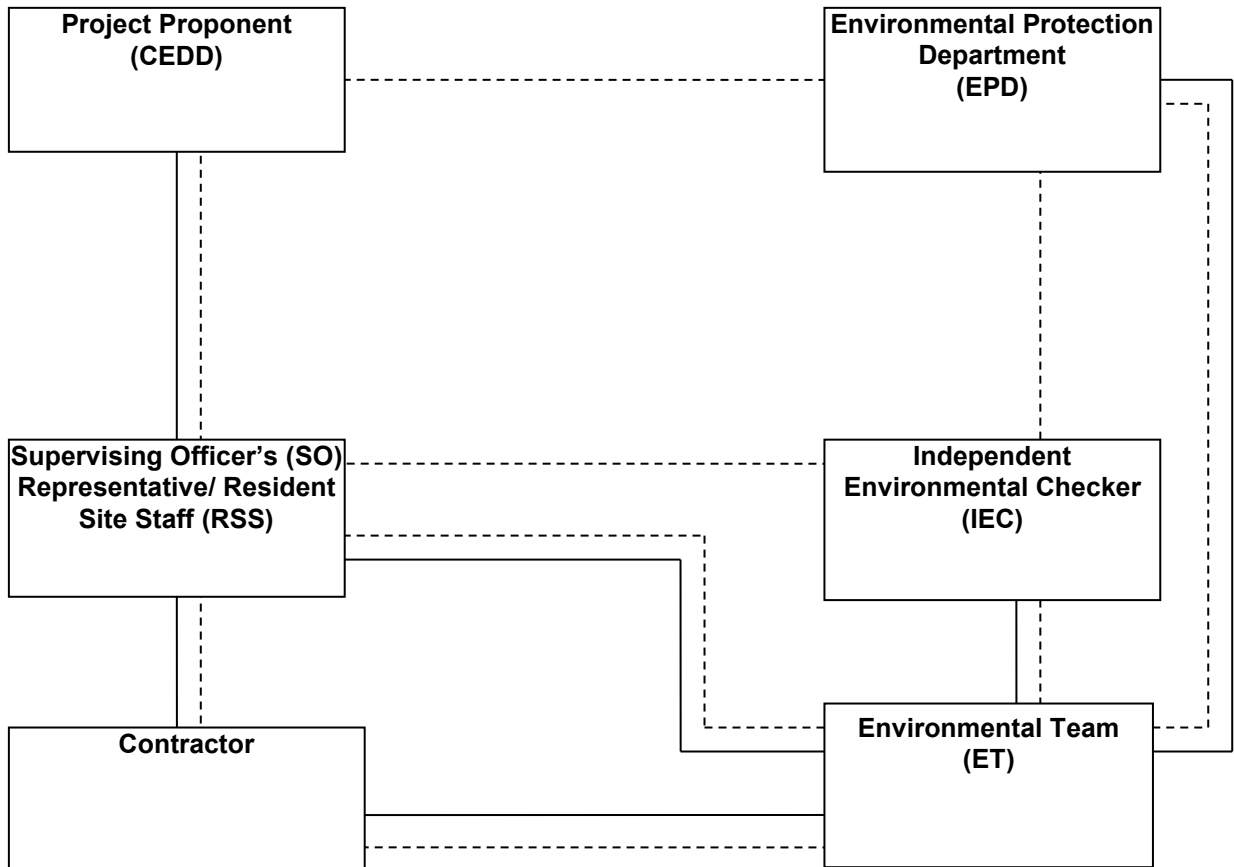
Appendix B

Project Organization Chart

FUGRO TECHNICAL SERVICES LIMITED

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Legend:

— Line of Reporting

- - - Line of Communication

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Appendix C

Action and Limit Levels for Air Quality and Noise

FUGRO TECHNICAL SERVICES LIMITED

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Action and Limit Levels for 24-hr TSP and 1-hr TSP

Parameter	Monitoring Station	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
24-hr TSP ($\mu\text{g}/\text{m}^3$)	AMS 5	156	260
	AMS 7A	171	
	AMS 14	174	
	AMS 15	172	
1-hr TSP ($\mu\text{g}/\text{m}^3$)	AMS 5	340	500
	AMS 7A	344	
	AMS 14	350	
	AMS 15	350	

Action and Limit Levels for Construction Noise, Leq (30min), dB(A)

Time Period	Location	Action	Limit
0700-1900 hrs on normal weekdays	NMS1	When one documented complaint is received	75 dB(A)
	NMS2		
	NMS3		
	NMS4		
	NMS5A		
	NMS6A		
	NMS7		
	NMS8		
	NMS9		
	NMS10A*		
	NMS11		
	NMS12*		
	NMS13		
	NMS14		
	NMS15		
	NMS16		
	NMS17*		
	NMS18		
	NMS19		
	NMS20		
NMS23			
NMS24			
NMS25A			
NMS26			
NMS27*			

* For NMS 10A, 12, 17 and 27, the Limit Level is reduced to 70 dB(A) for schools and 65 dB(A) during school examination periods.

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Appendix D

Calibration Certificates of Monitoring Equipment

CALIBRATION CERTIFICATE OF DUST METER

Client : Fugro Technical Services Limited

Project : Calibration Services

Client Supplied Information

Details of Unit Under Test, UUT

Description : Laser dust monitor
 Manufacturer : SIBATA
 Model No. : LD-3B
 Serial No. : 892187
 Specification Limit : NA
 Next Calibration Date : 11-Jul-2022

Laboratory Information

Description : 1. Balance 2. TSP high volume air sampler
 Equipment ID. / Serial no. : 1. C-065-9 2. 4350
 Date of Calibration : 12-Jul-2021 Ambient Temperature : 25 ± 10 °C
 Calibration Location : General Chemical Laboratory of FTS and Ma Wan A1 Site Boundary
 Method Used : By direct comparison the weight of dust particle trapped in a filter paper using high volume sampler (TSP method) for a certain period, with the reading of the UUT. They should be placed at the same location and powered on and off at the same time.

Calibration Results :

Reference concentration (mg/m ³)	Total count for 1 hour	CPM (Count per minute)
0.0424	1512	25.20
0.0194	1041	17.35
0.0230	1090	18.17

Remarks:

- The equipment being used in this calibration is traceable to recognized National Standards.
- The interpolation equation : Concentration (mg/m³) = K x [UUT reading (CPM)], where K = 0.001398
- Correlation coefficient (r) : 0.9987

Checked by : Clarry Date : 12-8-2021 Certified by : K.T. Leung Date : 13-8-2021
 CA-R-297 (22/07/2009) Leung Kwok Tai (Assistant Manager)

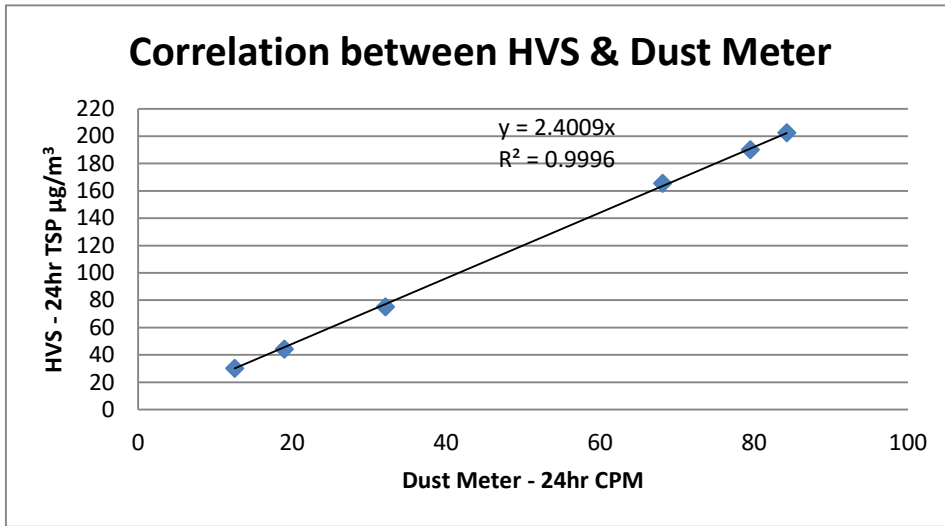
** End of Report **

Correlation between HVS & Dust Meter

Model: Sibata LD-3B

Serial No: 892187

HVS - 24hr TSP $\mu\text{g}/\text{m}^3$	30.27	44.26	75.06	165.63	190.06	202.54
Dust Meter - 24hr CPM	12.5	19.0	32.1	68.1	79.5	84.3



K factor = 2.401

Report no. : 940891CA202730(5)

Page 1 of 1

CALIBRATION CERTIFICATE OF DUST METER

Client : Fugro Technical Services Limited

Project : Calibration Services

Client Supplied Information

Details of Unit Under Test, UUT

Description : Laser dust monitor
 Manufacturer : SIBATA
 Model No. : LD-5R
 Serial No. : 892185
 Specification Limit : NA
 Next Calibration Date : 22-Nov-2021

Laboratory Information

Description : 1. Balance 2. TSP high volume air sampler
 Equipment ID. / Serial no. : 1. C-065-9 2. 4350
 Date of Calibration : 23-Nov-2020 Ambient Temperature : 25 ± 10 °C
 Calibration Location : General Chemical Laboratory of FTS and Ma Wan A1 Site Boundary
 Method Used : By direct comparison the weight of dust particle trapped in a filter paper using high volume sampler (TSP method) for a certain period, with the reading of the UUT. They should be placed at the same location and powered on and off at the same time.

Calibration Results :

Reference concentration (mg/m ³)	Total count for 1 hour	CPM (Count per minute)
0.0915	3263	54.38
0.0469	2909	48.48
0.1172	3562	59.37

Remarks:

1. The equipment being used in this calibration is traceable to recognized National Standards.
2. The interpolation equation : Concentration (mg/m³) = K x [UUT reading (CPM)], where K = 0.001576
3. Correlation coefficient (r) : 0.9945

Checked by : Canny Date : 15-12-2020 Certified by : K. Leung Date : 15-12-2020

CA-R-297 (22/07/2009)

Leung Kwok Tai (Assistant Manager)

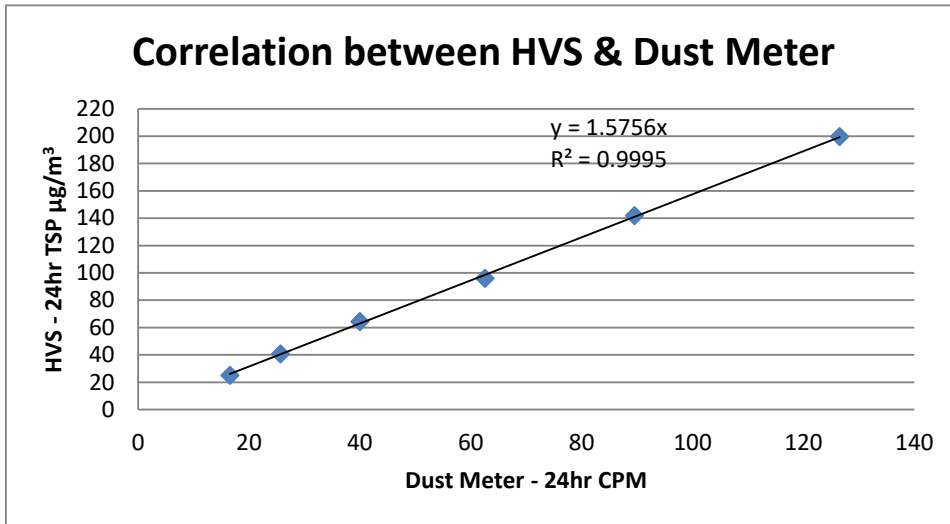
** End of Report **

Correlation between HVS & Dust Meter

Model: Sibata LD-5R

Serial No: 892185

HVS - 24hr TSP $\mu\text{g}/\text{m}^3$	25.12	40.65	64.43	95.91	141.99	199.70
Dust Meter - 24hr CPM	16.5	25.7	40.0	62.6	89.6	126.5



K factor = 1.576

Report no. : 940891CA211924(3)

Page 1 of 1

CALIBRATION CERTIFICATE OF DUST METER

Client : Fugro Technical Services Limited

Project : Calibration Services

Client Supplied Information

Details of Unit Under Test, UUT

Description : Laser dust monitor
 Manufacturer : SIBATA
 Model No. : LD-3B
 Serial No. : 882189
 Specification Limit : NA
 Next Calibration Date : 11-Jul-2022

Laboratory Information

Description : 1. Balance 2. TSP high volume air sampler
 Equipment ID. / Serial no. : 1. C-065-9 2. 4350
 Date of Calibration : 12-Jul-2021 Ambient Temperature : 25 ± 10 °C
 Calibration Location : General Chemical Laboratory of FTS and Ma Wan A1 Site Boundary
 Method Used : By direct comparison the weight of dust particle trapped in a filter paper using high volume sampler (TSP method) for a certain period, with the reading of the UUT. They should be placed at the same location and powered on and off at the same time.

Calibration Results :

Reference concentration (mg/m ³)	Total count for 1 hour	CPM (Count per minute)
0.0424	1498	24.97
0.0194	1052	17.53
0.0230	1088	18.13

Remarks:

- The equipment being used in this calibration is traceable to recognized National Standards.
- The interpolation equation : Concentration (mg/m³) = K x [UUT reading (CPM)], where K = 0.001400
- Correlation coefficient (r) : 0.9973

 Checked by : C. Wong Date : 12-8-2021 Certified by : P. T. Leung Date : 13-8-2021

CA-R-297 (22/07/2009)

Leung Kwok Tai (Assistant Manager)

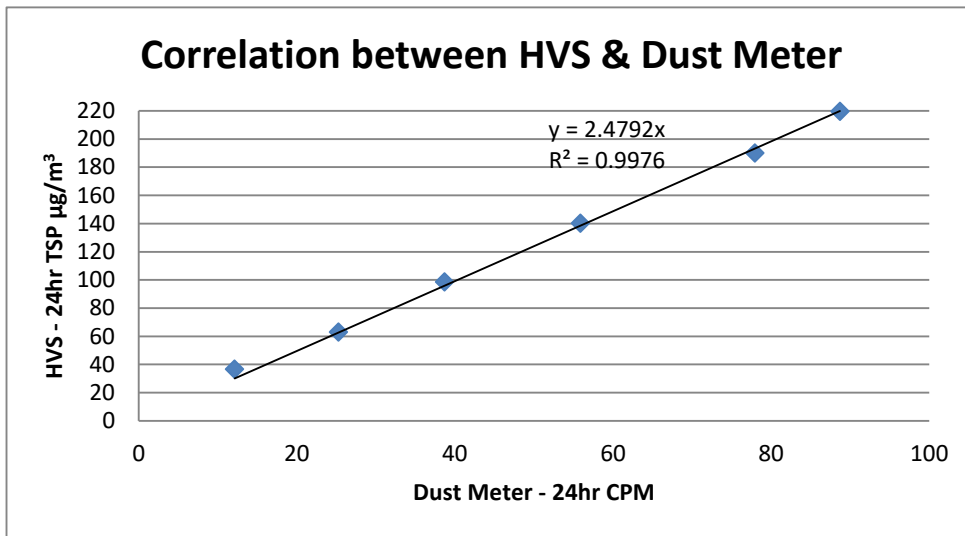
**** End of Report ****

Correlation between HVS & Dust Meter

Model: Sibata LD-3B

Serial No: 882189

HVS - 24hr TSP $\mu\text{g}/\text{m}^3$	36.55	62.88	98.49	140.27	189.93	219.68
Dust Meter - 24hr CPM	12.1	25.3	38.7	55.9	78.0	88.7



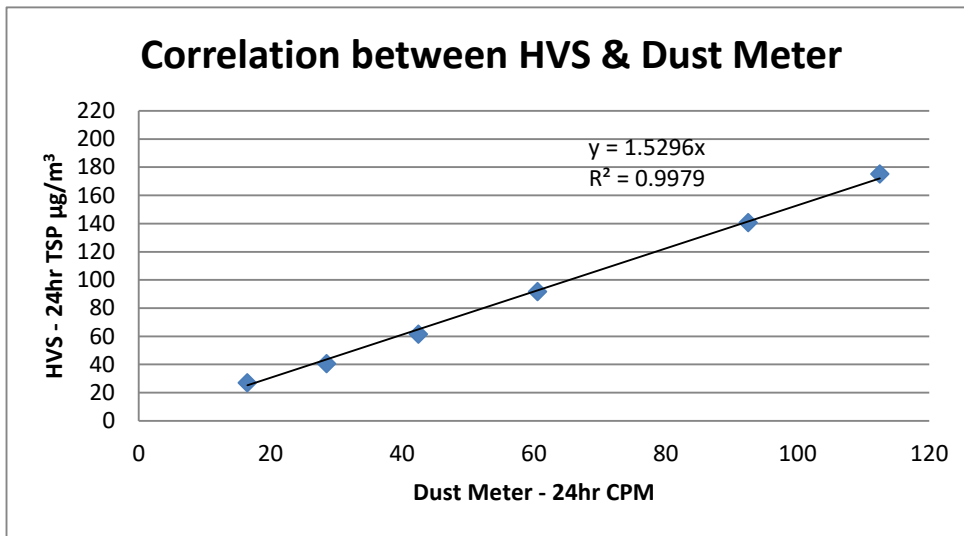
K factor = 2.479

Correlation between HVS & Dust Meter

Model: Sibata LD-5R

Serial No: 882149

HVS - 24hr TSP $\mu\text{g}/\text{m}^3$	26.86	40.60	61.52	91.56	140.59	175.25
Dust Meter - 24hr CPM	16.5	28.5	42.5	60.6	92.5	112.5



K factor = 1.530

Report no.: 203258CA202751

Page 1 of 1

CALIBRATION CERTIFICATE OF SOUND LEVEL METER

Client Supplied Information

Client : Fugro Technical Services Ltd.

Project : Calibration Services

Details of Unit Under Test, UUT

 Description : Sound Level Meter
 Manufacturer : Casella

	Meter	Microphone	Preamplifier
Model No.	CEL-63X	CE-251	CEL-495
Serial No.	1488271	01910	004065

Equipment ID : N-52

Next Calibration Date : 21-Dec-2021

Specification Limit : EN 61672-1: 2003 Class 1

Laboratory Information

Details of Reference Equipment -

Description : B & K Acoustic Multifunction Calibrator 4226 (Traditional free field setting)

Equipment ID. : R-108-1

Date of Calibration : 22-Dec-2020

Calibration Location : Calibration Laboratory of FTS Ambient Temperature : 20±2 °C

Method Used : By direct comparison Relative Humidity : <80% R.H.

Calibration Results :

Parameters	Mean Value (dB)	Specification Limit(dB)
A-weighting frequency response	4000Hz	2.1 2.6 to -0.6
	2000Hz	1.4 2.8 to -0.4
	1000Hz	0.0 1.1 to -1.1
	500Hz	-3.5 -1.8 to -4.6
	250Hz	-8.8 -7.2 to -10.0
	125Hz	-16.3 -14.6 to -17.6
	63Hz	-26.3 -24.7 to -27.7
	31.5Hz	-39.2 -37.4 to -41.4
Differential level linearity	94dB-104dB	0.0 ± 0.6
	104dB-114dB	0.0 ± 0.6

Remarks :

- The equipment used in this calibration is traceable to recognized National Standards.
- The mean value is the average of four measurements.
- For calibration: Reference SPL are 94, 104 & 114dB, range setting is 20-140dB & time weighting is fast.
- The UUT does comply with EN 61672-1: 2003 Class 1 sound level meter for the above measurement.
- The values given in this Calibration Certificate only relate to the values at the time of the test and any uncertainties will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling or the capability of any other laboratory to repeat the measurement.

 Checked by : William Date : 28-12-2020 Certified by : F. Leung Date : 28-12-2020
 CA-R-297 (22/07/2009) Leung Kwok Tai (Assistant Manager)

** End of Report **

Report no.: 212769CA211755

Page 1 of 1

CALIBRATION CERTIFICATE OF SOUND LEVEL METER

Client Supplied Information

Client : Fugro Technical Services Ltd.

Address : Room 723 & 725, 7/F., Block B Profit Industrial Building, 1-15 Kwai Fung Crescent, Kwai Chung, N.T.

Project : Calibration Services

Details of Unit Under Test, UUT

 Description : Sound Level Meter
 Manufacturer : Casella

	Meter	Microphone	Preamplifier
Model No.	CEL-63X	CE-251	CEL-495
Serial No.	1488293	04064	004061

Equipment ID : N/A

Next Calibration Date : 25-Jul-2022

Specification Limit : EN 61672-1: 2003 Class 1

Laboratory Information

Details of Reference Equipment -

Description : B & K Acoustic Multifunction Calibrator 4226 (Traditional free field setting)

Equipment ID. : R-108-1

Date of Calibration : 26-Jul-2021

Calibration Location : Calibration Laboratory of FTS Ambient Temperature : 20±2 °C

Method Used : By direct comparison Relative Humidity : <80% R.H.

Calibration Results :

Parameters	Mean Value (dB)	Specification Limit(dB)
A-weighting frequency response	4000Hz	1.0 2.6 to -0.6
	2000Hz	1.2 2.8 to -0.4
	1000Hz	0.0 1.1 to -1.1
	500Hz	-3.4 -1.8 to -4.6
	250Hz	-8.7 -7.2 to -10.0
	125Hz	-16.2 -14.6 to -17.6
	63Hz	-26.1 -24.7 to -27.7
	31.5Hz	-38.9 -37.4 to -41.4
Differential level linearity	94dB-104dB	± 0.6
	104dB-114dB	± 0.6

Remarks :

- The equipment used in this calibration is traceable to recognized National Standards.
- The mean value is the average of four measurements.
- The expanded uncertainty is 0.3 dB with a coverage factor of 2 at a confidence level of 95%.
- For calibration: Reference SPL are 94, 104 & 114dB, range setting is 20-140dB & time weighting is fast
- The UUT does comply with EN 61672-1: 2003 Class 1 sound level meter for the above measurement.
- The values given in this Calibration Certificate only relate to unit under test and the values measured at the time of the test. Any uncertainties will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling or the capability of any other laboratory to repeat the measurement.

 Checked by : Cenny Date : 30-7-2021 Certified by : K.T. Leung Date : 30-7-2021
 CA-R-297 (22/07/2009) Leung Kwok Tai (Assistant Manager)

**** End of Report ****

Report no.: 212769CA212069(2)

Page 1 of 1

CALIBRATION CERTIFICATE OF SOUND LEVEL METER

Client Supplied Information

Client : Fugro Technical Services Ltd.

Address : Room 723 & 725, 7/F., Block B Profit Industrial Building, 1-15 Kwai Fung Crescent, Kwai Chung, N.T.

Project : Calibration Services

Details of Unit Under Test, UUT

Description : Sound Level Meter

Manufacturer : Casella

	Meter	Microphone	Preamplifier
Model No.	CEL-63X	CE-251	CEL-495
Serial No.	1488295	01163	004064

Equipment ID : N-54

Next Calibration Date : 25-Aug-2022

Specification Limit : EN 61672-1: 2003 Class 1

Laboratory Information

Details of Reference Equipment -

Description : B & K Acoustic Multifunction Calibrator 4226 (Traditional free field setting)

Equipment ID. : R-108-1

Date of Calibration : 26-Aug-2021

Calibration Location : Calibration Laboratory of FTS Ambient Temperature : 20±2 °C

Method Used : By direct comparison Relative Humidity : <80% R.H.

Calibration Results :

Parameters		Mean Value (dB)	Specification Limit(dB)
A-weighting frequency response	4000Hz	2.3	2.6 to -0.6
	2000Hz	1.5	2.8 to -0.4
	1000Hz	0.0	1.1 to -1.1
	500Hz	-3.4	-1.8 to -4.6
	250Hz	-8.8	-7.2 to -10.0
	125Hz	-16.3	-14.6 to -17.6
	63Hz	-26.3	-24.7 to -27.7
	31.5Hz	-39.0	-37.4 to -41.4
Differential level linearity	94dB-104dB	0.1	± 0.6
	104dB-114dB	0.1	± 0.6

Remarks :

- The equipment used in this calibration is traceable to recognized National Standards.
- The mean value is the average of four measurements.
- The expanded uncertainty is 0.3 dB with a coverage factor of 2 at a confidence level of 95%.
- For calibration: Reference SPL are 94, 104 & 114dB, range setting is 20-140dB & time weighting is fast
- The UUT does comply with EN 61672-1: 2003 Class 1 sound level meter for the above measurement.
- The values given in this Calibration Certificate only relate to unit under test and the values measured at the time of the test. Any uncertainties will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling or the capability of any other laboratory to repeat the measurement.

 Checked by : Canny Date : 27-8-2021 Certified by : K.T. Leung Date : 27-8-2021
 CA-R-297 (22/07/2009) Leung Kwok Tai (Assistant Manager)

**** End of Report ****

Report no.: 203258CA202302(2)

Page 1 of 1

CALIBRATION CERTIFICATE OF SOUND LEVEL METER

Client Supplied Information

Client : Fugro Technical Services Ltd.

Project : Calibration Services

Details of Unit Under Test, UUT

 Description : Sound Level Meter
 Manufacturer : Casella

	Meter	Microphone	Preamplifier
Model No.	CEL-63X	CE-251	CEL-495
Serial No.	1488304	03876	002752

Equipment ID : N-62

Next Calibration Date : 29-Oct-2021

Specification Limit : EN 61672-1: 2003 Class 1

Laboratory Information

Details of Reference Equipment -

 Description : B & K Acoustic Multifunction Calibrator 4226 (Traditional free field setting)
 Equipment ID. : R-108-1

Date of Calibration : 30-Oct-2020

Calibration Location : Calibration Laboratory of FTS Ambient Temperature : 20±2 °C

Method Used : By direct comparison Relative Humidity : <80% R.H.

Calibration Results :

Parameters	Mean Value (dB)	Specification Limit(dB)
A-weighting frequency response	4000Hz	1.5 2.6 to -0.6
	2000Hz	1.3 2.8 to -0.4
	1000Hz	-0.1 1.1 to -1.1
	500Hz	-3.5 -1.8 to -4.6
	250Hz	-8.9 -7.2 to -10.0
	125Hz	-16.4 -14.6 to -17.6
	63Hz	-26.4 -24.7 to -27.7
	31.5Hz	-39.4 -37.4 to -41.4
Differential level linearity	94dB-104dB	0.0 ± 0.6
	104dB-114dB	0.0 ± 0.6

Remarks :

- The equipment used in this calibration is traceable to recognized National Standards.
- The mean value is the average of four measurements.
- For calibration: Reference SPL are 94, 104 & 114dB, range setting is 20-140dB & time weighting is fast.
- The UUT does comply with EN 61672-1: 2003 Class 1 sound level meter for the above measurement.
- The values given in this Calibration Certificate only relate to the values at the time of the test and any uncertainties will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling or the capability of any other laboratory to repeat the measurement.

 Checked by : William Date : 4-11-2020 Certified by : K.T. Leung Date : 4-11-2020
 CA-R-297 (22/07/2009) Leung Kwok Tai (Assistant Manager)

**** End of Report ****

Report no.: 212769CA212054

Page 1 of 1

CALIBRATION CERTIFICATE OF SOUND CALIBRATOR

Client : Materialab Consultants Ltd.

Project : Calibration Services

Client Supplied Information

Details of Unit Under Test, UUT

Description : Sound Calibrator
 Manufacturer : Casella (Model CEL-120/1)
 Serial No. : 1677126
 Equipment ID : N/A

Next Calibration Date : 19-Aug-2022

Specification Limit : EN 60942: 2003 Class 1

Laboratory Information

Details of Calibration Equipment

Description : Reference Sound level meter
 Equipment ID. : R-119-2

Date of Calibration : 20-Aug-2021

Calibration Location : Calibration Laboratory of FTS Ambient Temperature : 20±2 °C

Method Used : By direct comparison Relative Humidity : <80% R.H.

Calibration Results :

Parameters (Setting of UUT)	Mean Value (error of measurement)	Specification Limit(dB)
94dB	0.1 dB	±0.4dB
114dB	0.2 dB	

Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. The mean value is the average of four measurements.
3. The unit under test complies with the specification limit.
4. The values given in this Calibration Certificate only relate to the unit-under-test and the values measured at the time of the test. Any uncertainties quoted will not include allowances for the environmental changes, variation and shock during transportation, or the capability of any other laboratory to repeat the measurement.

Checked by : C. Chan Date : 24-Aug-2021 Certified by : K.T. Leung Date : 24-8-2021
 CA-R-297 (22/07/2009) Leung Kwok Tai (Assistant Manager)

** End of Report **

Report no.: 212769CA211663

Page 1 of 1

CALIBRATION CERTIFICATE OF SOUND CALIBRATOR

Client : Fugro Technical Services Ltd.

Project : Calibration Services

Client Supplied Information

Details of Unit Under Test, UUT

Description : Sound Calibrator
 Manufacturer : Casella (Model CEL-120/1)
 Serial No. : 2383886
 Equipment ID : N/A
 Next Calibration Date : 15-Jul-2022
 Specification Limit : EN 60942: 2003 Class 1

Laboratory Information

Details of Calibration Equipment

Description : Reference Sound level meter
 Equipment ID. : R-119-2
 Date of Calibration : 16-Jul-2021
 Calibration Location : Calibration Laboratory of FTS Ambient Temperature : 20±2 °C
 Method Used : By direct comparison Relative Humidity : <80% R.H.

Calibration Results :

Parameters (Setting of UUT)	Mean Value (error of measurement)	Specification Limit(dB)
94dB	0.3 dB	±0.4dB
114dB	0.4 dB	

Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. The mean value is the average of four measurements.
3. The expanded uncertainty is 0.3 dB with a coverage factor of 2 at a confidence level of 95%.
4. The unit under test complies with the specification limit.
5. The values given in this Calibration Certificate only relate to the unit-under-test and the values measured at the time of the test. Any uncertainties quoted will not include allowances for the environmental changes, variation and shock during transportation, or the capability of any other laboratory to repeat the measurement.

Checked by : Cenny Date : 20-7-2021 Certified by : K.T. Leung Date : 20-7-2021
 CA-R-297 (22/07/2009)

Leung Kwok Tai (Assistant Manager)

** End of Report **

Report no.: 212769CA212279(2)

Page 1 of 1

CALIBRATION CERTIFICATE OF SOUND CALIBRATOR

Client : Fugro Technical Services Ltd.

Project : Calibration Services

Client Supplied Information

Details of Unit Under Test, UUT

Description : Sound Calibrator
 Manufacturer : Casella (Model CEL-120/1)
 Serial No. : 5230736
 Equipment ID : N/A

Next Calibration Date : 12-Sep-2022

Specification Limit : EN 60942: 2003 Class 1

Laboratory Information

Details of Calibration Equipment

Description : Reference Sound level meter
 Equipment ID. : R-119-2

Date of Calibration : 13-Sep-2021

Calibration Location : Calibration Laboratory of FTS Ambient Temperature : 20±2 °C

Method Used : By direct comparison Relative Humidity : <80% R.H.

Calibration Results :

Parameters (Setting of UUT)	Mean Value (error of measurement)	Specification Limit(dB)
94dB	-0.1 dB	±0.4dB
114dB	-0.1 dB	

Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. The mean value is the average of four measurements.
3. The unit under test complies with the specification limit.
4. The values given in this Calibration Certificate only relate to the unit-under-test and the values measured at the time of the test. Any uncertainties quoted will not include allowances for the environmental changes, variation and shock during transportation, or the capability of any other laboratory to repeat the measurement.

 Checked by : Conny Date : 17-9-2021 Certified by : E.T. Leung Date : 17-9-2021

CA-R-297 (22/07/2009)

Leung Kwok Tai (Assistant Manager)

**** End of Report ****

Report no.: 212769CA211664

Page 1 of 1

CALIBRATION CERTIFICATE OF SOUND CALIBRATOR

Client : Fugro Technical Services Ltd.

Project : Calibration Services

Client Supplied Information

Details of Unit Under Test, UUT

Description : Sound Calibrator
 Manufacturer : Casella (Model CEL-120/1)
 Serial No. : 5230758
 Equipment ID : N/A

Next Calibration Date : 15-Jul-2022

Specification Limit : EN 60942: 2003 Class 1

Laboratory Information

Details of Calibration Equipment

Description : Reference Sound level meter
 Equipment ID. : R-119-2

Date of Calibration : 16-Jul-2021

Calibration Location : Calibration Laboratory of FTS Ambient Temperature : 20±2 °C

Method Used : By direct comparison Relative Humidity : <80% R.H.

Calibration Results :

Parameters (Setting of UUT)	Mean Value (error of measurement)	Specification Limit(dB)
94dB	-0.2 dB	±0.4dB
114dB	-0.2 dB	

Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. The mean value is the average of four measurements.
3. The expanded uncertainty is 0.3 dB with a coverage factor of 2 at a confidence level of 95%.
4. The unit under test complies with the specification limit.
5. The values given in this Calibration Certificate only relate to the unit-under-test and the values measured at the time of the test. Any uncertainties quoted will not include allowances for the environmental changes, variation and shock during transportation, or the capability of any other laboratory to repeat the measurement.

 Checked by : Emily Date : 20-7-2021 Certified by : R. T. Leung Date : 20-7-2021

CA-R-297 (22/07/2009)

Leung Kwok Tai (Assistant Manager)

**** End of Report ****

FUGRO TECHNICAL SERVICES LIMITED

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Website : www.fugro.com



Appendix E

Environmental Monitoring Schedules, Examination Schedules and Arrangements on Deferral of Class Resumption for All Schools

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2	3
							4
	5	6	7	8	9	10	11
	AMS5 Tin Liu AMS7A Sheung Wo Che AMS14 Ha Wo Che AMS15 Ha Wo Che						AMS5 Tin Liu AMS7A Sheung Wo Che AMS14 Ha Wo Che AMS15 Ha Wo Che
	NMS 1, NMS 2, NMS 3, NMS 4, NMS 5A, NMS 6A, NMS 7, NMS 15, NMS 16, NMS 18, NMS 23, NMS 27	NMS 8, NMS9, NMS 10A, NMS 11, NMS 12, NMS 13, NMS 14, NMS17, NMS 19, NMS 20, NMS 24, NMS 25A, NMS 26					
	12	13	14	15	16	17	18
						AMS5 Tin Liu AMS7A Sheung Wo Che AMS14 Ha Wo Che AMS15 Ha Wo Che	
						NMS 1, NMS 2, NMS 3, NMS 4, NMS 5A, NMS 6A, NMS 7, NMS 15, NMS 16, NMS 18, NMS 23, NMS 27	NMS 8, NMS9, NMS 10A, NMS 11, NMS 12, NMS 13, NMS 14, NMS17, NMS 19, NMS 20, NMS 24, NMS 25A, NMS 26
	19	20	21	22	23	24	25
					AMS5 Tin Liu AMS7A Sheung Wo Che AMS14 Ha Wo Che AMS15 Ha Wo Che		
					NMS 1, NMS 2, NMS 3, NMS 4, NMS 5A, NMS 6A, NMS 7, NMS 15, NMS 16, NMS 18, NMS 23, NMS 27	NMS 8, NMS9, NMS 10A, NMS 11, NMS 12, NMS 13, NMS 14, NMS17, NMS 19, NMS 20, NMS 24, NMS 25A, NMS 26	
	26	27	28	29	30		
				AMS5 Tin Liu AMS7A Sheung Wo Che AMS14 Ha Wo Che AMS15 Ha Wo Che			
				NMS 1, NMS 2, NMS 3, NMS 4, NMS 5A, NMS 6A, NMS 7, NMS 15, NMS 16, NMS 18, NMS 23, NMS 27	NMS 8, NMS9, NMS 10A, NMS 11, NMS 12, NMS 13, NMS 14, NMS17, NMS 19, NMS 20, NMS 24, NMS 25A, NMS 26		

Remark

1. Actual monitoring may be subjected to change due to any safety concern or adverse weather condition.
2. The Impact Air Monitoring Stations to be monitored should be selected based on the prevailing wind direction and their proximity to the active construction works.
3. According to the Hong Kong Observatory, anticipated wind directions in September 2021 are north, north east and east.
4. According to the Contractor, the anticipated major construction activities in the reporting month includes:
 - (1) Tree Preservation, Felling, Pruning, Transplantation in Zone 1, 2, 3, 4 and 5.
 - (2) Noise Barrier Foundation Works in Zone 1, 2, 4 and 5.
 - (3) Noise Barrier Erection Works in Zone 1 and 2.
 - (4) Road Reconstruction Works, Sheet Pile Removal and Lane Shifting Works in Zone 1 and 2.
 - (5) Trial Pits Excavation in Zone 3, 4 and 5.
 - (6) Construction, Diversion of Underground Utilities, including ELS works and Sheet Piling in Zone 3.
 - (7) Retaining Wall Construction Works in Zone 3.
 - (8) Construction of Cycle Track Subway, Pump Room and Stem Wall Construction Works in Zone 3.
 - (9) Demolition of Existing Parapet and Lagging Wall Construction Works in Zone 3.
 - (10) Construction work for Temporary Site Access Relocation in Zone 3.
 - (11) Pre bore H Pile Construction Works and Steel Works Installation for Lift in Zone 3.
 - (12) Profile Barrier and Stem Wall Construction Works and Foundation Works for SR2 in Zone 3.
 - (13) Construction Works for N263 Bridge Deck Widening and SR6 Temporary Widening in Zone 3.
 - (14) ELS Works at SHA for Widening of SR3 in Zone 3.
 - (15) Piezometer for underground water pressure measurement in Zone 3.
 - (16) NF40 and N66 Footbridge Construction Works in Zone 4.
 - (17) Mini Pile Construction Works in Zone 4 and 5.
 - (18) Stem Wall and Drainage Construction Works in Zone 5.

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
							1
							2
	3		4	5	6	7	8
			AMSS Tin Liu AMS7A Sheung Wo Che AMS14 Ha Wo Che AMS15 Ha Wo Che				
			NMS 1, NMS 2, NMS 3, NMS 4, NMS 5A, NMS 6A, NMS 7, NMS 15, NMS 16, NMS 18,NMS 23, NMS 27	NMS 8, NMS9, NMS 10A, NMS 11, NMS 12, NMS 13, NMS 14, NMS17, NMS 19, NMS 20, NMS 24, NMS 25A, NMS 26			
	10		11	12	13	14	15
		AMSS Tin Liu AMS7A Sheung Wo Che AMS14 Ha Wo Che AMS15 Ha Wo Che					AMSS Tin Liu AMS7A Sheung Wo Che AMS14 Ha Wo Che AMS15 Ha Wo Che
		NMS 1, NMS 2, NMS 3, NMS 4, NMS 5A, NMS 6A, NMS 7, NMS 15, NMS 16, NMS 18,NMS 23, NMS 27	NMS 8, NMS9, NMS 10A, NMS 11, NMS 12, NMS 13, NMS 14, NMS17, NMS 19, NMS 20, NMS 24, NMS 25A, NMS 26				
	17		18	19	20	21	22
						AMSS Tin Liu AMS7A Sheung Wo Che AMS14 Ha Wo Che AMS15 Ha Wo Che	
						NMS 1, NMS 2, NMS 3, NMS 4, NMS 5A, NMS 6A, NMS 7, NMS 15, NMS 16, NMS 18,NMS 23, NMS 27	NMS 8, NMS9, NMS 10A, NMS 11, NMS 12, NMS 13, NMS 14, NMS17, NMS 19, NMS 20, NMS 24, NMS 25A, NMS 26
	24		25	26	27	28	29
					AMSS Tin Liu AMS7A Sheung Wo Che AMS14 Ha Wo Che AMS15 Ha Wo Che		
					NMS 1, NMS 2, NMS 3, NMS 4, NMS 5A, NMS 6A, NMS 7, NMS 15, NMS 16, NMS 18,NMS 23, NMS 27	NMS 8, NMS9, NMS 10A, NMS 11, NMS 12, NMS 13, NMS 14, NMS17, NMS 19, NMS 20, NMS 24, NMS 25A, NMS 26	
	31						

- Remark
1. Actual monitoring may be subjected to change due to any safety concern or adverse weather condition.
 2. The Impact Air Monitoring Stations to be monitored should be selected based on the prevailing wind direction and their proximity to the active construction works.
 3. According to the Hong Kong Observatory, anticipated wind directions in October 2021 are north, north east and east.
 4. According to the Contractor, the anticipated major construction activities in the reporting month includes:
 - (1) Tree Preservation, Felling, Pruning, Transplantation in Zone 1, 2, 3, 4 and 5.
 - (2) Road Surface Maintenance in Zone 1, 2, 3, 4 and 5.
 - (3) Noise Barrier Foundation Works in Zone 1, 2, 4 and 5.
 - (4) Noise Barrier Erection Works in Zone 1 and 2.
 - (5) Road Reconstruction Works, Sheet Pile Removal and Lane Shifting Works in Zone 1 and 2.
 - (6) Trial Pits Excavation in Zone 3, 4 and 5.
 - (7) Construction, Diversion of Underground Utilities, including ELS works and Sheet Piling in Zone 3 and 5.
 - (8) Retaining Wall Construction Works in Zone 3.
 - (9) Construction of Cycle Track Subway, Pump Room and Stem Wall Construction Works in Zone 3.
 - (10) Demolition of Existing Parapet and Lagging Wall Construction Works in Zone 3.
 - (11) Construction work for Temporary Site Access Relocation in Zone 3.
 - (12) Pre Bore H Pile Construction Works and Steel Works Installation for Lift in Zone 3.
 - (13) Profile Barrier, Stem Wall Construction Works and Foundation Works for SR2 in Zone 3.
 - (14) Construction Works for N263 Bridge Deck Widening and SR6 Temporary Widening in Zone 3.
 - (15) ELS Works at SHA for Widening of SR3 in Zone 3.
 - (16) Piezometer for underground water pressure measurement in Zone 3.
 - (17) NF40 and N66 Footbridge Construction Works in Zone 4.
 - (18) Mini Pile Construction Works in Zone 4 and 5.
 - (19) Erection of 7m Height Fencing in Zone 4.
 - (20) Stem Wall and Drainage Construction Works in Zone 5.

FUGRO TECHNICAL SERVICES LIMITED

Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong

Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com



Project: Road Widening and Retrofitting Noise Barriers on Tai Po Road (Sha Tin Section)

Regular Night Time Noise Monitoring Schedule (September 2021)

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2 Regular night time noise monitoring	3	4
5	6	7	8	9 Regular night time noise monitoring	10	11
12	13	14	15	16 Regular night time noise monitoring	17	18
19	20	21	22	23 Regular night time noise monitoring	24	25
26	27	28	29 Regular night time noise monitoring	30		

Remarks

1. Due to safety concern, 2 staffs will carry out the night time noise monitoring together at all 21 monitoring stations on the same monitoring night of each week.
2. Actual monitoring schedule may be subjected to change due to any safety concern or adverse weather condition.

FUGRO TECHNICAL SERVICES LIMITED

Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
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Email : mcl@fugro.com



Project: Road Widening and Retrofitting Noise Barriers on Tai Po Road (Sha Tin Section)

Tentative Regular Night Time Noise Monitoring Schedule (October 2021)

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7 Regular night time noise monitoring	8	9
10	11	12 Regular night time noise monitoring	13	14	15	16
17	18	19	20	21 Regular night time noise monitoring	22	23
24	25	26	27	28 Regular night time noise monitoring	29	30
31						

Remarks

1. Due to safety concern, 2 staffs will carry out the night time noise monitoring together at all 21 monitoring stations on the same monitoring night of each week.
2. Actual monitoring schedule may be subjected to change due to any safety concern or adverse weather condition.

聖公會主風小學 2021-2022 年度上學期校曆表

週次	月份	星 期							行 事 要 項	假期日數	
		日	一	二	三	四	五	六			
①	2021 九 月				1*	2	3	4	1/9 上學期開學日		
②		5	6	7	8	9	10	11			
③		12	13	14	15	16	17	18			
④		19	20	21*	22	23	24	25			21/9 教師專業發展日 22/9 中秋節翌日
⑤		26	27	28	29	30					
⑥	十 月						1	2	1/10 國慶日	1	
⑦		3	4	5	6	7	8	9			
⑧		10	11	12	13	14	15	16	14/10 重陽節		
⑨		17	18	19	20	21	22	23			
⑩		24	25	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	30	26/10-29/10 進展性評估(J.2-J.5)/呈分試(J.6)		
	31										
⑪	十 一 月		1	2	3	4	5	6	12/11 第十四屆陸運會		
⑫		7	8	9	10	11	12*	13			
⑬		14	15	16	17	18	19	20*			20/11 上學期家長日、J.6 家長會
⑭		21	22	23	24	25	26	27			
	28	29	30								
⑮	十 二 月				1	2	3	4	9/12 教師專業發展日		
⑯		5	6	7	8	9*	10	11			
⑰		12	<u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>	17	18			13/12-16/12 上學期學期試
⑱		19	20	21	22	23	24	25			
⑳	26	27	28	29	30	31		20/12 選舉日翌日	1 5 6		
								21/12/2021-1/1/2022 聖誕及新年假期			
㉑	2022 一 月							1		1	
㉒		2	3	4	5	6	7	8			
		9	10	11	12	13	14	15	17/1 下學期開始		
		16	17*	18	19	20	21	22			
		23	24	25	26*	27*	28*	29			26/1-28/1 教育營(J.6) 27/1 旅行日(J.1-J.5)
		30	31					31/1-10/2 農曆新年假期			
	二 月			1	2	3	4	5		5 5	
		6	7	8	9	10	11	12			
		13	14	15	16	17	18	19			

附註： □代表假期 *代表特別事宜

培英中學2021至2022年度校曆表

		日	一	二	三	四	五	六	假期及注意事項
週次	八	(15)	(16)	(17)	(18)	(19)	(20)	(21)	
	月	(22)	(23)	(24)	(25)	(26)	(27)	(28)	
1	九	(29)	(30)	(31)	Sept 1	2	3	4	(1/9)開學禮 (2/9)正式上課
2		5	6	7	8	9	10	11	(10/9)開學崇拜會
3		12	13	14	15	16	17	18	(13/9)中一至中四學生開始繳交周記 (14/9)各班拍攝學生相片 (13-17/9)藝術周
4		19	20	21	(22)	23	24	25	(22/9)中秋節翌日假期 (24/9)學生會候選內閣論壇
5	月	26	27	28	29	30	Oct (1)	2	(27-30/9)學生會網上選舉 (27-30/9)個人社會及人文領域周 (1/10)國慶日假期
6	十	3	4	5	6	7	8	9	(9/10)香港培英校友會校友日
7		10	11	12	13	(14)	(15)	16	(14/10)重陽節假期 (15/10)教師專業發展日(1)
8	月	17	18	19	20	21	22	23	
9		24	25 ^T	26 ^T	27 ^T	28 ^T	29 ^T	30	(25-29/10)中一至中六級統一測驗
10	十	31	Nov 1 [△]	(2)	3	4	5	6	(1/11)第六十一屆陸運會 (2/11)陸運會翌日假期 (5/11)學生領袖就職典禮
11	一	7	8	9	10	11	12	13 [△]	(8-12/11)數學周 (13/11下午)家長教師會第二十四屆會員大會
12		14	15	16	17	18	19	20	
13	月	21 [△]	22	23	24	25	26	27	(21/11)南區中學巡禮 (22-26/11)敬師周 (26/11)師生聯誼日
14	十	28	29	30	Dec 1	2	3 [△]	4	(3/12)全方位學習日
15	二	5	6	7	8	9	10	11	(6-10/12)英語周 (7/12)拍攝畢業照及班相 (11/12)中西南區小學數學比賽
16	月	12	13	14	15	16	17	18	(14-16/12)中六級校外模擬考試 (17/12)聖誕崇拜及慶祝會
17		19	(20)	(21)	(22)	(23)	(24)	(25)	(20/12)立法會選舉翌日假期 (21/12-1/1)聖誕及新年假期共12天
18	一	(26)	(27)	(28)	(29)	(30)	(31)	Jan (1)	(21-24,28-30/12)中六級補課
19		2	3	4	5	6	7 ^E	8	(7-18/1)中一至中五級上學期期考共8天 (7-20/1)中六級畢業試
20		9	10 ^E	11 ^E	12 ^E	13 ^E	14 ^E	15	
21		16	17 ^E	18 ^E	19 ^E	20 ^E	21	22	(19-21/1)中一至中五級試後回饋日 (21/1-10/3)中六級試後上課 (21/1下午)中五級學習概覽講座
22	月	23	24	25	26	27	28	29	(24-26/1)中一至中五級溫習及補考
23	二	30	(31)	(1)	(2)	(3)	(4)	(5)	(31/1-12/2)農曆新年假期共13天
24		(6)	(7)	(8)	(9)	(10)	(11)	(12)	
25		13	14	15	16	17	(18)	19	(14/2)下學期開始 (14-17/2)中華文化周 (18/2)區會中、小、幼聯校教師發展日
26	月	20	21	22	23	24	25	26	(25/2)區會中、小、幼聯校教師發展日(後備) (21/2)中一至中四級學生開始繳交周記 (21-25/2)福音周 (25/2)佈道會

() - 假期 ^E - 考試 [△] - 特別活動 教師發展日，學生不用上課

週日		週一		週二		週三		週四		週五		週六	
29	30	31	1	2	3	4	<div style="display: flex; justify-content: space-between;"> <div style="width: 33%;"> <p>Summer Vacation</p> </div> <div style="width: 33%;"> <p>Newsletter to Opening Ceremony Week 1</p> </div> <div style="width: 33%;"> <p>School Year</p> </div> </div>						
5	6	7	8	9	10	11	<div style="display: flex; justify-content: space-between;"> <div style="width: 33%;"> <p>Week 2</p> </div> <div style="width: 33%;"></div> <div style="width: 33%;"></div> </div>						
12	13	14	15	16	17	18	<div style="display: flex; justify-content: space-between;"> <div style="width: 33%;"> <p>Week 3</p> </div> <div style="width: 33%;"> <p>Student Bodies</p> </div> <div style="width: 33%;"> <p>SU Election Forum</p> </div> </div>						
19	20	21	22	23	24	25	<div style="display: flex; justify-content: space-between;"> <div style="width: 33%;"> <p>Week 4</p> </div> <div style="width: 33%;"> <p>SU Election Polling</p> </div> <div style="width: 33%;"> <p>The Day After Mid-</p> </div> <div style="width: 33%;"> <p>Student Bodies Joint</p> </div> </div>						
26	27	28	29	30	1	2	<div style="display: flex; justify-content: space-between;"> <div style="width: 33%;"> <p>Week 5</p> </div> <div style="width: 33%;"> <p>Student Bodies Joint</p> </div> <div style="width: 33%;"> <p>National Day</p> </div> </div>						

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Appendix F

Air Quality Monitoring Data

1-hour TSP Impact Monitoring Result for NOD 03-2018 Road Widening and Retrofitting Noise Barriers on Tai Po Road (Sha Tin Section)

AMS5 - Tin Liu

1-hour TSP ($\mu\text{g}/\text{m}^3$)								
Date	Start Time	1st hr	2nd hr	3rd hr	Average	Action Level	Limit Level	Weather
06-Sep-21	12:16	103	96	89	96	340	500	Fine
11-Sep-21	16:22	86	94	84	88			Fine
17-Sep-21	14:42	92	86	78	85			Sunny
23-Sep-21	09:20	70	118	118	102			Overcast
29-Sep-21	16:40	63	69	76	69			Fine
Average		88						
Max		118						
Min		63						

AMS 7A - Sheung Wo Che

1-hour TSP ($\mu\text{g}/\text{m}^3$)								
Date	Start Time	1st hr	2nd hr	3rd hr	Average	Action Level	Limit Level	Weather
06-Sep-21	10:29	71	57	61	63	344	500	Fine
11-Sep-21	12:38	58	55	57	57			Fine
17-Sep-21	16:30	92	85	84	87			Sunny
23-Sep-21	09:53	102	104	115	107			Overcast
29-Sep-21	17:01	49	59	53	54			Fine
Average		73						
Max		115						
Min		49						

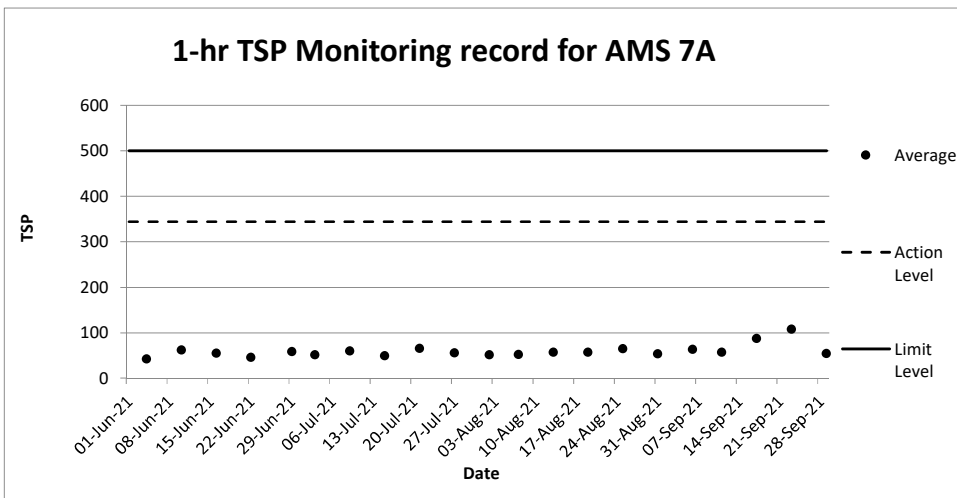
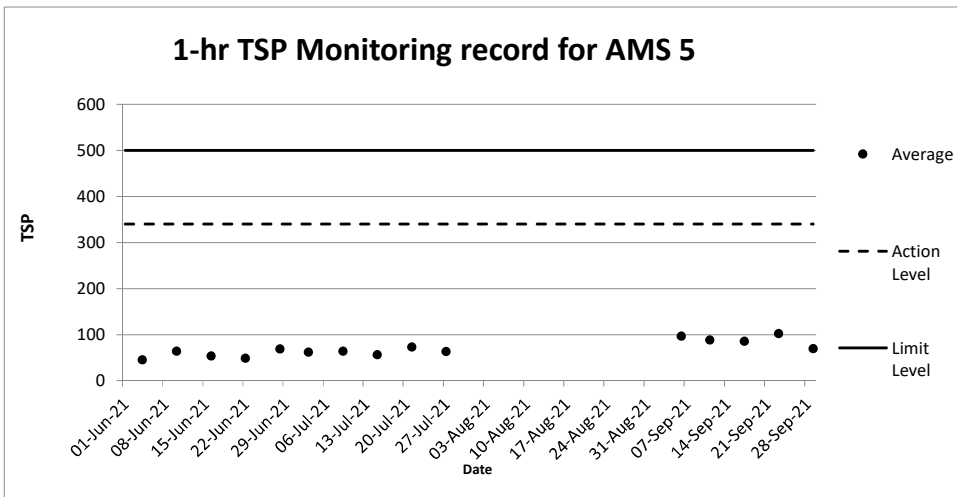
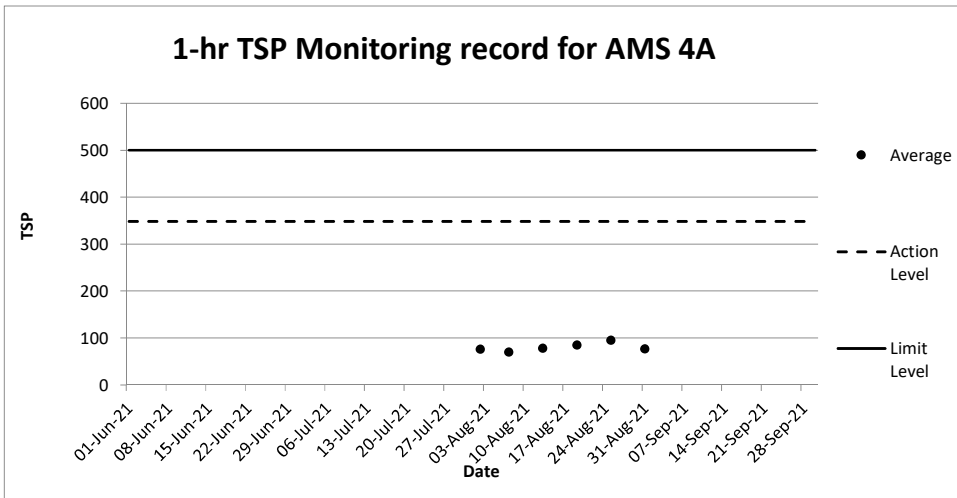
AMS 14 - Ha Wo Che

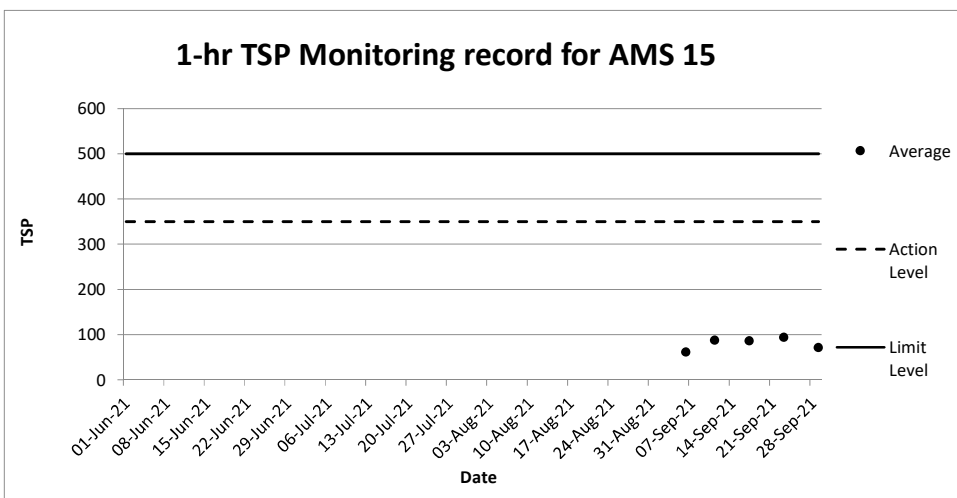
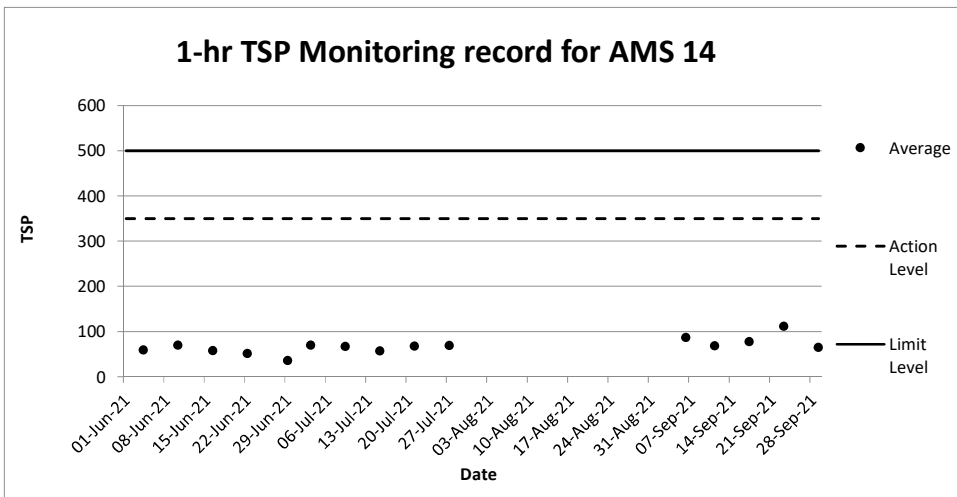
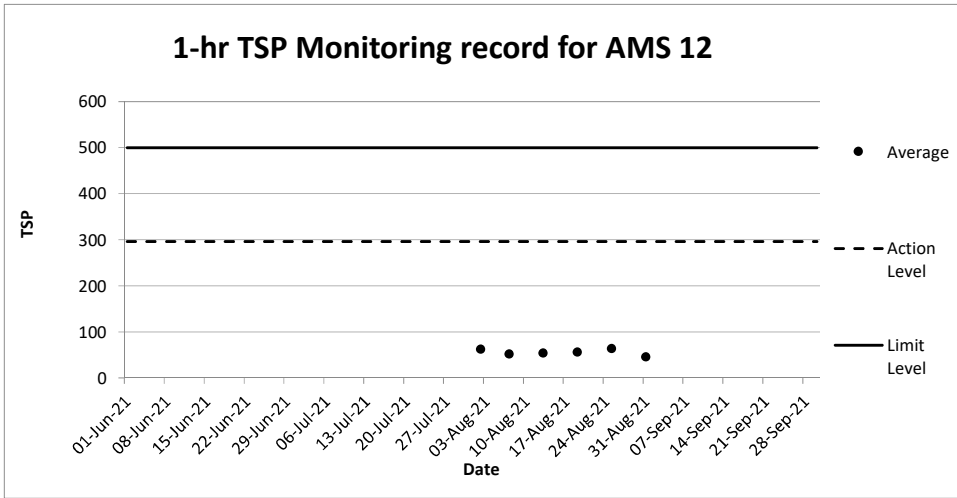
1-hour TSP ($\mu\text{g}/\text{m}^3$)								
Date	Start Time	1st hr	2nd hr	3rd hr	Average	Action Level	Limit Level	Weather
06-Sep-21	09:43	84	87	89	87	350	500	Fine
11-Sep-21	12:00	69	69	67	68			Fine
17-Sep-21	15:07	80	77	75	77			Sunny
23-Sep-21	16:39	101	119	115	112			Overcast
29-Sep-21	17:11	64	70	61	65			Fine
Average		82						
Max		119						
Min		61						

AMS 15 - Ha Wo Che

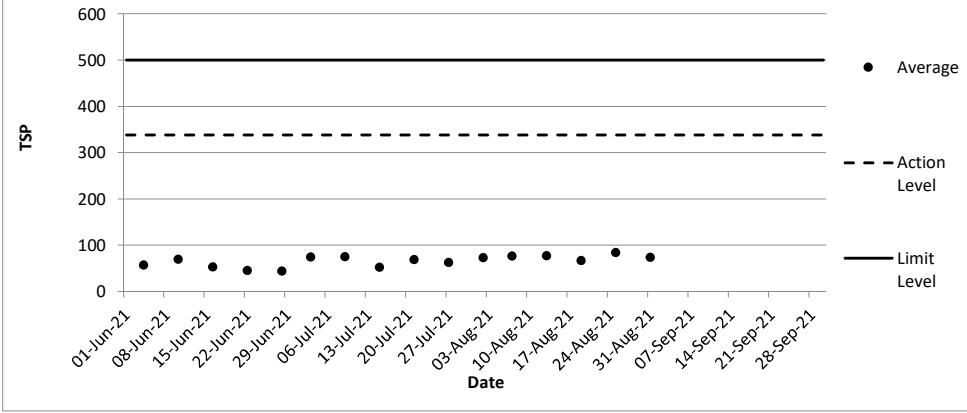
1-hour TSP ($\mu\text{g}/\text{m}^3$)								
Date	Start Time	1st hr	2nd hr	3rd hr	Average	Action Level	Limit Level	Weather
06-Sep-21	17:57	57	61	66	61	350	500	Fine
11-Sep-21	10:10	89	84	89	87			Fine
17-Sep-21	17:36	80	91	87	86			Sunny
23-Sep-21	07:16	102	96	84	94			Overcast
29-Sep-21	18:34	74	72	68	71			Fine
Average		80						
Max		102						
Min		57						

- Remark
1. Actual monitoring may be subjected to change due to any safety concern or adverse weather condition.
 2. The Impact Air Monitoring Stations to be monitored should be selected based on the prevailing wind direction and their proximity to the active construction works.





1-hr TSP Monitoring record for AMS 17



**24-hour TSP Impact Monitoring Result for
NOD 03-2018 Road Widening and Retrofitting Noise Barriers on Tai Po Road (Sha Tin Section)**

AMS5 - Tin Liu

Date and Time	TSP Concentration (µg/m³)
06/09/2021 07:16	65
06/09/2021 08:16	70
06/09/2021 09:16	89
06/09/2021 10:16	84
06/09/2021 11:16	77
06/09/2021 12:16	103
06/09/2021 13:16	96
06/09/2021 14:16	89
06/09/2021 15:16	79
06/09/2021 16:16	86
06/09/2021 17:16	77
06/09/2021 18:16	68
06/09/2021 19:16	91
06/09/2021 20:16	79
06/09/2021 21:16	67
06/09/2021 22:16	60
06/09/2021 23:16	58
07/09/2021 00:16	72
07/09/2021 01:16	65
07/09/2021 02:16	94
07/09/2021 03:16	84
07/09/2021 04:16	77
07/09/2021 05:16	68
07/09/2021 06:16	70
Average	78
Action Level	156
Limit Level	260

Date and Time	TSP Concentration (µg/m³)
11/09/2021 09:22	79
11/09/2021 10:22	82
11/09/2021 11:22	86
11/09/2021 12:22	82
11/09/2021 13:22	67
11/09/2021 14:22	67
11/09/2021 15:22	67
11/09/2021 16:22	86
11/09/2021 17:22	94
11/09/2021 18:22	84
11/09/2021 19:22	70
11/09/2021 20:22	86
11/09/2021 21:22	77
11/09/2021 22:22	86
11/09/2021 23:22	89
12/09/2021 00:22	84
12/09/2021 01:22	67
12/09/2021 02:22	74
12/09/2021 03:22	96
12/09/2021 04:22	77
12/09/2021 05:22	84
12/09/2021 06:22	79
12/09/2021 07:22	91
12/09/2021 08:22	89
Average	81
Action Level	156
Limit Level	260

Date and Time	TSP Concentration (µg/m³)
17/09/2021 08:42	44
17/09/2021 09:42	50
17/09/2021 10:42	52
17/09/2021 11:42	53
17/09/2021 12:42	56
17/09/2021 13:42	61
17/09/2021 14:42	92
17/09/2021 15:42	86
17/09/2021 16:42	78
17/09/2021 17:42	67
17/09/2021 18:42	73
17/09/2021 19:42	71
17/09/2021 20:42	77
17/09/2021 21:42	68
17/09/2021 22:42	70
17/09/2021 23:42	65
18/09/2021 00:42	83
18/09/2021 01:42	74
18/09/2021 02:42	71
18/09/2021 03:42	68
18/09/2021 04:42	67
18/09/2021 05:42	56
18/09/2021 06:42	53
18/09/2021 07:42	58
Average	66
Action Level	156
Limit Level	260

Date and Time	TSP Concentration (µg/m³)
23/09/2021 08:20	64
23/09/2021 09:20	70
23/09/2021 10:20	118
23/09/2021 11:20	118
23/09/2021 12:20	48
23/09/2021 13:20	62
23/09/2021 14:20	83
23/09/2021 15:20	94
23/09/2021 16:20	52
23/09/2021 17:20	67
23/09/2021 18:20	92
23/09/2021 19:20	100
23/09/2021 20:20	83
23/09/2021 21:20	62
23/09/2021 22:20	91
23/09/2021 23:20	115
24/09/2021 00:20	80
24/09/2021 01:20	82
24/09/2021 02:20	85
24/09/2021 03:20	117
24/09/2021 04:20	111
24/09/2021 05:20	109
24/09/2021 06:20	80
24/09/2021 07:20	74
Average	86
Action Level	156
Limit Level	260

Date and Time	TSP Concentration (µg/m³)
29/09/2021 08:40	33
29/09/2021 09:40	34
29/09/2021 10:40	41
29/09/2021 11:40	39
29/09/2021 12:40	38
29/09/2021 13:40	38
29/09/2021 14:40	45
29/09/2021 15:40	54
29/09/2021 16:40	63
29/09/2021 17:40	69
29/09/2021 18:40	76
29/09/2021 19:40	51
29/09/2021 20:40	61
29/09/2021 21:40	66
29/09/2021 22:40	59
29/09/2021 23:40	54
30/09/2021 00:40	51
30/09/2021 01:40	41
30/09/2021 02:40	38
30/09/2021 03:40	40
30/09/2021 04:40	40
30/09/2021 05:40	43
30/09/2021 06:40	41
30/09/2021 07:40	46
Average	48
Action Level	156
Limit Level	260

- Remark
1. Actual monitoring may be subjected to change due to any safety concern or adverse weather condition.
 2. The Impact Air Monitoring Stations to be monitored should be selected based on the prevailing wind direction and their proximity to the active construction works.

**24-hour TSP Impact Monitoring Result for
NOD 03-2018 Road Widening and Retrofitting Noise Barriers on Tai Po Road (Sha Tin Section)**

AMS7A - Sheung Wo Che

Date and Time	TSP Concentration ($\mu\text{g}/\text{m}^3$)
06/09/2021 07:29	57
06/09/2021 08:29	46
06/09/2021 09:29	52
06/09/2021 10:29	71
06/09/2021 11:29	57
06/09/2021 12:29	61
06/09/2021 13:29	56
06/09/2021 14:29	55
06/09/2021 15:29	46
06/09/2021 16:29	43
06/09/2021 17:29	44
06/09/2021 18:29	49
06/09/2021 19:29	60
06/09/2021 20:29	41
06/09/2021 21:29	52
06/09/2021 22:29	49
06/09/2021 23:29	58
07/09/2021 00:29	54
07/09/2021 01:29	63
07/09/2021 02:29	50
07/09/2021 03:29	60
07/09/2021 04:29	55
07/09/2021 05:29	58
07/09/2021 06:29	65
Average	54
Action Level	171
Limit Level	260

Date and Time	TSP Concentration ($\mu\text{g}/\text{m}^3$)
11/09/2021 09:38	57
11/09/2021 10:38	50
11/09/2021 11:38	44
11/09/2021 12:38	58
11/09/2021 13:38	55
11/09/2021 14:38	57
11/09/2021 15:38	47
11/09/2021 16:38	47
11/09/2021 17:38	47
11/09/2021 18:38	52
11/09/2021 19:38	54
11/09/2021 20:38	58
11/09/2021 21:38	43
11/09/2021 22:38	54
11/09/2021 23:38	50
12/09/2021 00:38	54
12/09/2021 01:38	44
12/09/2021 02:38	49
12/09/2021 03:38	49
12/09/2021 04:38	49
12/09/2021 05:38	54
12/09/2021 06:38	55
12/09/2021 07:38	57
12/09/2021 08:38	57
Average	52
Action Level	171
Limit Level	260

Date and Time	TSP Concentration ($\mu\text{g}/\text{m}^3$)
17/09/2021 08:30	36
17/09/2021 09:30	41
17/09/2021 10:30	41
17/09/2021 11:30	35
17/09/2021 12:30	46
17/09/2021 13:30	52
17/09/2021 14:30	57
17/09/2021 15:30	51
17/09/2021 16:30	92
17/09/2021 17:30	85
17/09/2021 18:30	84
17/09/2021 19:30	60
17/09/2021 20:30	57
17/09/2021 21:30	51
17/09/2021 22:30	52
17/09/2021 23:30	66
18/09/2021 00:30	65
18/09/2021 01:30	70
18/09/2021 02:30	72
18/09/2021 03:30	65
18/09/2021 04:30	68
18/09/2021 05:30	63
18/09/2021 06:30	85
18/09/2021 07:30	66
Average	61
Action Level	171
Limit Level	260

Date and Time	TSP Concentration ($\mu\text{g}/\text{m}^3$)
23/09/2021 07:53	63
23/09/2021 08:53	50
23/09/2021 09:53	102
23/09/2021 10:53	104
23/09/2021 11:53	115
23/09/2021 12:53	69
23/09/2021 13:53	47
23/09/2021 14:53	79
23/09/2021 15:53	57
23/09/2021 16:53	113
23/09/2021 17:53	82
23/09/2021 18:53	63
23/09/2021 19:53	104
23/09/2021 20:53	58
23/09/2021 21:53	57
23/09/2021 22:53	84
23/09/2021 23:53	82
24/09/2021 00:53	60
24/09/2021 01:53	96
24/09/2021 02:53	76
24/09/2021 03:53	98
24/09/2021 04:53	85
24/09/2021 05:53	44
24/09/2021 06:53	46
Average	76
Action Level	171
Limit Level	260

Date and Time	TSP Concentration ($\mu\text{g}/\text{m}^3$)
29/09/2021 09:01	44
29/09/2021 10:01	47
29/09/2021 11:01	44
29/09/2021 12:01	46
29/09/2021 13:01	53
29/09/2021 14:01	41
29/09/2021 15:01	41
29/09/2021 16:01	43
29/09/2021 17:01	49
29/09/2021 18:01	59
29/09/2021 19:01	53
29/09/2021 20:01	44
29/09/2021 21:01	55
29/09/2021 22:01	53
29/09/2021 23:01	41
30/09/2021 00:01	43
30/09/2021 01:01	50
30/09/2021 02:01	50
30/09/2021 03:01	49
30/09/2021 04:01	44
30/09/2021 05:01	39
30/09/2021 06:01	40
30/09/2021 07:01	40
30/09/2021 08:01	43
Average	46
Action Level	171
Limit Level	260

- Remark
1. Actual monitoring may be subjected to change due to any safety concern or adverse weather condition.
 2. The Impact Air Monitoring Stations to be monitored should be selected based on the prevailing wind direction and their proximity to the active construction works.

**24-hour TSP Impact Monitoring Result for
NOD 03-2018 Road Widening and Retrofitting Noise Barriers on Tai Po Road (Sha Tin Section)**

AMS14 - Ha Wo Che

Date and Time	TSP Concentration (µg/m³)
06/09/2021 07:43	62
06/09/2021 08:43	57
06/09/2021 09:43	84
06/09/2021 10:43	87
06/09/2021 11:43	89
06/09/2021 12:43	69
06/09/2021 13:43	77
06/09/2021 14:43	72
06/09/2021 15:43	87
06/09/2021 16:43	82
06/09/2021 17:43	79
06/09/2021 18:43	62
06/09/2021 19:43	69
06/09/2021 20:43	64
06/09/2021 21:43	62
06/09/2021 22:43	57
06/09/2021 23:43	87
07/09/2021 00:43	77
07/09/2021 01:43	89
07/09/2021 02:43	64
07/09/2021 03:43	72
07/09/2021 04:43	55
07/09/2021 05:43	64
07/09/2021 06:43	67
Average	72
Action Level	174
Limit Level	260

Date and Time	TSP Concentration (µg/m³)
11/09/2021 10:00	47
11/09/2021 11:00	49
11/09/2021 12:00	69
11/09/2021 13:00	69
11/09/2021 14:00	67
11/09/2021 15:00	54
11/09/2021 16:00	55
11/09/2021 17:00	55
11/09/2021 18:00	49
11/09/2021 19:00	67
11/09/2021 20:00	58
11/09/2021 21:00	69
11/09/2021 22:00	55
11/09/2021 23:00	58
12/09/2021 00:00	54
12/09/2021 01:00	66
12/09/2021 02:00	46
12/09/2021 03:00	64
12/09/2021 04:00	63
12/09/2021 05:00	60
12/09/2021 06:00	61
12/09/2021 07:00	67
12/09/2021 08:00	67
12/09/2021 09:00	60
Average	60
Action Level	174
Limit Level	260

Date and Time	TSP Concentration (µg/m³)
17/09/2021 09:07	40
17/09/2021 10:07	40
17/09/2021 11:07	44
17/09/2021 12:07	52
17/09/2021 13:07	51
17/09/2021 14:07	55
17/09/2021 15:07	80
17/09/2021 16:07	77
17/09/2021 17:07	75
17/09/2021 18:07	66
17/09/2021 19:07	67
17/09/2021 20:07	73
17/09/2021 21:07	70
17/09/2021 22:07	66
17/09/2021 23:07	63
18/09/2021 00:07	58
18/09/2021 01:07	58
18/09/2021 02:07	66
18/09/2021 03:07	60
18/09/2021 04:07	61
18/09/2021 05:07	55
18/09/2021 06:07	49
18/09/2021 07:07	51
18/09/2021 08:07	55
Average	60
Action Level	174
Limit Level	260

Date and Time	TSP Concentration (µg/m³)
23/09/2021 07:39	113
23/09/2021 08:39	58
23/09/2021 09:39	69
23/09/2021 10:39	116
23/09/2021 11:39	80
23/09/2021 12:39	61
23/09/2021 13:39	73
23/09/2021 14:39	84
23/09/2021 15:39	66
23/09/2021 16:39	101
23/09/2021 17:39	119
23/09/2021 18:39	115
23/09/2021 19:39	101
23/09/2021 20:39	116
23/09/2021 21:39	118
23/09/2021 22:39	92
23/09/2021 23:39	60
24/09/2021 00:39	58
24/09/2021 01:39	87
24/09/2021 02:39	89
24/09/2021 03:39	92
24/09/2021 04:39	107
24/09/2021 05:39	89
24/09/2021 06:39	63
Average	89
Action Level	174
Limit Level	260

Date and Time	TSP Concentration (µg/m³)
29/09/2021 09:11	32
29/09/2021 10:11	40
29/09/2021 11:11	38
29/09/2021 12:11	37
29/09/2021 13:11	37
29/09/2021 14:11	35
29/09/2021 15:11	43
29/09/2021 16:11	40
29/09/2021 17:11	64
29/09/2021 18:11	70
29/09/2021 19:11	61
29/09/2021 20:11	47
29/09/2021 21:11	55
29/09/2021 22:11	52
29/09/2021 23:11	51
30/09/2021 00:11	46
30/09/2021 01:11	40
30/09/2021 02:11	44
30/09/2021 03:11	51
30/09/2021 04:11	58
30/09/2021 05:11	46
30/09/2021 06:11	51
30/09/2021 07:11	52
30/09/2021 08:11	61
Average	48
Action Level	174
Limit Level	260

- Remark
1. Actual monitoring may be subjected to change due to any safety concern or adverse weather condition.
 2. The Impact Air Monitoring Stations to be monitored should be selected based on the prevailing wind direction and their proximity to the active construction works.

**24-hour TSP Impact Monitoring Result for
NOD 03-2018 Road Widening and Retrofitting Noise Barriers on Tai Po Road (Sha Tin Section)**

AMS 15 - Ha Wo Che

Date and Time	TSP Concentration ($\mu\text{g}/\text{m}^3$)
06/09/2021 07:57	38
06/09/2021 08:57	41
06/09/2021 09:57	58
06/09/2021 10:57	52
06/09/2021 11:57	63
06/09/2021 12:57	49
06/09/2021 13:57	44
06/09/2021 14:57	35
06/09/2021 15:57	54
06/09/2021 16:57	47
06/09/2021 17:57	57
06/09/2021 18:57	61
06/09/2021 19:57	66
06/09/2021 20:57	54
06/09/2021 21:57	47
06/09/2021 22:57	46
06/09/2021 23:57	39
07/09/2021 00:57	37
07/09/2021 01:57	32
07/09/2021 02:57	41
07/09/2021 03:57	38
07/09/2021 04:57	35
07/09/2021 05:57	49
07/09/2021 06:57	52
Average	47
Action Level	172
Limit Level	260

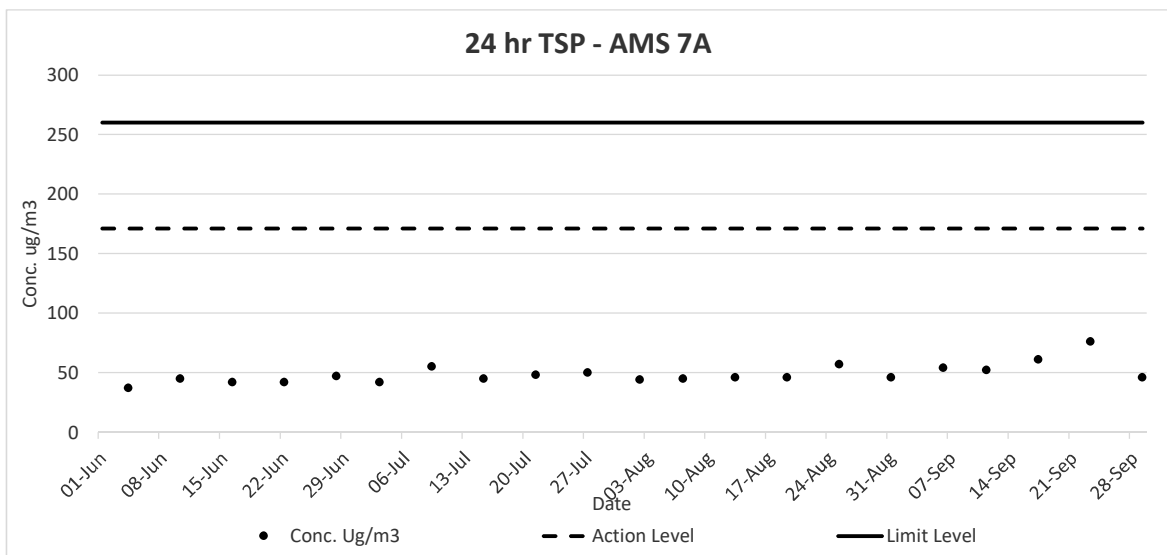
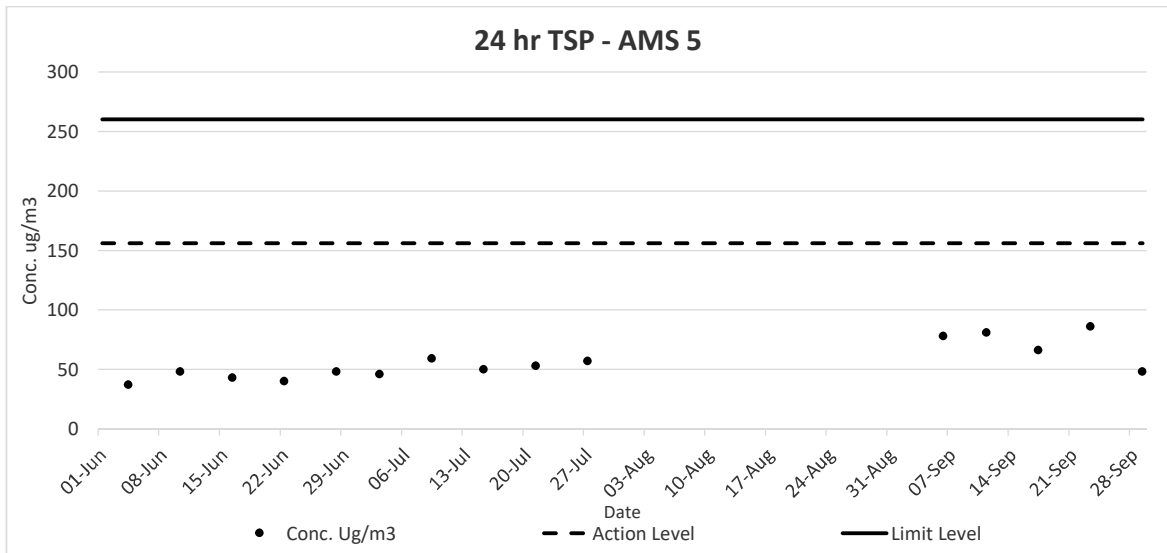
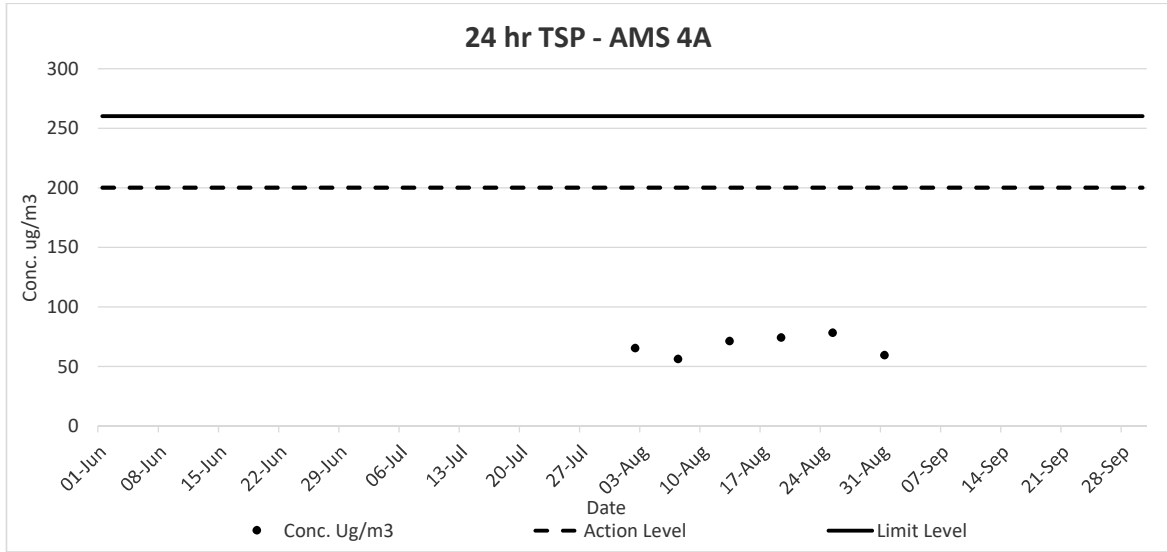
Date and Time	TSP Concentration ($\mu\text{g}/\text{m}^3$)
11/09/2021 10:10	89
11/09/2021 11:10	84
11/09/2021 12:10	89
11/09/2021 13:10	64
11/09/2021 14:10	77
11/09/2021 15:10	62
11/09/2021 16:10	77
11/09/2021 17:10	97
11/09/2021 18:10	62
11/09/2021 19:10	87
11/09/2021 20:10	89
11/09/2021 21:10	94
11/09/2021 22:10	82
11/09/2021 23:10	62
12/09/2021 00:10	64
12/09/2021 01:10	82
12/09/2021 02:10	79
12/09/2021 03:10	94
12/09/2021 04:10	84
12/09/2021 05:10	72
12/09/2021 06:10	82
12/09/2021 07:10	79
12/09/2021 08:10	64
12/09/2021 09:10	82
Average	79
Action Level	172
Limit Level	260

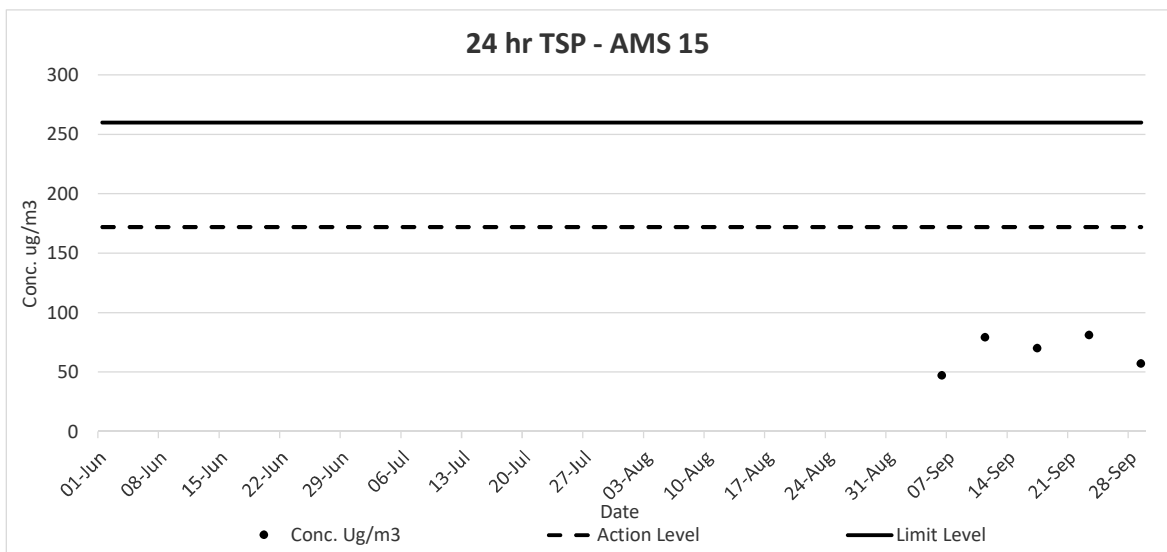
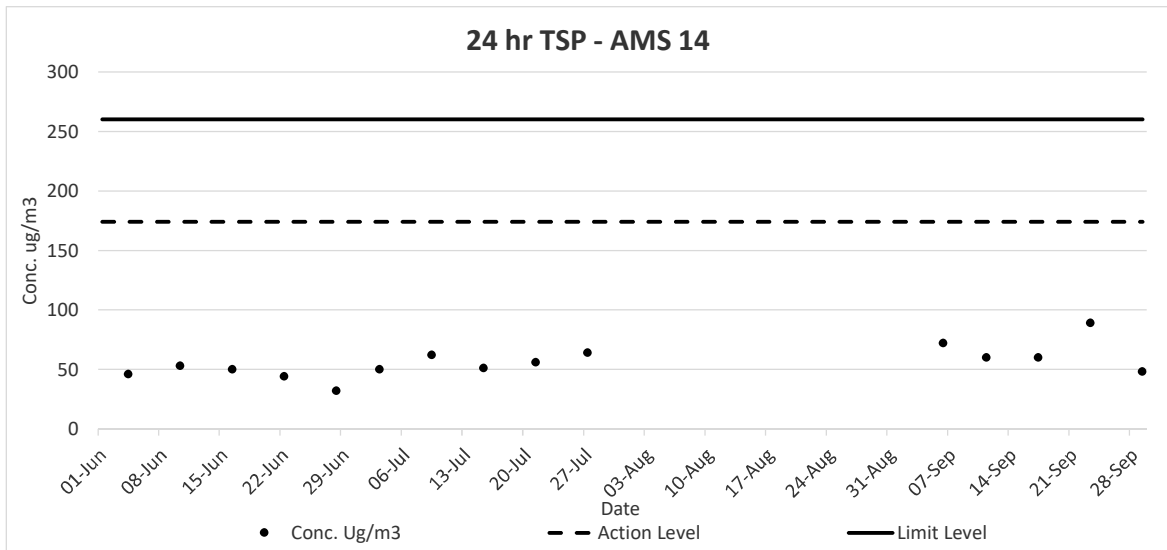
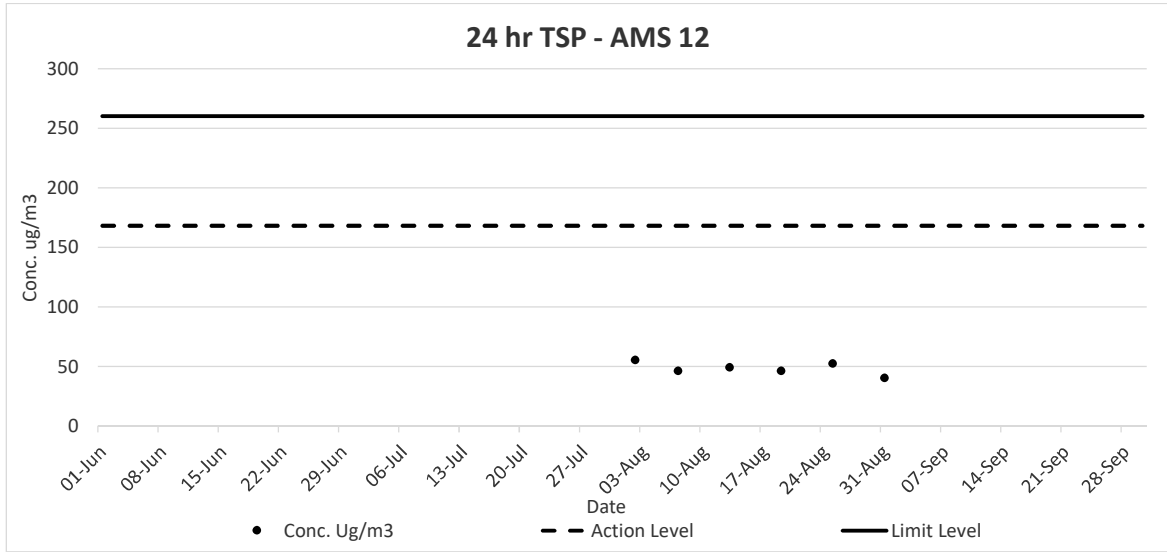
Date and Time	TSP Concentration ($\mu\text{g}/\text{m}^3$)
17/09/2021 09:36	65
17/09/2021 10:36	61
17/09/2021 11:36	61
17/09/2021 12:36	68
17/09/2021 13:36	57
17/09/2021 14:36	53
17/09/2021 15:36	70
17/09/2021 16:36	78
17/09/2021 17:36	80
17/09/2021 18:36	91
17/09/2021 19:36	87
17/09/2021 20:36	86
17/09/2021 21:36	82
17/09/2021 22:36	82
17/09/2021 23:36	72
18/09/2021 00:36	68
18/09/2021 01:36	59
18/09/2021 02:36	68
18/09/2021 03:36	57
18/09/2021 04:36	53
18/09/2021 05:36	55
18/09/2021 06:36	63
18/09/2021 07:36	76
18/09/2021 08:36	82
Average	70
Action Level	172
Limit Level	260

Date and Time	TSP Concentration ($\mu\text{g}/\text{m}^3$)
23/09/2021 07:16	102
23/09/2021 08:16	96
23/09/2021 09:16	84
23/09/2021 10:16	77
23/09/2021 11:16	73
23/09/2021 12:16	90
23/09/2021 13:16	86
23/09/2021 14:16	90
23/09/2021 15:16	58
23/09/2021 16:16	103
23/09/2021 17:16	87
23/09/2021 18:16	54
23/09/2021 19:16	64
23/09/2021 20:16	99
23/09/2021 21:16	93
23/09/2021 22:16	71
23/09/2021 23:16	79
24/09/2021 00:16	87
24/09/2021 01:16	93
24/09/2021 02:16	55
24/09/2021 03:16	50
24/09/2021 04:16	98
24/09/2021 05:16	64
24/09/2021 06:16	86
Average	81
Action Level	172
Limit Level	260

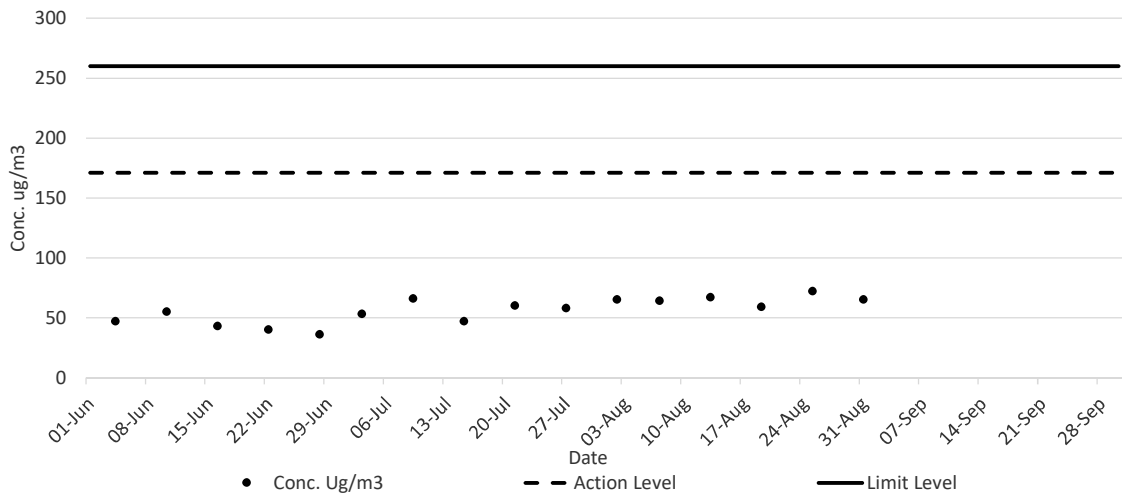
Date and Time	TSP Concentration ($\mu\text{g}/\text{m}^3$)
29/09/2021 09:34	34
29/09/2021 10:34	30
29/09/2021 11:34	42
29/09/2021 12:34	40
29/09/2021 13:34	46
29/09/2021 14:34	55
29/09/2021 15:34	55
29/09/2021 16:34	53
29/09/2021 17:34	61
29/09/2021 18:34	74
29/09/2021 19:34	72
29/09/2021 20:34	68
29/09/2021 21:34	67
29/09/2021 22:34	65
29/09/2021 23:34	65
30/09/2021 00:34	57
30/09/2021 01:34	49
30/09/2021 02:34	53
30/09/2021 03:34	55
30/09/2021 04:34	59
30/09/2021 05:34	65
30/09/2021 06:34	63
30/09/2021 07:34	69
30/09/2021 08:34	70
Average	57
Action Level	172
Limit Level	260

- Remark
1. Actual monitoring may be subjected to change due to any safety concern or adverse weather condition.
 2. The Impact Air Monitoring Stations to be monitored should be selected based on the prevailing wind direction and their proximity to the active construction works.





24 hr TSP - AMS 17



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Appendix G

Noise Monitoring Data

Impact Noise Monitoring Result for NOD 03-2018 Road Widening and Retrofitting Noise Barriers on Tai Po Road (Sha Tin Section)

NMS 1 Scenery Court

Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L _{eq}	L ₉₀	L ₁₀				
		Unit: dB(A) 30 Mins						
06-Sep-21	16:19	67.0	64.5	68.5	75	67.0	Fine	0.5
17-Sep-21	13:06	66.5	64.0	68.0		66.5	Sunny	0.8
23-Sep-21	17:25	64.5	62.0	66.5		64.5	Overcast	0.5
29-Sep-21	09:09	63.6	61.5	65.5		63.6	Fine	0.9

NMS 2 Villa Le Parc

Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L _{eq}	L ₉₀	L ₁₀				
		Unit: dB(A) 30 Mins						
06-Sep-21	08:42	54.7	53.0	55.5	75	54.7	Fine	0.8
17-Sep-21	08:29	53.9	51.5	55.0		53.9	Sunny	0.4
23-Sep-21	10:34	54.0	52.0	55.0		54.0	Overcast	1.2
29-Sep-21	09:48	54.9	52.0	56.0		54.9	Fine	0.8

NMS 3 Hilton Plaza

Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L _{eq}	L ₉₀	L ₁₀				
		Unit: dB(A) 30 Mins						
06-Sep-21	15:44	66.0	63.5	67.5	75	66.0	Fine	0.8
17-Sep-21	11:06	65.6	63.5	67.0		65.6	Sunny	0.9
23-Sep-21	09:52	68.6	66.5	70.5		68.6	Overcast	1.0
29-Sep-21	08:30	68.7	64.0	71.0		68.7	Fine	0.9

NMS 4 Tin Liu

Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L _{eq}	L ₉₀	L ₁₀				
		Unit: dB(A) 30 Mins						
06-Sep-21	09:26	64.7	63.0	66.0	75	64.7	Fine	0.5
17-Sep-21	09:04	63.4	61.0	65.5		63.4	Sunny	0.6
23-Sep-21	11:12	65.5	63.0	67.5		65.5	Overcast	0.5
29-Sep-21	11:33	65.6	61.5	67.0		65.6	Fine	0.6

NMS 5A Wai Wah Centre

Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L _{eq}	L ₉₀	L ₁₀				
		Unit: dB(A) 30 Mins						
06-Sep-21	15:10	71.8	69.5	73.0	75	71.8	Fine	0.8
17-Sep-21	10:32	70.0	67.0	72.0		70.0	Sunny	0.5
23-Sep-21	09:18	69.1	67.0	70.5		69.1	Overcast	1.2
29-Sep-21	10:24	71.3	67.0	73.5		71.3	Fine	0.9

NMS 6A Wai Wah Centre

Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L _{eq}	L ₉₀	L ₁₀				
		Unit: dB(A) 30 Mins						
06-Sep-21	14:32	73.9	72.5	75.0	75	73.9	Fine	1.0
17-Sep-21	11:38	73.2	71.5	74.5		73.2	Sunny	0.8
23-Sep-21	08:40	74.0	72.5	75.5		74.0	Overcast	0.8
29-Sep-21	10:58	72.9	67.5	75.0		72.9	Fine	1.2

If measured noise level (L_{eq}) > limit level, Corrected noise level (CNL) is calculated as:

$$10 \times \log \left[\left(10^{\frac{\text{Measured noise level, } L_{eq}}{10}} \right) - \left(10^{\frac{\text{Baseline noise level}}{10}} \right) \right]$$

NMS 7 Tin Liu

Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L _{eq}	L ₉₀	L ₁₀				
Unit: dB(A) 30 Mins								
06-Sep-21	09:59	64.4	62.5	66.5	75	64.4	Fine	0.6
17-Sep-21	09:47	63.3	61.0	64.5		63.3	Sunny	0.6
23-Sep-21	13:00	64.3	62.0	66.5		64.3	Overcast	0.9
29-Sep-21	13:00	68.9	66.3	71.0		68.9	Fine	0.8

NMS 8 Shatin Plaza

Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L _{eq}	L ₉₀	L ₁₀				
Unit: dB(A) 30 Mins								
07-Sep-21	16:04	67.7	66.5	68.5	75	67.7	Fine	0.6
18-Sep-21	08:40	64.5	61.5	66.5		64.5	Fine	1.1
24-Sep-21	08:37	64.7	62.5	66.0		64.7	Fine	0.7
30-Sep-21	08:41	65.2	63.0	67.0		65.2	Fine	0.9

NMS 9 Lek Yuen Estate

Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L _{eq}	L ₉₀	L ₁₀				
Unit: dB(A) 30 Mins								
07-Sep-21	15:26	62.5	60.5	64.0	75	62.5	Fine	0.4
18-Sep-21	09:57	61.8	58.0	63.0		61.8	Fine	0.7
24-Sep-21	09:53	65.9	61.5	68.0		65.9	Fine	0.5
30-Sep-21	10:02	63.5	59.5	66.0		63.5	Fine	1.1

NMS 10A Shatin Tsung Tsin School

Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L _{eq}	L ₉₀	L ₁₀				
Unit: dB(A) 30 Mins								
07-Sep-21	14:13	62.6	59.0	64.0	70	62.6	Fine	0.7
18-Sep-21	10:39	63.5	59.0	64.5		63.5	Fine	1.1
24-Sep-21	10:31	62.3	57.5	64.0		62.3	Fine	1.2
30-Sep-21	10:39	63.4	60.0	65.5		63.4	Fine	1.0

*Note: The school calendar was provide in Appendix E.

NMS 11 Sheung Wo Che

Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L _{eq}	L ₉₀	L ₁₀				
Unit: dB(A) 30 Mins								
07-Sep-21	09:04	57.1	53.5	59.5	75	57.1	Fine	0.6
18-Sep-21	09:33	56.5	54.0	58.0		56.5	Fine	0.5
24-Sep-21	09:17	56.4	54.5	58.0		56.4	Fine	0.4
30-Sep-21	17:00	57.9	55.5	59.0		57.9	Fine	0.6

NMS 12 SKH Holy Spirit Primary School

Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L _{eq}	L ₉₀	L ₁₀				
Unit: dB(A) 30 Mins								
07-Sep-21	14:48	64.3	61.5	66.5	70	64.3	Fine	0.7
18-Sep-21	11:20	64.3	60.5	65.5		64.3	Fine	0.9
24-Sep-21	11:15	63.6	60.0	65.0		63.6	Fine	1.1
30-Sep-21	11:25	63.9	60.5	65.0		63.9	Fine	1.2

*Note: The school calendar was provide in Appendix E.

If measured noise level (L_{eq}) > limit level, Corrected noise level (CNL) is calculated as:

$$10 \times \log \left[\left(10^{\frac{\text{Measured noise level, } L_{eq}}{10}} \right) - \left(10^{\frac{\text{Baseline noise level}}{10}} \right) \right]$$

NMS 13 Lek Yuen Estate

Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L _{eq}	L ₉₀	L ₁₀				
Unit: dB(A) 30 Mins								
07-Sep-21	13:38	61.0	58.5	62.5	75	61.0	Fine	0.8
18-Sep-21	13:05	59.9	56.5	61.0		59.9	Fine	0.6
24-Sep-21	13:03	60.4	57.5	62.5		60.4	Fine	0.8
30-Sep-21	13:00	62.2	59.0	63.0		62.2	Fine	0.8

NMS 14 Sheung Wo Che

Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L _{eq}	L ₉₀	L ₁₀				
Unit: dB(A) 30 Mins								
07-Sep-21	09:38	61.8	59.0	64.0	75	61.8	Fine	0.5
18-Sep-21	10:15	64.8	60.5	65.5		64.8	Fine	0.8
24-Sep-21	09:59	63.8	61.0	65.5		63.8	Fine	0.4
30-Sep-21	16:19	62.5	59.5	64.0		62.5	Fine	0.8

NMS 15 Ha Wo Che

Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L _{eq}	L ₉₀	L ₁₀				
Unit: dB(A) 30 Mins								
06-Sep-21	11:16	58.6	56.0	60.5	75	58.6	Fine	0.8
17-Sep-21	09:17	59.0	56.5	61.5		59.0	Sunny	1.0
23-Sep-21	14:25	58.4	56.0	60.5		58.4	Overcast	0.4
29-Sep-21	16:05	64.0	62.0	66.5		64.0	Fine	0.6

NMS 16 Ha Wo Che

Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L _{eq}	L ₉₀	L ₁₀				
Unit: dB(A) 30 Mins								
06-Sep-21	13:08	63.7	58.5	66.0	75	63.7	Fine	0.9
17-Sep-21	10:00	62.7	58.0	64.0		62.7	Sunny	0.7
23-Sep-21	15:02	63.8	60.0	65.0		63.8	Overcast	1.0
29-Sep-21	15:26	63.0	60.5	65.0		63.0	Fine	1.4

NMS 17 Shatin Pui Ying College

Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L _{eq}	L ₉₀	L ₁₀				
Unit: dB(A) 30 Mins								
07-Sep-21	10:52	62.3	60.0	63.5	70	62.3	Fine	0.6
18-Sep-21	13:50	60.0	58.0	61.5		60.0	Fine	1.0
24-Sep-21	13:59	61.3	59.5	62.0		61.3	Fine	0.9
30-Sep-21	13:38	61.6	59.5	63.0		61.6	Fine	0.8

*Note: The school calendar was provide in Appendix E.

NMS 18 Ha Wo Che

Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L _{eq}	L ₉₀	L ₁₀				
Unit: dB(A) 30 Mins								
06-Sep-21	13:46	60.2	57.0	62.0	75	60.2	Fine	0.9
17-Sep-21	10:32	63.4	60.0	65.5		63.4	Sunny	0.4
23-Sep-21	15:40	61.5	57.0	64.0		61.5	Overcast	0.5
29-Sep-21	14:51	61.4	58.5	63.5		61.4	Fine	0.7

If measured noise level (L_{eq}) > limit level, Corrected noise level (CNL) is calculated as:

$$10 \times \log \left[\left(10^{\frac{\text{Measured noise level, } L_{eq}}{10}} \right) - \left(10^{\frac{\text{Baseline noise level}}{10}} \right) \right]$$

NMS 19 Wo Che Estate

Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L _{eq}	L ₉₀	L ₁₀				
Unit: dB(A) 30 Mins								
07-Sep-21	11:28	66.6	64.5	68.0	75	66.6	Fine	0.7
18-Sep-21	11:35	64.5	61.5	66.0		64.5	Fine	0.9
24-Sep-21	13:05	65.9	64.0	67.0		65.9	Fine	0.4
30-Sep-21	14:20	64.2	62.0	66.0		64.2	Fine	0.6

NMS 20 Wo Che Estate

Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L _{eq}	L ₉₀	L ₁₀				
Unit: dB(A) 30 Mins								
07-Sep-21	13:03	60.2	58.0	61.5	75	60.2	Fine	0.5
18-Sep-21	13:02	63.2	61.5	64.0		63.2	Fine	0.5
24-Sep-21	13:48	63.1	60.0	65.5		63.1	Fine	0.3
30-Sep-21	14:54	64.4	62.5	66.0		64.4	Fine	0.7

NMS 23 Pai Tau

Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L _{eq}	L ₉₀	L ₁₀				
Unit: dB(A) 30 Mins								
06-Sep-21	10:37	62.5	60.0	64.5	75	62.5	Fine	0.3
17-Sep-21	08:39	63.3	61.0	65.5		63.3	Sunny	0.6
23-Sep-21	13:36	67.1	61.5	68.0		67.1	Overcast	0.8
29-Sep-21	16:47	65.4	63.0	67.5		65.4	Fine	0.8

NMS 24 Shatin Plaza

Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L _{eq}	L ₉₀	L ₁₀				
Unit: dB(A) 30 Mins								
07-Sep-21	16:37	68.1	67.0	69.0	75	68.1	Fine	0.9
18-Sep-21	09:13	64.1	62.0	66.0		64.1	Fine	0.8
24-Sep-21	09:10	64.5	62.5	66.0		64.5	Fine	0.7
30-Sep-21	09:15	64.7	62.0	65.5		64.7	Fine	0.7

NMS 25A Sheung Wo Che

Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L _{eq}	L ₉₀	L ₁₀				
Unit: dB(A) 30 Mins								
07-Sep-21	08:27	64.4	56.5	67.5	75	64.4	Fine	0.6
18-Sep-21	08:53	59.3	55.0	62.0		59.3	Fine	0.7
24-Sep-21	08:41	66.5	62.0	69.5		66.5	Fine	0.6
30-Sep-21	17:39	59.5	55.0	61.0		59.5	Fine	0.8

NMS 26 Wo Che Estate

Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L _{eq}	L ₉₀	L ₁₀				
Unit: dB(A) 30 Mins								
07-Sep-21	10:14	70.2	67.0	72.0	75	70.2	Fine	0.8
18-Sep-21	10:56	70.7	68.5	72.0		70.7	Fine	0.7
24-Sep-21	10:43	68.6	66.5	70.0		68.6	Fine	0.7
30-Sep-21	15:33	68.8	66.5	69.5		68.8	Fine	0.2

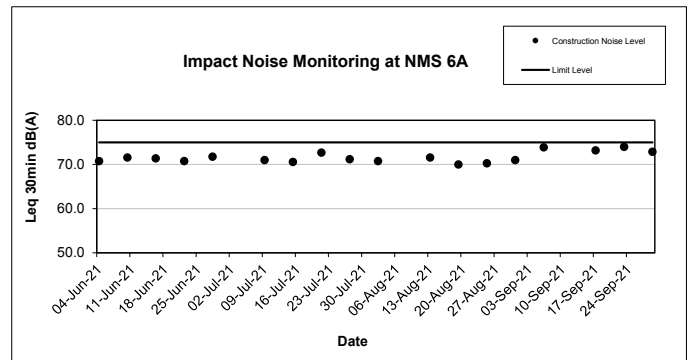
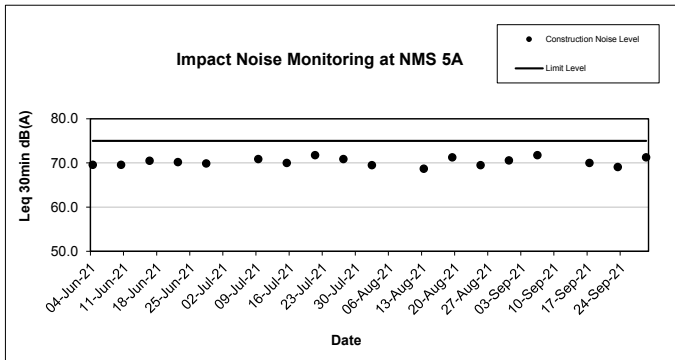
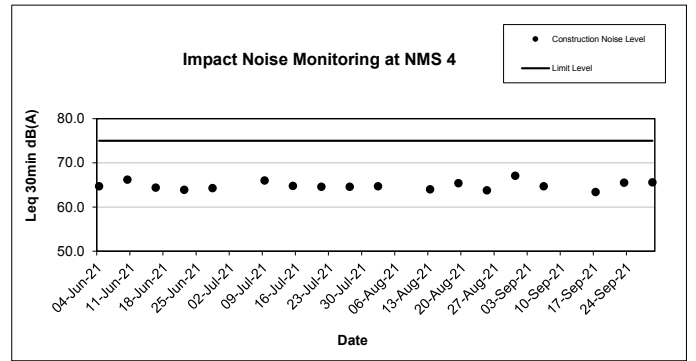
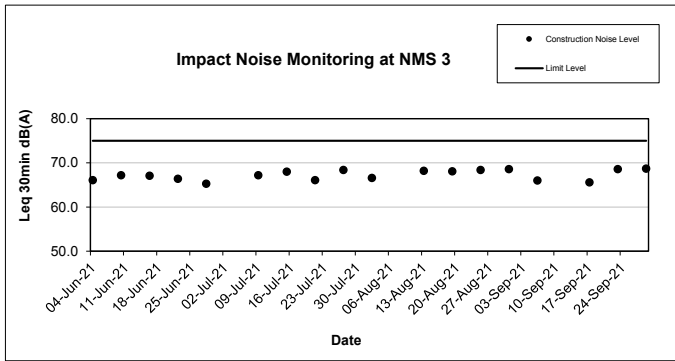
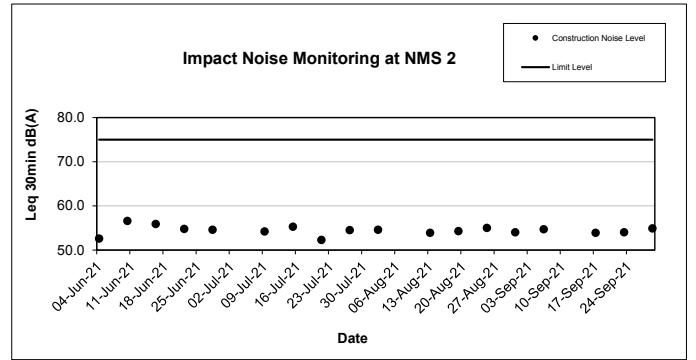
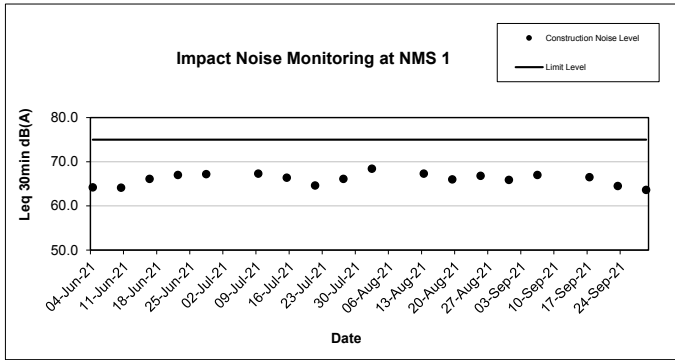
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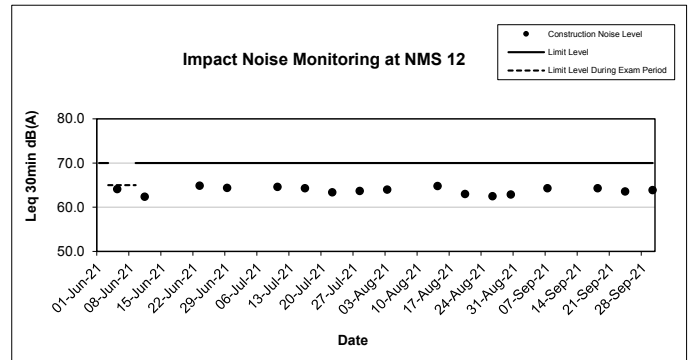
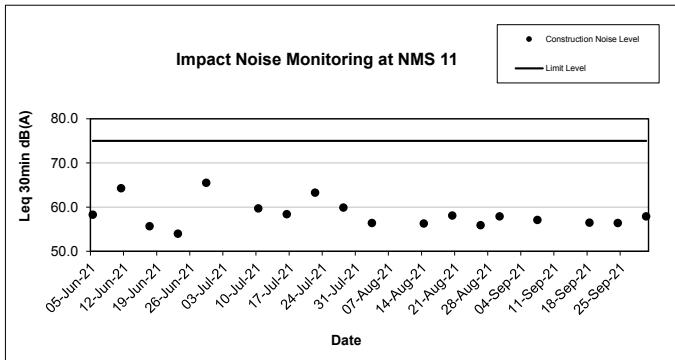
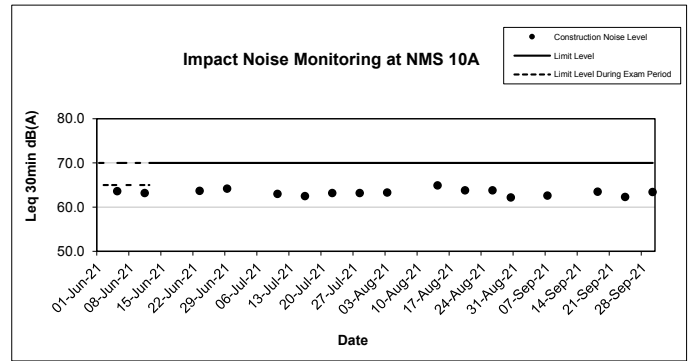
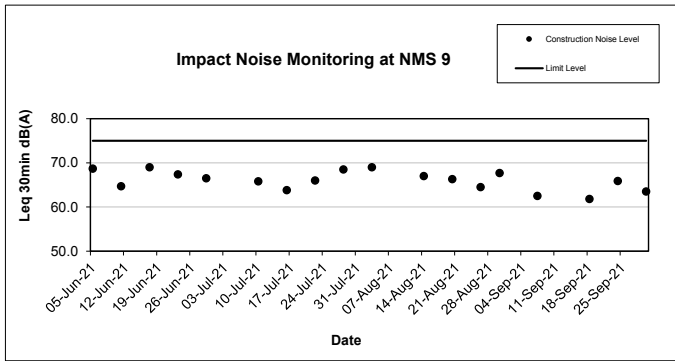
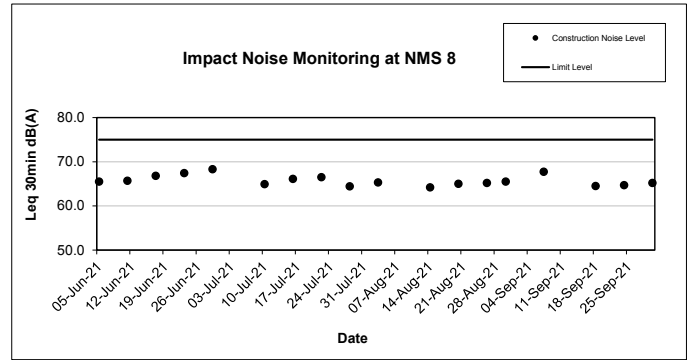
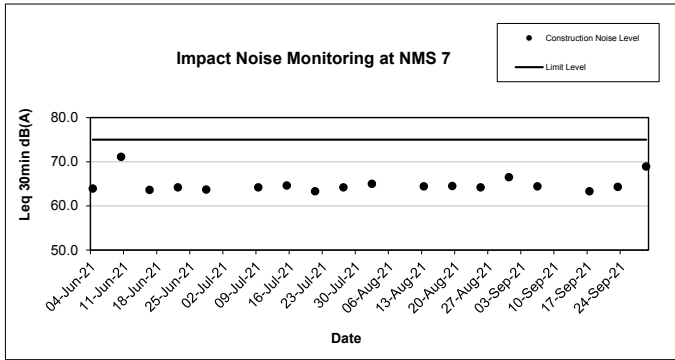
Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L _{eq}	L ₉₀	L ₁₀				
Unit: dB(A) 30 Mins								
06-Sep-21	17:15	64.3	62.0	65.5	70	64.3	Fine	0.6
17-Sep-21	11:24	64.8	62.0	66.5		64.8	Sunny	0.9
23-Sep-21	16:35	66.0	62.5	67.0		66.0	Overcast	0.6
29-Sep-21	13:56	64.2	61.0	66.0		64.2	Fine	0.9

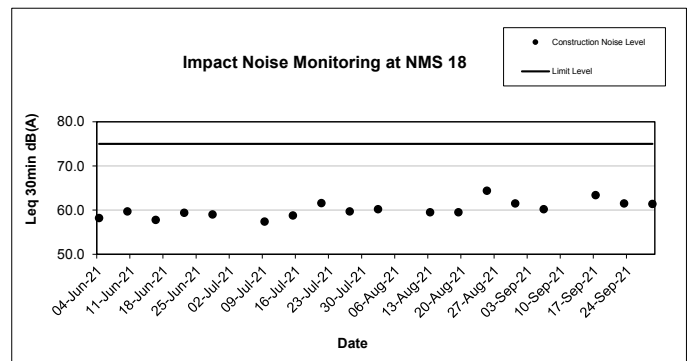
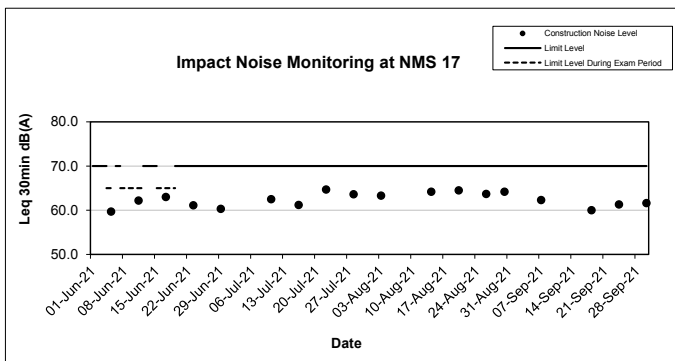
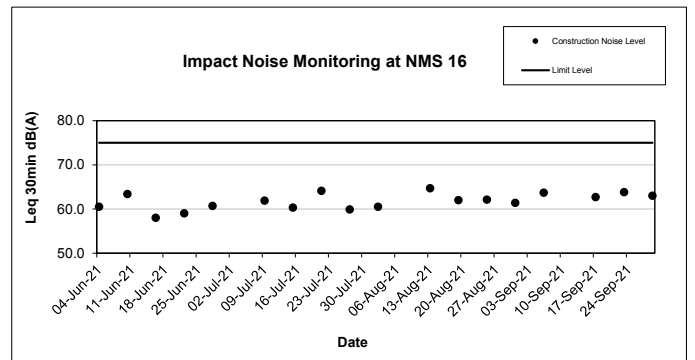
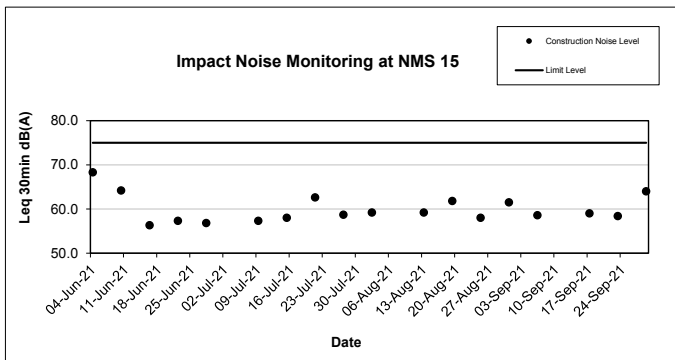
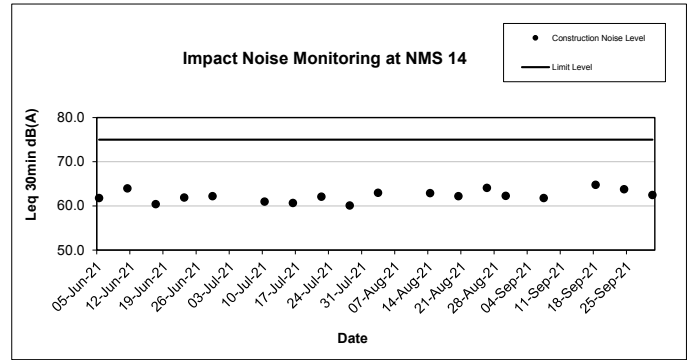
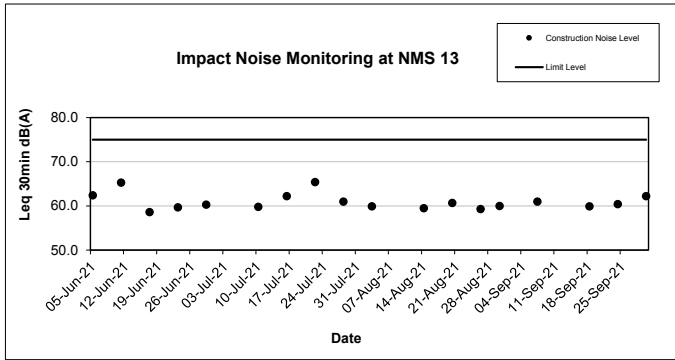
*Note: The school calendar was provide in Appendix E.

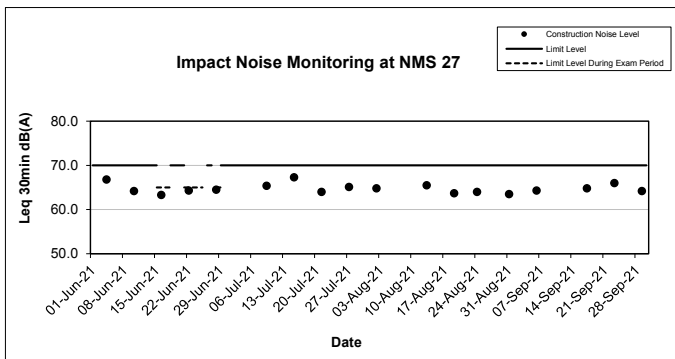
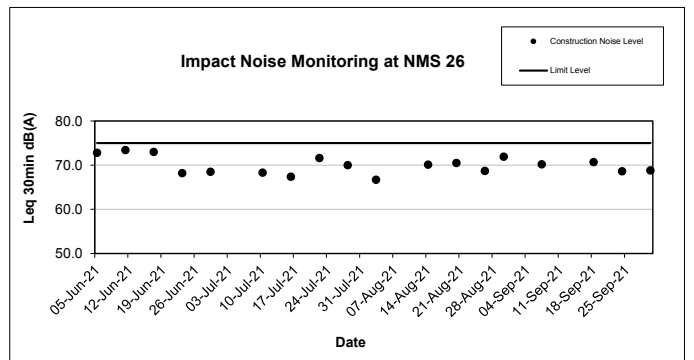
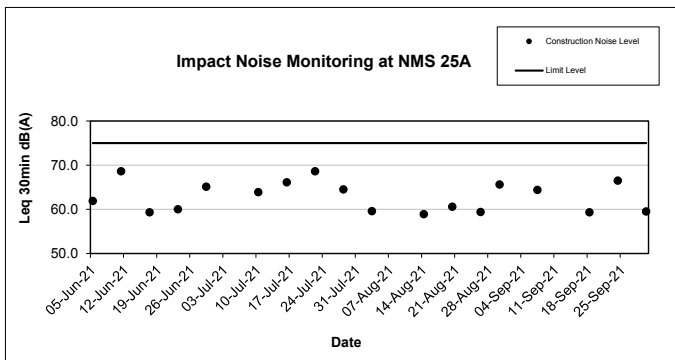
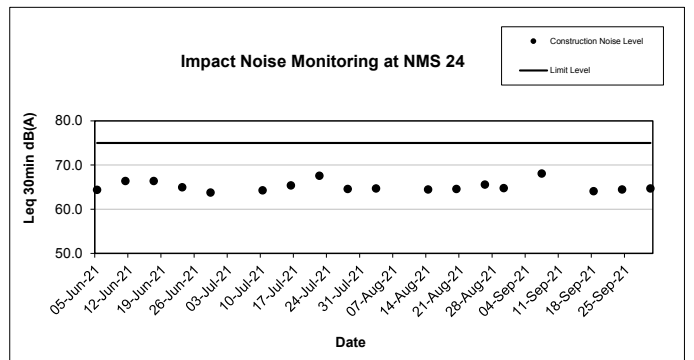
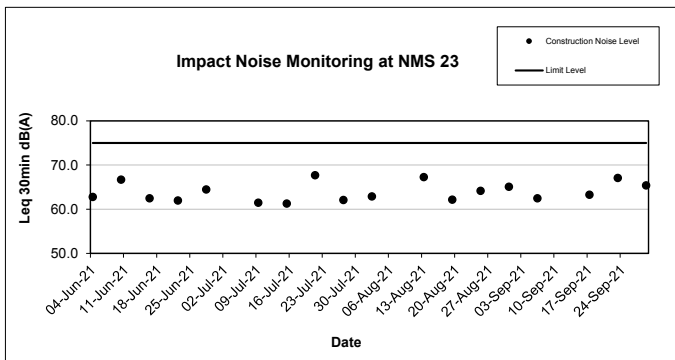
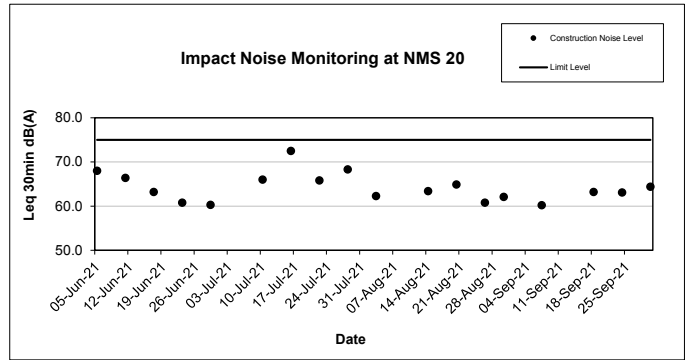
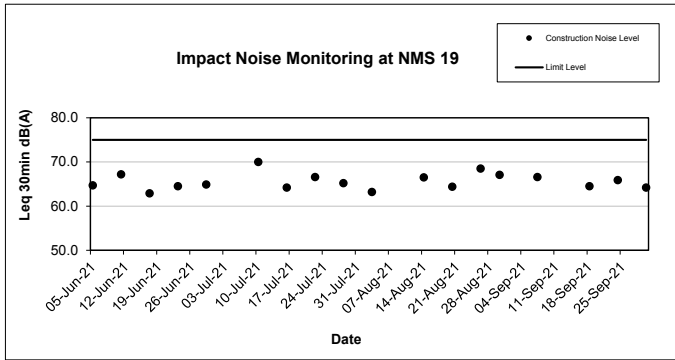
If measured noise level (L_{eq}) > limit level, Corrected noise level (CNL) is calculated as:

$$10 \times \log \left[\left(10^{\frac{\text{Measured noise level, } L_{eq}}{10}} \right) - \left(10^{\frac{\text{Baseline noise level}}{10}} \right) \right]$$









Night Time Noise Monitoring Result for NOD 03-2018 Road Widening and Retrofitting Noise Barriers on Tai Po Road (Sha Tin Section)

NMS 1 Scenery Court

Date	Start Time	Average Leq (15 min) (dB(A))	Baseline (dB(A))	Baseline Range (dB(A))	Limit Level (dB(A))	Corrected Noise Level (dB(A))	Weather	Wind Speed (m/s)
02-Sep-21	23:00	59.7	61.4	52.8 - 66.3	55	Measured Noise Level<Baseline	Fine	0.8
09-Sep-21	23:00	57.6			55	Measured Noise Level<Baseline	Fine	0.5
16-Sep-21	23:00	59.8			55	Measured Noise Level<Baseline	Fine	0.7
23-Sep-21	23:00	56.9			55	Measured Noise Level<Baseline	Fine	0.5
29-Sep-21	23:00	59.8			55	Measured Noise Level<Baseline	Fine	0.4

NMS 2 Villa Le Parc

Date	Start Time	Average Leq (15 min) (dB(A))	Baseline (dB(A))	Baseline Range (dB(A))	Limit Level (dB(A))	Corrected Noise Level (dB(A))	Weather	Wind Speed (m/s)
03-Sep-21	02:17	53.2	49.7	40.1 - 58.2	55	Measured Noise Level<Limit Level	Fine	1.4
09-Sep-21	23:30	52.8			55	Measured Noise Level<Limit Level	Fine	1.2
17-Sep-21	02:03	52.6			55	Measured Noise Level<Limit Level	Fine	0.6
24-Sep-21	02:59	51.1			55	Measured Noise Level<Limit Level	Fine	0.9
30-Sep-21	01:06	53.0			55	Measured Noise Level<Limit Level	Fine	0.7

NMS 3 Hilton Plaza

Date	Start Time	Average Leq (15 min) (dB(A))	Baseline (dB(A))	Baseline Range (dB(A))	Limit Level (dB(A))	Corrected Noise Level (dB(A))	Weather	Wind Speed (m/s)
03-Sep-21	01:54	67.0	70.9	60.2 - 78.9	55	Measured Noise Level<Baseline	Fine	0.8
09-Sep-21	23:21	68.6			55	Measured Noise Level<Baseline	Fine	0.5
17-Sep-21	01:39	61.6			55	Measured Noise Level<Baseline	Fine	1.2
23-Sep-21	23:20	68.2			55	Measured Noise Level<Baseline	Fine	0.5
30-Sep-21	00:38	62.0			55	Measured Noise Level<Baseline	Fine	0.9

NMS 4 Tin Liu

Date	Start Time	Average Leq (15 min) (dB(A))	Baseline (dB(A))	Baseline Range (dB(A))	Limit Level (dB(A))	Corrected Noise Level (dB(A))	Weather	Wind Speed (m/s)
03-Sep-21	02:53	59.1	62.6	53.1 - 68.1	55	Measured Noise Level<Baseline	Fine	0.4
09-Sep-21	23:53	62.5			55	Measured Noise Level<Baseline	Fine	0.9
17-Sep-21	02:57	59.5			55	Measured Noise Level<Baseline	Fine	0.8
24-Sep-21	02:36	60.8			55	Measured Noise Level<Baseline	Fine	0.7
30-Sep-21	02:49	59.0			55	Measured Noise Level<Baseline	Fine	0.5

NMS 5A Wai Wah Centre

Date	Start Time	Average Leq (15 min) (dB(A))	Baseline (dB(A))	Baseline Range (dB(A))	Limit Level (dB(A))	Corrected Noise Level (dB(A))	Weather	Wind Speed (m/s)
02-Sep-21	23:19	70.9	67.9	62.0 - 75.2	55	68.0*	Fine	0.6
09-Sep-21	23:42	67.8			55	Measured Noise Level<Baseline	Fine	0.4
16-Sep-21	23:19	70.9			55	67.8*	Fine	0.6
23-Sep-21	23:41	68.0			55	49.8*	Fine	0.6
29-Sep-21	23:20	70.7			55	67.4*	Fine	0.4

Note: *Corrected Noise Level in Leq (15min) dB(A) was/were lower than Limit level: 55 dB(A).

NMS 6A Wai Wah Centre

Date	Start Time	Average Leq (15 min) (dB(A))	Baseline (dB(A))	Baseline Range (dB(A))	Limit Level (dB(A))	Corrected Noise Level (dB(A))	Weather	Wind Speed (m/s)
03-Sep-21	01:06	66.1	71.5	65.0 - 85.9	55	Measured Noise Level<Baseline	Fine	0.4
10-Sep-21	00:00	68.8			55	Measured Noise Level<Baseline	Fine	0.7
17-Sep-21	01:19	63.0			55	Measured Noise Level<Baseline	Fine	0.9
23-Sep-21	23:58	68.9			55	Measured Noise Level<Baseline	Fine	0.5
30-Sep-21	00:18	63.7			55	Measured Noise Level<Baseline	Fine	0.6

If measured noise level (L_{eq}) > limit level, Corrected noise level (CNL) is calculated as:

$$10 \times \log \left[\left(10^{\frac{\text{Measured noise level, Leq}}{10}} \right) - \left(10^{\frac{\text{Baseline noise level}}{10}} \right) \right]$$

NMS 7 Tin Liu

Date	Start Time	Average Leq (15 min) (dB(A))	Baseline (dB(A))	Baseline Range (dB(A))	Limit Level (dB(A))	Corrected Noise Level (dB(A))	Weather	Wind Speed (m/s)
03-Sep-21	02:32	59.2	59.0	51.4 - 65.5	55	46.1*	Fine	0.8
10-Sep-21	00:14	59.8			55	52.1*	Fine	0.9
17-Sep-21	02:38	58.5			55	Measured Noise Level<Baseline	Fine	0.8
24-Sep-21	02:15	59.3			55	47.5*	Fine	1.0
30-Sep-21	02:31	58.8			55	Measured Noise Level<Baseline	Fine	0.6

Note: *Corrected Noise Level in Leq (15min) dB(A) was/were lower than Limit level: 55 dB(A).

NMS 8 Shatin Plaza

Date	Start Time	Average Leq (15 min) (dB(A))	Baseline (dB(A))	Baseline Range (dB(A))	Limit Level (dB(A))	Corrected Noise Level (dB(A))	Weather	Wind Speed (m/s)
03-Sep-21	00:45	60.4	64.4	55.6 - 72.8	55	Measured Noise Level<Baseline	Fine	0.8
10-Sep-21	00:30	62.4			55	Measured Noise Level<Baseline	Fine	0.7
17-Sep-21	00:54	59.7			55	Measured Noise Level<Baseline	Fine	0.4
24-Sep-21	00:26	58.7			55	Measured Noise Level<Baseline	Fine	0.5
30-Sep-21	00:52	61.6			55	Measured Noise Level<Baseline	Fine	0.7

NMS 9 Lek Yuen Estate

Date	Start Time	Average Leq (15 min) (dB(A))	Baseline (dB(A))	Baseline Range (dB(A))	Limit Level (dB(A))	Corrected Noise Level (dB(A))	Weather	Wind Speed (m/s)
02-Sep-21	23:00	56.6	53.5	39.5 - 63.1	55	53.8*	Fine	0.7
10-Sep-21	01:11	55.8			55	52.0*	Fine	0.6
17-Sep-21	00:32	56.4			55	53.3*	Fine	0.6
24-Sep-21	01:00	57.0			55	54.4*	Fine	0.4
30-Sep-21	00:29	55.1			55	50.0*	Fine	1.1

Note: *Corrected Noise Level in Leq (15min) dB(A) was/were lower than Limit level: 55 dB(A).

NMS 11 Sheung Wo Che

Date	Start Time	Average Leq (15 min) (dB(A))	Baseline (dB(A))	Baseline Range (dB(A))	Limit Level (dB(A))	Corrected Noise Level (dB(A))	Weather	Wind Speed (m/s)
03-Sep-21	01:52	50.9	53.2	46.1 - 62.8	55	Measured Noise Level<Limit Level	Fine	0.9
10-Sep-21	01:17	53.8			55	Measured Noise Level<Limit Level	Fine	0.8
17-Sep-21	01:57	54.9			55	Measured Noise Level<Limit Level	Fine	0.4
24-Sep-21	01:08	54.7			55	Measured Noise Level<Limit Level	Fine	0.4
30-Sep-21	01:53	53.9			55	Measured Noise Level<Limit Level	Fine	0.5

If measured noise level (L_{eq}) > limit level, Corrected noise level (CNL) is calculated as:

$$10 \times \log \left[\left(10^{\frac{\text{Measured noise level, Leq}}{10}} \right) - \left(10^{\frac{\text{Baseline noise level}}{10}} \right) \right]$$

NMS 13 Lek Yuen Estate

Date	Start Time	Average Leq (15 min) (dB(A))	Baseline (dB(A))	Baseline Range (dB(A))	Limit Level (dB(A))	Corrected Noise Level (dB(A))	Weather	Wind Speed (m/s)
03-Sep-21	00:19	54.8	57.3	45.4 - 72.5	55	Measured Noise Level<Limit Level	Fine	0.6
10-Sep-21	01:34	55.9			55	Measured Noise Level<Baseline	Fine	0.3
17-Sep-21	00:26	58.9			55	53.8*	Fine	0.9
24-Sep-21	01:21	59.2			55	54.6*	Fine	0.4
30-Sep-21	00:27	56.1			55	Measured Noise Level<Baseline	Fine	0.6

Note: *Corrected Noise Level in Leq (15min) dB(A) was/were lower than Limit level: 55 dB(A).

NMS 14 Sheung Wo Che

Date	Start Time	Average Leq (15 min) (dB(A))	Baseline (dB(A))	Baseline Range (dB(A))	Limit Level (dB(A))	Corrected Noise Level (dB(A))	Weather	Wind Speed (m/s)
03-Sep-21	00:21	54.1	54.1	46.1 - 62.8	55	Measured Noise Level<Limit Level	Fine	0.9
10-Sep-21	01:42	55.6			55	50.4*	Fine	1.0
17-Sep-21	23:00	55.7			55	50.4*	Fine	0.7
24-Sep-21	00:48	56.9			55	53.8*	Fine	0.6
30-Sep-21	23:00	56.0			55	51.5*	Fine	0.7

Note: *Corrected Noise Level in Leq (15min) dB(A) was/were lower than Limit level: 55 dB(A).

NMS 15 Ha Wo Che

Date	Start Time	Average Leq (15 min) (dB(A))	Baseline (dB(A))	Baseline Range (dB(A))	Limit Level (dB(A))	Corrected Noise Level (dB(A))	Weather	Wind Speed (m/s)
03-Sep-21	01:29	56.5	58.8	48.4 - 69.7	55	Measured Noise Level<Baseline	Fine	0.4
10-Sep-21	02:06	57.0			55	Measured Noise Level<Baseline	Fine	0.4
17-Sep-21	01:32	55.4			55	Measured Noise Level<Baseline	Fine	0.4
24-Sep-21	00:24	58.4			55	Measured Noise Level<Baseline	Fine	0.7
30-Sep-21	01:33	54.9			55	Measured Noise Level<Limit Level	Fine	0.5

NMS 16 Ha Wo Che

Date	Start Time	Average Leq (15 min) (dB(A))	Baseline (dB(A))	Baseline Range (dB(A))	Limit Level (dB(A))	Corrected Noise Level (dB(A))	Weather	Wind Speed (m/s)
03-Sep-21	00:02	60.7	60.1	51.4 - 69.5	55	51.7*	Fine	0.6
10-Sep-21	02:24	57.4			55	Measured Noise Level<Baseline	Fine	0.7
16-Sep-21	23:24	55.3			55	Measured Noise Level=Baseline	Fine	0.8
23-Sep-21	23:59	59.2			55	Measured Noise Level<Baseline	Fine	0.8
29-Sep-21	23:19	57.8			55	Measured Noise Level<Baseline	Fine	0.8

Note: *Corrected Noise Level in Leq (15min) dB(A) was/were lower than Limit level: 55 dB(A).

NMS 18 Ha Wo Che

Date	Start Time	Average Leq (15 min) (dB(A))	Baseline (dB(A))	Baseline Range (dB(A))	Limit Level (dB(A))	Corrected Noise Level (dB(A))	Weather	Wind Speed (m/s)
03-Sep-21	23:42	58.9	63.2	56.0 - 72.1	55	Measured Noise Level<Baseline	Fine	0.6
10-Sep-21	02:43	57.2			55	Measured Noise Level<Baseline	Fine	0.7
16-Sep-21	23:44	55.3			55	Measured Noise Level<Baseline	Fine	0.6
23-Sep-21	23:39	59.8			55	Measured Noise Level<Baseline	Fine	0.3
29-Sep-21	23:39	54.6			55	Measured Noise Level<Limit Level	Fine	1.3

If measured noise level (L_{eq}) > limit level, Corrected noise level (CNL) is calculated as:

$$10 \times \log \left[\left(10^{\frac{\text{Measured noise level, Leq}}{10}} \right) - \left(10^{\frac{\text{Baseline noise level}}{10}} \right) \right]$$

NMS 19 Wo Che Estate

Date	Start Time	Average Leq (15 min) (dB(A))	Baseline (dB(A))	Baseline Range (dB(A))	Limit Level (dB(A))	Corrected Noise Level (dB(A))	Weather	Wind Speed (m/s)
03-Sep-21	00:42	59.4	61.7	53.8 - 72.8	55	Measured Noise Level<Baseline	Fine	0.6
10-Sep-21	01:59	61.2			55	Measured Noise Level<Baseline	Fine	0.0
17-Sep-21	00:48	60.3			55	Measured Noise Level<Baseline	Fine	0.5
24-Sep-21	01:45	59.9			55	Measured Noise Level<Baseline	Fine	0.4
30-Sep-21	00:49	60.7			55	Measured Noise Level<Baseline	Fine	0.5

NMS 20 Wo Che Estate

Date	Start Time	Average Leq (15 min) (dB(A))	Baseline (dB(A))	Baseline Range (dB(A))	Limit Level (dB(A))	Corrected Noise Level (dB(A))	Weather	Wind Speed (m/s)
03-Sep-21	00:59	53.6	57.7	48.6 - 71.7	55	Measured Noise Level<Limit Level	Fine	0.5
10-Sep-21	02:17	56.8			55	Measured Noise Level<Baseline	Fine	0.0
17-Sep-21	01:06	54.5			55	Measured Noise Level<Limit Level	Fine	0.8
24-Sep-21	02:03	57.2			55	Measured Noise Level<Baseline	Fine	0.7
30-Sep-21	01:09	54.6			55	Measured Noise Level<Limit Level	Fine	0.5

NMS 23 Pai Tau

Date	Start Time	Average Leq (15 min) (dB(A))	Baseline (dB(A))	Baseline Range (dB(A))	Limit Level (dB(A))	Corrected Noise Level (dB(A))	Weather	Wind Speed (m/s)
03-Sep-21	01:29	57.9	59.9	47.8 - 69.8	55	Measured Noise Level<Baseline	Fine	0.6
10-Sep-21	00:38	60.2			55	47.9*	Fine	0.8
17-Sep-21	02:20	57.2			55	Measured Noise Level<Baseline	Fine	0.6
24-Sep-21	01:53	60.8			55	53.5*	Fine	0.9
30-Sep-21	01:31	56.3			55	Measured Noise Level<Baseline	Fine	0.7

Note: *Corrected Noise Level in Leq (15min) dB(A) was/were lower than Limit level: 55 dB(A).

NMS 24 Shatin Plaza

Date	Start Time	Average Leq (15 min) (dB(A))	Baseline (dB(A))	Baseline Range (dB(A))	Limit Level (dB(A))	Corrected Noise Level (dB(A))	Weather	Wind Speed (m/s)
02-Sep-21	23:57	59.2	58.0	50.2 - 66.7	55	53.2*	Fine	0.5
10-Sep-21	00:48	57.3			55	Measured Noise Level<Baseline	Fine	0.4
17-Sep-21	00:04	58.7			55	50.7*	Fine	0.5
24-Sep-21	00:45	58.7			55	50.7*	Fine	0.8
30-Sep-21	00:02	58.4			55	47.9*	Fine	0.5

Note: *Corrected Noise Level in Leq (15min) dB(A) was/were lower than Limit level: 55 dB(A).

NMS 25A Sheung Wo Che

Date	Start Time	Average Leq (15 min) (dB(A))	Baseline (dB(A))	Baseline Range (dB(A))	Limit Level (dB(A))	Corrected Noise Level (dB(A))	Weather	Wind Speed (m/s)
03-Sep-21	02:11	52.0	59.7	50.3 - 68.4	55	Measured Noise Level<Limit Level	Fine	0.6
10-Sep-21	00:59	52.3			55	Measured Noise Level<Limit Level	Fine	0.4
17-Sep-21	02:15	56.6			55	Measured Noise Level<Baseline	Fine	0.5
24-Sep-21	01:32	53.9			55	Measured Noise Level<Limit Level	Fine	0.4
30-Sep-21	02:11	58.0			55	Measured Noise Level<Baseline	Fine	0.7

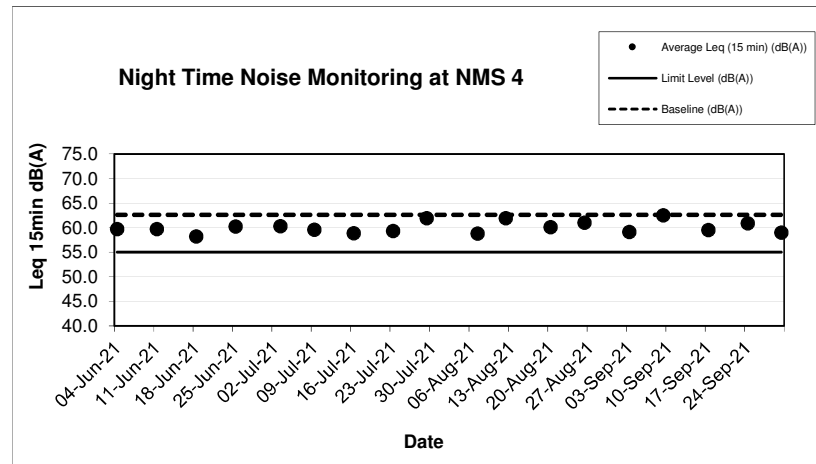
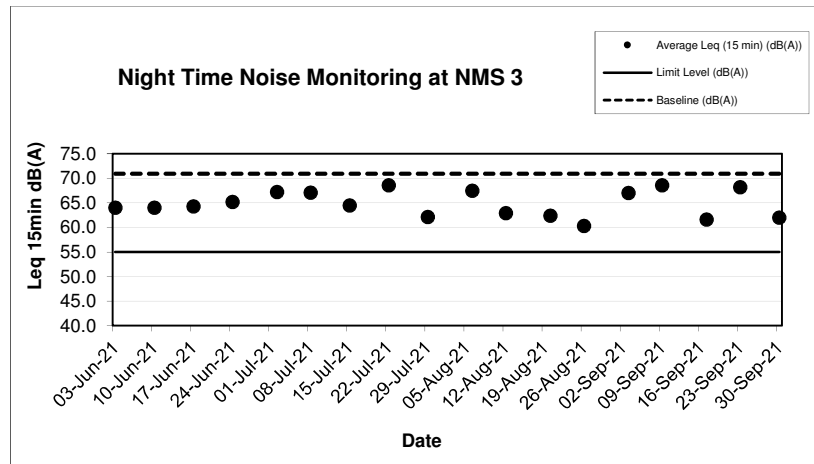
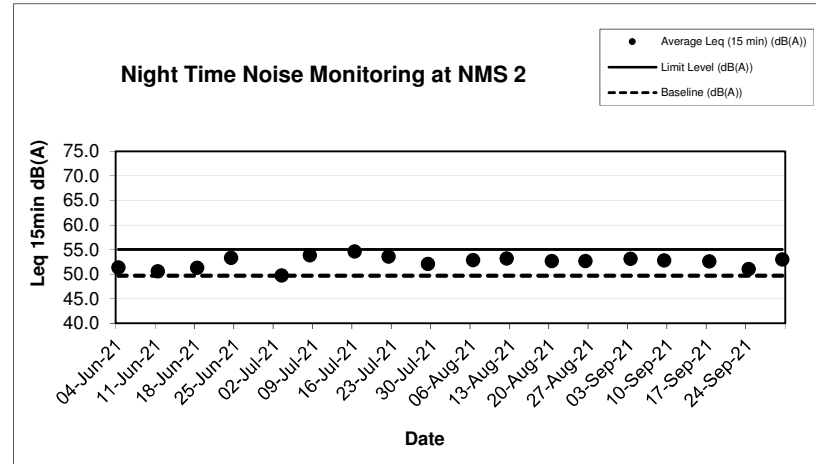
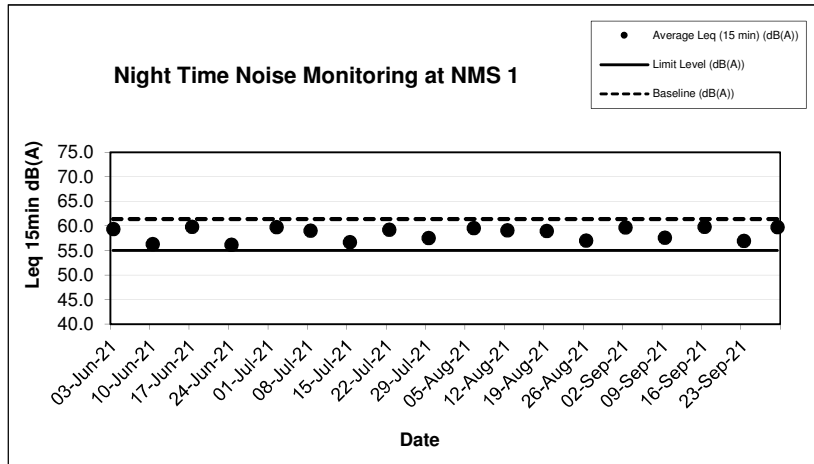
NMS 26 Wo Che Estate

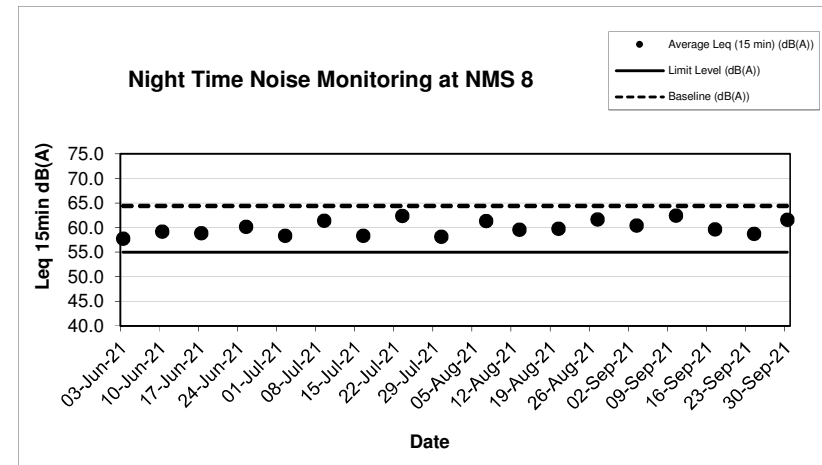
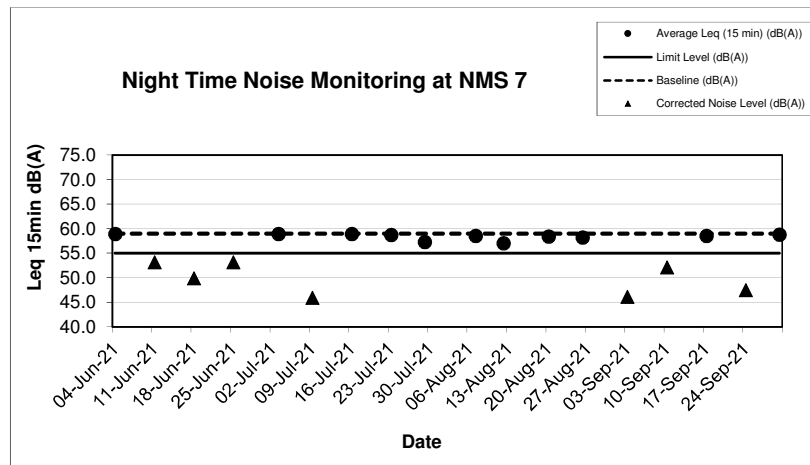
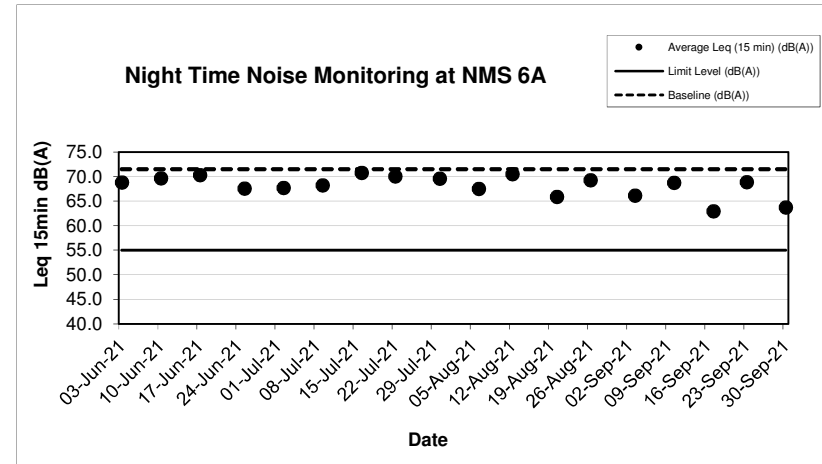
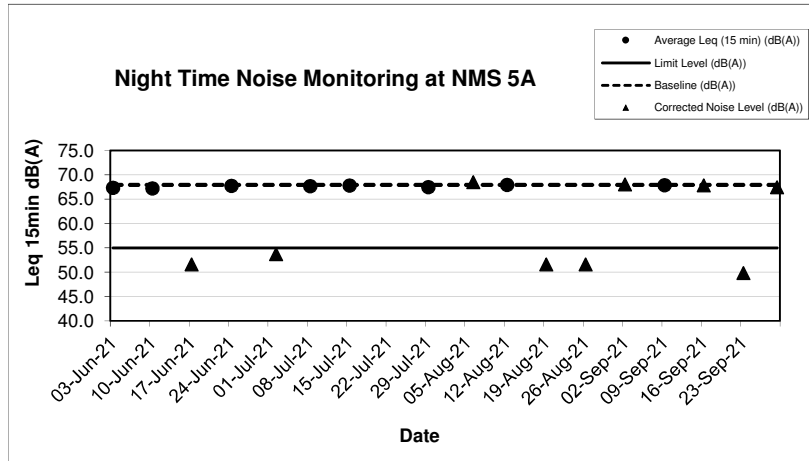
Date	Start Time	Average Leq (15 min) (dB(A))	Baseline (dB(A))	Baseline Range (dB(A))	Limit Level (dB(A))	Corrected Noise Level (dB(A))	Weather	Wind Speed (m/s)
02-Sep-21	23:21	61.0	61.2	45.7 - 70.1	55	Measured Noise Level<Baseline	Fine	1.3
10-Sep-21	03:02	60.9			55	Measured Noise Level<Baseline	Fine	0.5
17-Sep-21	00:10	59.7			55	Measured Noise Level<Baseline	Fine	0.4
23-Sep-21	23:18	61.5			55	49.4*	Fine	1.1
30-Sep-21	00:07	60.0			55	Measured Noise Level<Baseline	Fine	0.9

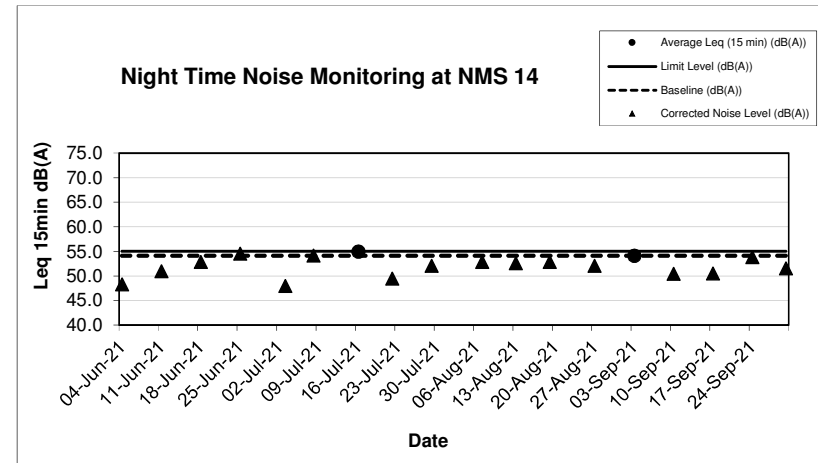
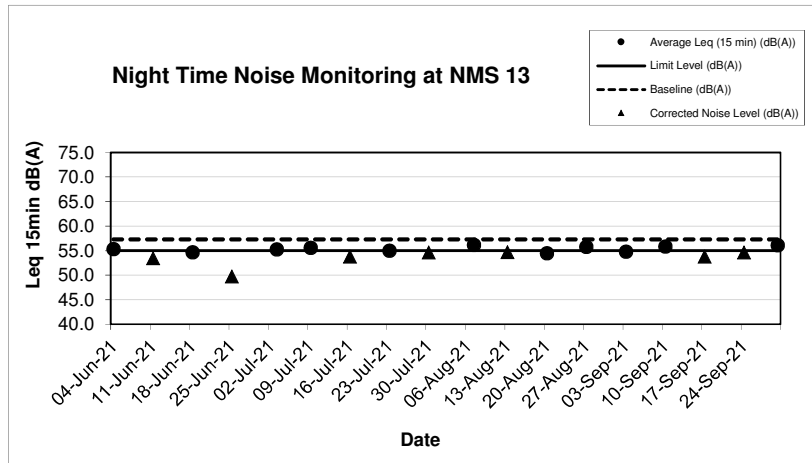
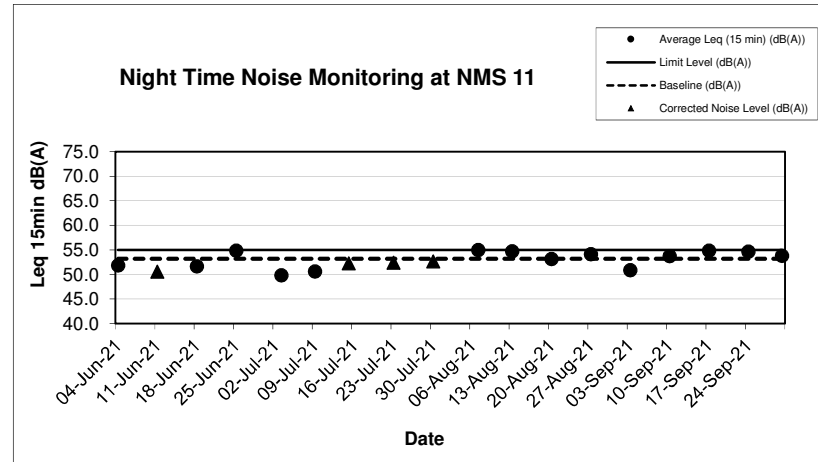
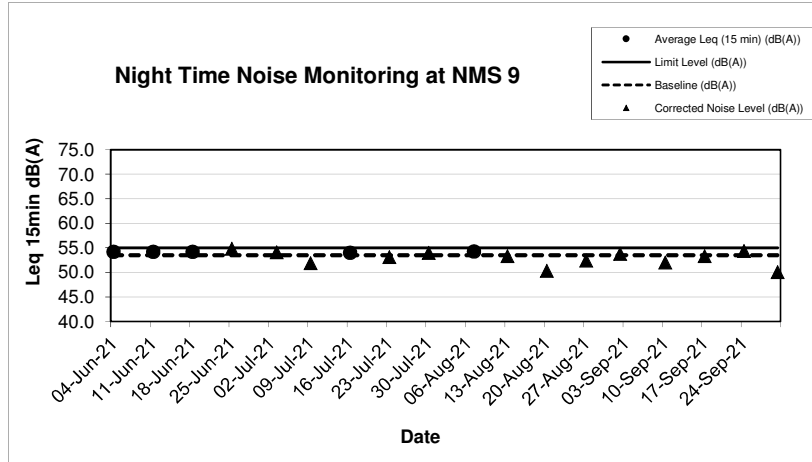
Note: *Corrected Noise Level in Leq (15min) dB(A) was/were lower than Limit level: 55 dB(A).

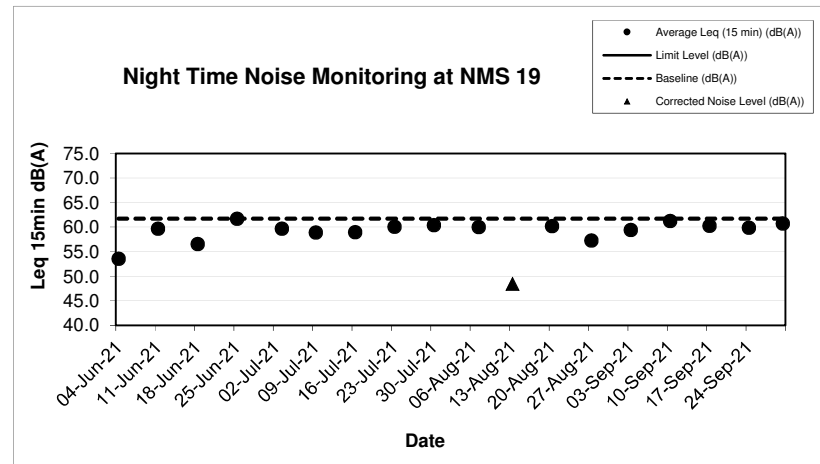
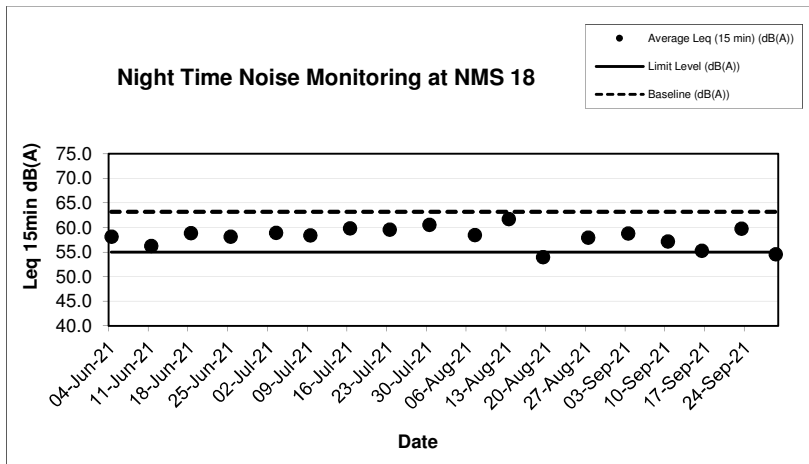
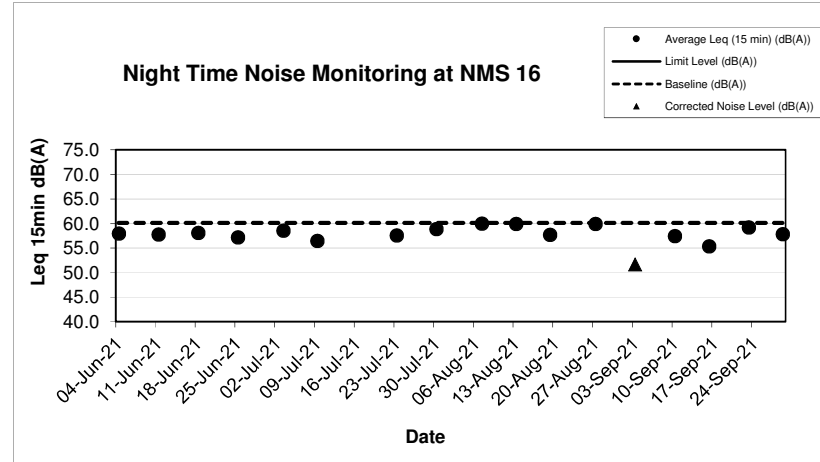
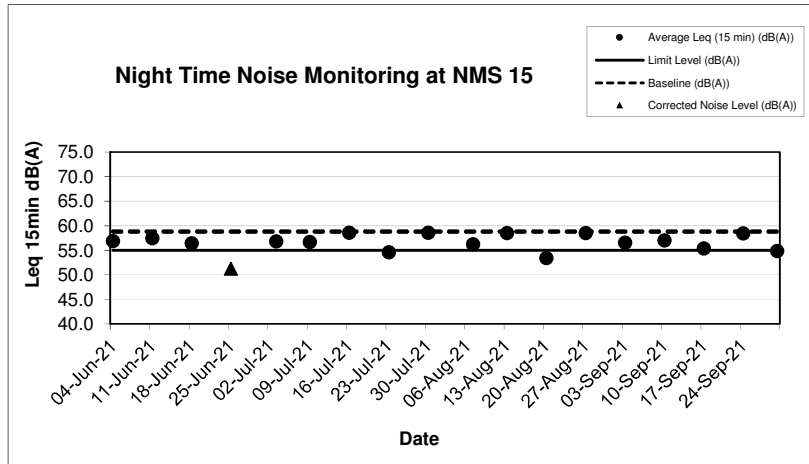
If measured noise level (L_{eq}) > limit level, Corrected noise level (CNL) is calculated as:

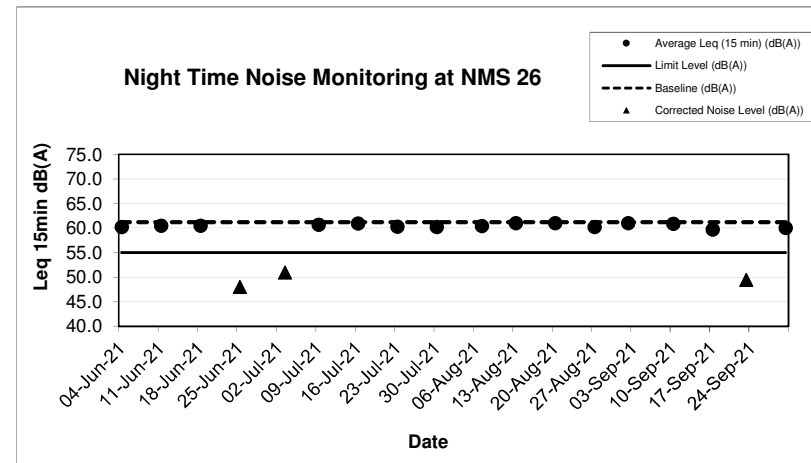
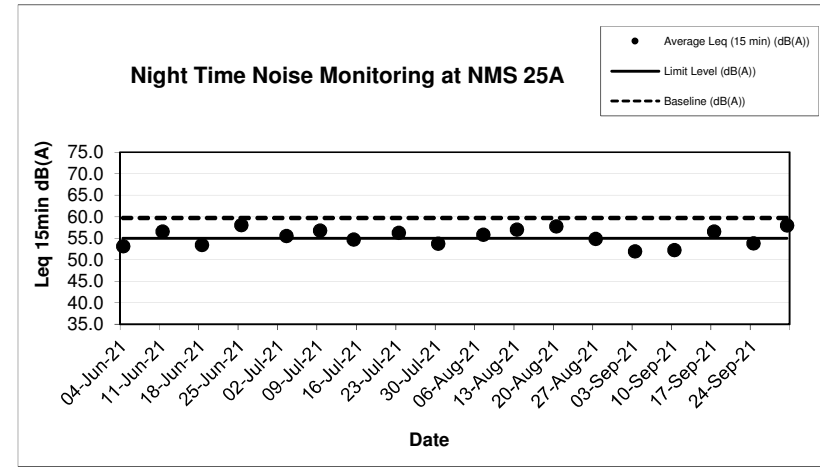
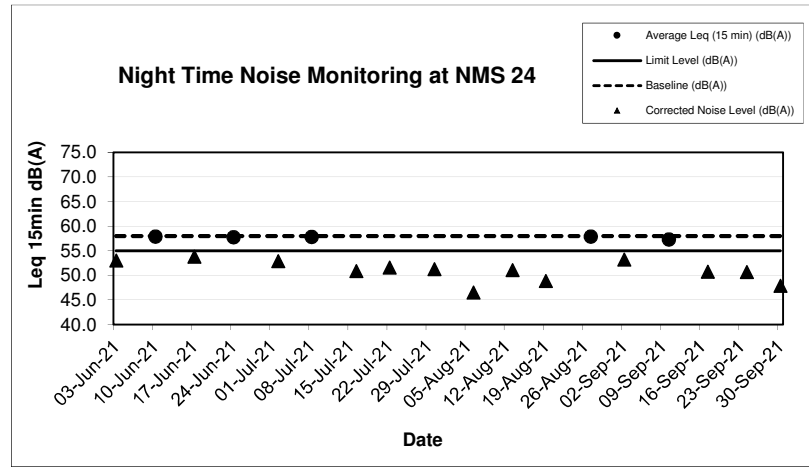
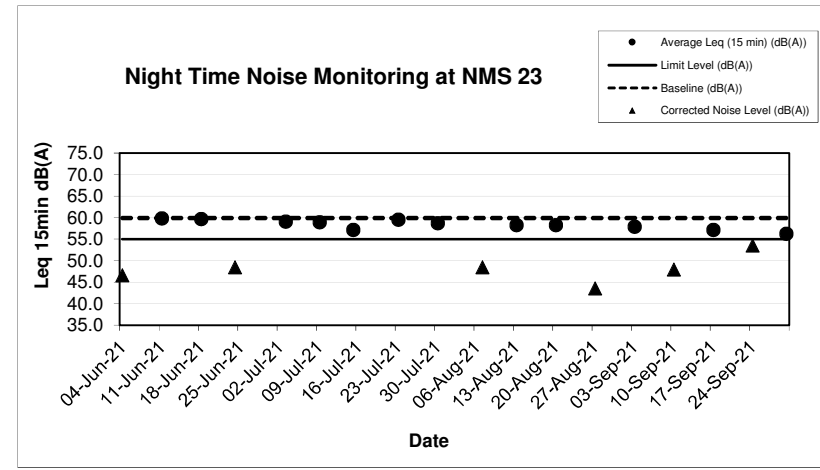
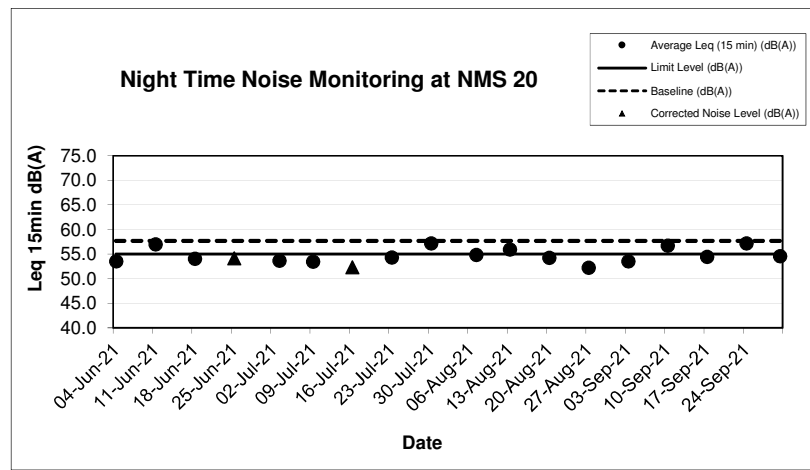
$$10 \times \log \left[\left(10^{\frac{\text{Measured noise level, Leq}}{10}} \right) - \left(10^{\frac{\text{Baseline noise level}}{10}} \right) \right]$$











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Appendix H

Events and Action Plan

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Event and Action Plan for Construction Dust Monitoring

EVENT	ACTION			
	ET Leader	IEC	SO	Contractor
Action Level				
1. Exceedance for one sample	<ol style="list-style-type: none"> 1. Identify the source. 2. Inform the IEC and the SO. 3. Repeat measurement to confirm findings. 4. Increase monitoring frequency to daily. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by the ET Leader. 2. Check Contractor's working method. 	<ol style="list-style-type: none"> 1. Notify Contractor. 	<ol style="list-style-type: none"> 1. Rectify any unacceptable practice. 2. Amend working methods if appropriate.
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> 1. Identify the source. 2. Inform the IEC and the SO. 3. Repeat measurement to confirm findings. 4. Increase monitoring frequency to daily. 5. Discuss with the IEC and the Contractor on remedial actions required. 6. If exceedance continues, arrange meeting with the IEC and the SO. 7. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by the ET Leader. 2. Check the Contractor's working method. 3. Discuss with the ET Leader and the Contractor on possible remedial measures. 4. Advise the SO on the effectiveness of the proposed remedial measures. 5. Supervisor implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Ensure remedial measures properly implemented. 	<ol style="list-style-type: none"> 1. Submit proposals for remedial actions to IEC within 3 working days of notification. 2. Implement the agreed proposals. 3. Amend proposal if appropriate.
Limit Level				
1. Exceedance for one sample	<ol style="list-style-type: none"> 1. Identify the source. 2. Inform the SO and the EPD. 3. Repeat measurement to confirm findings. 4. Increase monitoring frequency to daily. 5. Assess effectiveness of Contractor's remedial actions and keep the IEC, the EPD and the SO informed of the results. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by the ET Leader. 2. Check Contractor's working method. 3. Discuss with the ET Leader and the Contractor on possible remedial measures. 4. Advise the SO on the effectiveness of the proposed remedial measures. 5. Supervisor implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Ensure remedial measures are properly implemented. 	<ol style="list-style-type: none"> 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. 4. Amend proposal if appropriate.
2. Exceedance	<ol style="list-style-type: none"> 1. Notify the IEC, the SO and the EPD and the 	<ol style="list-style-type: none"> 1. Discuss amongst the SO, ET 	<ol style="list-style-type: none"> 1. Confirm receipt of 	<ol style="list-style-type: none"> 1. Take immediate action to avoid

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EVENT	ACTION			
	ET Leader	IEC	SO	Contractor
for two or more consecutive samples	<p>Contractor.</p> <ol style="list-style-type: none"> 2. Identify the source. 3. Repeat measurement to confirm findings. 4. Increase monitoring frequency to daily. 5. Carry out analysis of the Contractor's working procedures to determine possible mitigation to be implemented. 6. Arrange meeting with the IEC and the SO to discuss the remedial actions to be taken. 7. Assess effectiveness of Contractor's remedial actions and keep the IEC, the EPD and the SO informed of the results. 8. If exceedance stops, cease additional monitoring. 	<p>Leader and the Contractor on the potential remedial actions.</p> <ol style="list-style-type: none"> 2. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise the SO accordingly. 3. Supervisor implementation of remedial measures. 	<p>notification of failure in writing.</p> <ol style="list-style-type: none"> 2. Notify the Contractor. 3. In consultation with the Contractor on the remedial measures to be implemented. 4. Ensure remedial measures are properly implemented. 5. If exceedance continues, consider what activity of the work is responsible and instruct the Contractor to stop that activity of work until the exceedance is abated. 	<p>further exceedance.</p> <ol style="list-style-type: none"> 2. Submit proposals for remedial actions to IEC within 3 working days of notification. 3. Implement the agreed proposals. 4. Resubmit proposals if problem still not under control. 5. Stop the relevant activity of works as determined by the SO until the exceedance is abated.

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Event and Action Plan for Noise Impact

EVENT	ACTION			
	ET Leader	IEC	SO	Contractor
Action Level	<ol style="list-style-type: none"> 1. Notify the IEC and the Contractor. 2. Carry out investigation. 3. Report the results of investigation to the IEC. 4. Discuss with the Contractor and formulate remedial measures. 5. Increase monitoring frequency to check mitigation effectiveness. 	<ol style="list-style-type: none"> 1. Review the analysed results submitted by the ET. 2. Review the proposed remedial measures by the Contractor and advise the SO accordingly. 3. Supervise the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Require the Contractor to propose remedial measures for the analysed noise problem. 4. Ensure remedial measures are properly implemented. 	<ol style="list-style-type: none"> 1. Submit noise mitigation proposals to IEC. 2. Implement noise mitigation proposals.
Limit Level	<ol style="list-style-type: none"> 1. Notify the IEC, the SO and the Contractor. 2. Identify the source. 3. Repeat measurement to confirm findings. 4. Increase monitoring frequency. 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented. 6. Inform the IEC, the SO and the EPD the causes & actions taken for the exceedance. 7. Assess effectiveness if the Contractor's remedial actions and keep the IEC and the SO informed of the results. 8. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Discuss amongst the SO, the ET Leader and the Contractor on the potential remedial actions. 2. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise the SO accordingly. 3. Supervise the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Require the Contractor to propose remedial measures for the analysed noise problem. 4. Ensure remedial measures are properly implemented. 5. If exceedance continues, consider what activities of the work is responsible and instruct the Contractor to stop that activity of work until the exceedance is abated. 	<ol style="list-style-type: none"> 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 4. Resubmit proposals if problem still not under control 5. Stop the relevant activity of works as determined by the SO until the exceedance is abated.



Event and Action Plan for Landscape and Visual Impact

Event	Action		
	ET	SO	Contractor
Non-conformity on one occasion	<ol style="list-style-type: none"> 1. Identify Source; 2. Inform the Contractor and the SO; 3. Discuss remedial actions with the SO and the Contractor; and 4. Monitor remedial actions until rectification has been completed 	<ol style="list-style-type: none"> 1. Notify Contractor; and 2. Ensure remedial measures are properly implemented. 	<ol style="list-style-type: none"> 1. Amend working methods; 2. Rectify damage and undertake any necessary replacement.
Repeated conformity Non-	<ol style="list-style-type: none"> 1. Identify Source; 2. Inform the Contractor and the SO; 3. Increase monitoring frequency; 4. Discuss remedial actions with the SO and the Contractor; 5. Monitor remedial actions until rectification has been completed; and 6. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Notify Contractor; and 2. Ensure remedial measures are properly implemented. 	<ol style="list-style-type: none"> 1. Amend working methods; 2. Rectify damage and undertake any necessary replacement.

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Appendix I

Waste Flow Table

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Waste Flow Table for Year 2018

Monthly Ending	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of Non-inert C&D Wastes Generated Monthly				
	Total Quantity Generated (Inert C&D)	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in '000Ton)	(in '000kg)	(in '000Ton)	(in '000Ton)	(in '000Ton)	(in '000Ton)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000Ton)
2018 Jan	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2018 Feb	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2018 Mar	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2018 Apr	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2018 May	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2018 Jun	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sub-Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2018 Jul	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2018 Aug	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2018 Sep	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2018 Oct	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013
2018 Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004
2018 Dec	0.001	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001
Total	0.001	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.018

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Waste Flow Table for Year 2019

Monthly Ending	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of Non-inert C&D Wastes Generated Monthly				
	Total Quantity Generated (Inert C&D)	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in '000Ton)	(in '000kg)	(in '000Ton)	(in '000Ton)	(in '000Ton)	(in '000Ton)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000Ton)
2019 Jan	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021
2019 Feb	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.049
2019 Mar	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.048
2019 Apr	0.100	0.000	0.000	0.000	0.100	0.000	0.000	0.000	0.000	0.000	0.089
2019 May	0.150	0.000	0.000	0.000	0.150	0.000	0.000	0.000	0.000	0.000	0.175
2019 Jun	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.082
Sub-Total	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.464
2019 Jul	0.141	0.000	0.000	0.000	0.141	0.000	0.000	0.000	0.000	0.000	0.069
2019 Aug	0.431	0.000	0.221	0.000	0.210	0.000	0.000	0.000	0.000	0.000	0.154
2019 Sep	0.712	0.000	0.223	0.000	0.489	0.297	0.000	0.000	0.000	0.000	0.046
2019 Oct	0.663	0.000	0.306	0.000	0.357	1.085	0.001	0.027	0.009	0.000	0.027
2019 Nov	1.154	0.000	0.143	0.000	1.011	0.428	0.000	0.019	0.000	0.000	0.095
2019 Dec	0.849	0.000	0.023	0.000	0.826	0.074	0.000	0.014	0.001	0.000	0.034
Total	4.200	0.000	0.916	0.000	3.284	1.884	0.001	0.060	0.010	0.000	0.889

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Waste Flow Table for Year 2020

Monthly Ending	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of Non-inert C&D Wastes Generated Monthly				
	Total Quantity Generated (Inert C&D)	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in '000Ton)	(in '000kg)	(in '000Ton)	(in '000Ton)	(in '000Ton)	(in '000Ton)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000Ton)
2020 Jan	0.584	0.000	0.027	0.000	0.557	0.040	0.001	0.030	0.001	0.000	0.039
2020 Feb	1.072	0.000	0.042	0.000	1.030	0.000	0.001	0.026	0.003	0.000	0.013
2020 Mar	0.422	0.000	0.006	0.000	0.416	0.062	0.000	0.000	0.000	0.000	0.054
2020 Apr	0.450	0.000	0.000	0.000	0.450	0.000	0.002	0.085	0.003	0.000	0.025
2020 May	1.144	0.000	0.000	0.000	1.144	0.319	0.001	0.021	0.005	0.000	0.027
2020 Jun	3.660	0.000	0.000	0.000	3.660	0.077	0.001	0.027	0.004	0.000	0.048
Sub-Total	7.332	0.000	0.075	0.000	7.257	0.498	0.006	0.189	0.016	0.000	0.206
2020 Jul	2.008	0.000	0.014	0.000	1.994	0.000	0.002	0.047	0.006	0.000	0.067
2020 Aug	2.215	0.000	0.018	0.000	2.197	0.000	0.001	0.040	0.006	0.000	0.014
2020 Sep	4.305	0.000	0.000	0.000	4.305	0.000	0.002	0.042	0.009	0.000	0.044
2020 Oct	3.073	0.000	0.002	0.000	3.071	0.000	0.001	0.019	0.005	0.000	0.029
2020 Nov	1.670	0.000	0.000	0.000	1.670	0.000	0.001	0.030	0.006	0.000	0.036
2020 Dec	3.498	0.000	0.000	0.000	3.498	0.000	24.751	0.036	0.006	0.000	0.042
Total	24.101	0.000	0.109	0.000	23.992	0.498	24.764	0.403	0.054	0.000	0.438

Note:

- 1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- 2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging materials.
- 3) The Contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the Works, together with a breakdown of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000 m³.
- 4) Updated data for previous month.

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Waste Flow Table for Year 2021

Monthly Ending	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of Non-inert C&D Wastes Generated Monthly				
	Total Quantity Generated (Inert C&D)	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in '000Ton)	(in '000kg)	(in '000Ton)	(in '000Ton)	(in '000Ton)	(in '000Ton)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000Ton)
2021 Jan	3.196	0.000	0.000	0.000	3.196	0.000	0.001	0.048	0.855	0.000	0.053
2021 Feb	3.877	0.000	0.000	0.000	3.877	0.032	0.000	0.010	1.642	0.000	0.013
2021 Mar	7.348	0.000	0.000	0.000	7.348	0.000	0.001	0.215	0.004	0.000	0.050
2021 Apr	3.302	0.000	0.000	0.000	3.302	0.100	0.002	0.013	0.004	0.000	0.050
2021 May	2.315	0.000	0.150	0.000	2.165	0.024	0.001	0.008	0.005	0.000	0.106
2021 Jun	1.809	0.000	0.307	0.000	1.502	0.059	0.000	0.000	0.000	0.000	0.029
Sub-Total	21.847	0.000	0.457	0.000	21.390	0.215	0.005	0.294	2.510	0.000	0.301
2021 Jul	2.693	0.000	0.000	0.000	2.674	0.262	0.003	0.011	0.007	0.000	0.119
2021 Aug	3.088	0.000	0.000	0.000	3.088	0.095	0.002	0.007	0.011	0.000	0.071
2021 Sep	1.698	0.000	0.000	0.000	1.698	0.000	0.001	0.004	0.003	0.000	0.049
2021 Oct											
2021 Nov											
2021 Dec											
Total	29.326	0.000	0.476	0.000	28.850	0.572	0.011	0.316	2.531	0.000	0.540

Note:

- 1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- 2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging materials.
- 3) The Contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the Works, together with a breakdown of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000 m³.
- 4) Updated data for previous month.

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Appendix J

Environmental Mitigation Implementation Schedule (EMIS)

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EIA Review Ref	Location	Environmental Protection Measures/	Implementation Agent	Implementation Status in Construction Phase
<u>Noise Measures</u>				
3.10.2, 3.10.3, 3.10.14, 3.10.15 and Table 3.10	Within the boundaries of all construction sites.	• Scheduling the construction activities carefully according to the actual site work situation, avoid of concurrent activities and construction works fronting the affected schools, to minimize the total noise generated (max as 102dB (A)).	Contractor	Implemented
		• PME is recommended to operate in sub-grouping, and different sub-groups shall not be operated concurrently within any half hour period	Contractor	Implemented
		• The construction activities should be carried out in the daytime hours (0700 – 1900). Construction Noise Permit (CNP) for construction activities is required during evening or night time hours.	Contractor	Implemented
		• Construction work programme should be considered before actual construction work is undertaken, and noise mitigation measures should be implemented to minimize the potential construction noise impact. Selection and optimization of construction programmes, avoidance and reduction of parallel operation of noisy PME during noise sensitive periods.	Contractor	Implemented
		• Use of well-maintained and regularly-serviced plant during the works.	Contractor	Implemented
		• Plant operating on intermittent basis should be turned off or throttled down when not in active use.	Contractor	Implemented
		• Plant that is known to emit noise strongly in one direction should be orientated to face away from the NSRs.	Contractor	Not Applicable
		• Silencers, mufflers and enclosures for plant should be used where possible and maintained adequately throughout the works.	Contractor	Not Applicable
		• Fixed plants should be sited away from NSRs where possible.	Contractor	Not Applicable
		• Stockpiles of excavated materials and other structures such as site buildings should be used effectively to screen noise from the works.	Contractor	Not Applicable
3.10.4, 3.10.5 and Table 3.3		• The use of particular plant with equipment quieter than those specified in the GW-TM are recommended to reduce the noise levels generated by the plant.	Contractor	Implemented
		• Other type of quiet PME are allowed to use for their needs based on the actual construction conditions and programmes	Contractor	Implemented
3.10.6 to 3.10.9		• Temporary noise barriers provide noise attenuation by screening NSRs from stationary and mobile plants from direct line-of-sight in shadow zone.	Contractor	Not Applicable
		• The use of 3m high moveable barriers with skid footing and a small cantilevered upper portion should be adopted. The barrier material shall have a surface mass of not less than 14kg/m ² on skid footing with 25mm thick internal sound absorptive lining to achieve the maximum screening effect.	Contractor	Not Applicable
		• These temporary noise barriers should be located immediately adjacent to working area.	Contractor	Not Applicable

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EIA Review Ref	Location	Environmental Protection Measures/	Implementation Agent	Implementation Status in Construction Phase
		• The temporary noise barriers should be located along the working area to make sure the construction plant could be screened during all kinds of construction activities as far as practicable.	Contractor	Not Applicable
		• Noise jacket/muffler shall be used to cover the noisy part of the engine or at the engine exhaust of particular mobile plants respectively when temporary noise barriers are not practicable or noise reduction achieved is insufficient.	Contractor	Not Applicable
		• For the stationary plant bored pile oscillator, temporary noise barriers of sufficient height with skid footing and small cantilevered upper portion should be provided.	Contractor	Not Applicable
		• Barrier material of surface density of at least 14 kg/m ² is recommended in order to achieve the necessary screening effect.	Contractor	Not Applicable
3.10.10		• Full noise enclosures should cover the PME or fixed plants such as air compressor.	Contractor	Not Applicable
3.10.3		• Silencers, mufflers and enclosures for plant should be used where possible and maintained adequately throughout the works;	Contractor	Not Applicable
		• Where possible fixed plants should be sited away from NSRs; and	Contractor	Not Applicable
		• Stockpiles of excavated materials and other structures such as site buildings should be used effectively to screen noise from the works.	Contractor	Not Applicable
<u>Air Quality Measures</u>				
4.12.1 and 4.12.2	Within the boundaries of all construction sites.	• The Contractor shall notify any specific construction works as stated in the Air Pollution Control (Construction Dust) Regulation to the Authority before the commencement of such work. Dust mitigation measures stipulated in the Air Pollution Control (Construction Dust) Regulation should be implemented to control dust emissions from all construction work sites.	Contractor	Implemented
		• The Contractor shall undertake at all times to prevent dust nuisance as a result of his activities. Dust suppression measures such as the water spraying are necessary and should be installed to ensure that the air quality at the boundary of the site and at any sensitive receivers complies with the Hong Kong Air Quality Objectives.	Contractor	Implemented
		• The Contractor shall apply for a license or permit under the requirements of the relevant legislation (e.g. Air Pollution Control Ordinance and its subsidiary regulations) wherever applicable.	Contractor	Implemented
		• Watering of unpaved areas, access roads, construction areas and dusty stockpiles shall be undertaken at least eight times daily during dry and windy weather. Watering of the haul road shall be undertaken four to eight times daily during dry or windy weather. Water sprays may be either fixed or mobile to follow individual areas to be wetted as and when required. Application of suitable wetting agents, such as dust suppression chemicals, shall be used in addition to water, especially during the dry season (October to December). It is also suggested that watering with	Contractor	Implemented

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EIA Review Ref	Location	Environmental Protection Measures/	Implementation Agent	Implementation Status in Construction Phase
		complete coverage of active construction area eight times a day.		
		• Effective water sprays shall be used during the delivery and handling of all raw sand and aggregate, and other similar materials, wet dust is likely to be created and to dampen all stored materials during dry and windy weather.	Contractor	Implemented
4.12.1		• Stockpiles of sand, aggregate or any other dusty materials greater than 20m ³ shall be enclosed on three sides, with walls extending above the pile and 1 meter beyond the front of the pile.	Contractor	Not Applicable
		• Suitable chemical wetting agent such as dust suppression chemical shall be used on completed cuts and fills to reduce wind erosion.	Contractor	Not Applicable
		• Areas within the construction site where there is a regular movement of vehicles shall have a paved surface and be kept clear of loose surface material.	Contractor	Implemented
		• The Contractor shall restrict all motorized vehicles within the construction site, excluding those on public roads, to maximum speed of 20 km per hour and confine haulage and delivery vehicles to designated roadways inside the Site.	Contractor	Implemented
		• Construction working areas should be restricted to a minimum practicable size.	Contractor	Implemented
		• The Contractor shall ensure that no earth, rock or debris is deposited on public or private rights of way as result of his activities, including any deposits arising from the movement of plant or vehicles.	Contractor	Implemented
		• The Contractor shall provide a wheel washing facility at the exits from work areas to the satisfaction of the Engineer and to the requirements of the Commissioner of Police. Water in wheel washing facilities and sediment shall be changed and removed respectively at least once a month.	Contractor	Implemented
		• The Contractor shall submit details of the wheel washing facilities, which shall be usable prior to any earthworks excavation activity on the construction site. The Contractor shall also provide a hard-surfaced road between any washing facility and the public road.	Contractor	Implemented
		• In the event of any spoil or debris from construction works being deposited on adjacent land, or steams, or any slit being washed down to any area, then all such spoil, debris or material and silt shall be immediately removed and the affected land and areas restored to their natural state by the Contractor to the satisfaction of the Engineer.	Contractor	Implemented
		• If spoil cannot be immediately transported out of the Site, stockpiles should be stored in sheltered areas.	Contractor	Implemented
• Plant and vehicles shall be inspected annually to ensure that they are operating efficiently and that exhaust emissions are not causing a nuisance. All site vehicle exhausts should be directed vertically upwards or directed away from ground.	Contractor	Implemented		

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4.12.1, 4.13.1 and Table 8.2		• Construction dust monitoring shall be carried out at representative monitoring locations during the construction period.	Contractor	Implemented
		• Path for complaints and handling procedures should be set up and implement.	Contractor	Implemented
NA		• Dark smoke emission shall be control in accordance with the Air Pollution Control (Smoke) Regulation and ETWB TCW 19/2005.	Contractor	Implemented
		• Plant and equipment should be well maintained to prevent dark smoke emission.	Contractor	Implemented
		• Only approved or exempted Non-road Mobile Machineries (NRMMs) including regulated machines and non-road vehicles with proper labels are allowed to be used in specified activities on-site.	Contractor	Partially Implemented
Water Quality Measures				
5.7	Within the boundaries of all construction sites.	• Silt-laden surface run-off should be prevented from directly entering the sensitive receivers during the construction works. The mitigation measures described below for the construction phase are in accordance with ProPECC PN 1/94:	Contractor	Partially Implemented
		• Construction works should be programmed so as to minimise excavation during the wet season (April to September). If this is not possible then measures should be taken to minimise the areas exposed by covering temporary exposed slopes with tarpaulins or similar material, the protection of temporary road surfaces with gravel or crushed stone and the early reinstatement of final surfaces with hydro seed grass/shrub mixture. This latter measure would have the added benefit of reducing the windblown dust during the dry season. Where temporary covering of slopes is required this should be carried out before the onset of the rainfall or storm.	Contractor	Partially Implemented
		• Existing and newly constructed open manholes should be covered and sealed to prevent run off and water borne debris entering the drainage network without having previously passed through a sediment trap.	Contractor	Partially Implemented
		• Stock piles of construction materials, sand and gravel or excavated material should be covered with tarpaulins prior to rainstorms. The washing of material from the stockpiles directly into the storm drains should be prevented by passing the run off through a sediment trap.	Contractor	Implemented
		• The surface water from the site should be discharged into storm water drain after passing through sand and silt traps designed to accommodate the maximum discharge from the site. Within the site channels, bunds or sandbags should be used to direct run off into the traps. Storm water from outwit the site should be prevented from washing over the site by the construction of interceptor channels at the site boundary. Both perimeter channels and the sedimentation traps should be constructed prior to the commencement of site formation and earthworks.	Contractor	Partially Implemented
		• The efficiency of the interceptor channels, traps and sedimentation chambers should be maintained	Contractor	Partially Implemented

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EIA Review Ref	Location	Environmental Protection Measures/	Implementation Agent	Implementation Status in Construction Phase
		by regular cleaning of accumulated silt and sand. Particular attention should be paid to maintenance following heavy rainfall and immediately after the issue of heavy rainfall warning by the Hong Kong Observatory.		
		<ul style="list-style-type: none"> The ingress of rainwater into trenches should be minimised by the construction of bunds to prevent water flowing into the trench and covering by tarpaulins to prevent direct entry. The lengths of excavated trenches should be minimised and backfilled at the earliest opportunity. Water pumped from the trenches should be discharged to the storm water drains following passage through a suitable silt trap. 	Contractor	Partially Implemented
		<ul style="list-style-type: none"> Any ground water seeping into any trenches or foundation works should be passed through a silt trap prior to discharge to the storm water drains. 	Contractor	Implemented
		<ul style="list-style-type: none"> The water used for the washing down of mixing drums used for onsite batching of concrete and delivery lorries for off-site batched concrete should be recycled whenever possible. Wastewater generated from the washing which is discharged should be passed through a silt trap before discharge to the storm water system. 	Contractor	Not Applicable
		<ul style="list-style-type: none"> The wastewater from the washing of the wheels and subframe of vehicles returning from the site onto public roads will contain suspended solids and debris. A washing bay should be provided at the exit from the site and should, where practicable, incorporate water recirculation. Water from the washing bay which is discharged to the storm water system should first be passed through a silt trap which also includes an oil/grease removal weir. 	Contractor	Implemented
		<ul style="list-style-type: none"> Plant maintenance areas should be paved to prevent waste oils soaking into the ground. Where possible the area should be undercover to minimise the formation of runoff and any runoff from the paved area passed through an oil trap before being discharged to the storm drains. Fuel storage tanks should be surrounded by bunds with a capacity of at least 150% of the storage capacity. The bunded areas should be able to be drained of rain water through the petrol interceptor and accumulated rain removed at regular intervals. 	Contractor	Not Applicable
		<ul style="list-style-type: none"> Waste oils from the site should be collected and stored for recycling or disposal in accordance with the Waste Disposal Ordinance and absorbent cloths and granules should be available for the cleanup of spillages. 	Contractor	Implemented
		<ul style="list-style-type: none"> Sewage from toilets and kitchens should be discharged directly into a foul sewer. If it is not possible to locate the site offices within easy access of a foul sewer a septic tank and soakaway should be constructed before the offices are occupied. Chemical toilets should be emptied on a daily basis and the contents taken to a foul sewer or the Sha Tin Sewage Treatment Works for disposal. 	Contractor	Implemented

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		Wastewater collected from canteen kitchens should be discharged to the foul sewers via grease traps which provide a minimum of 20 minutes retention during peak flow. All discharges into foul sewers and storm sewers should have to be complied with TM standards under WPCO.		
		• Run off from roofed surfaces of site facilities should be collected and diverted to a storm water drain. Passage through a silt trap is only required if the water is diverted via open channels which might accumulate solids during non-rainy periods or which intercept surface run off from unpaved areas.	Contractor	Not Applicable
		• Discharges from the site shall be required to meet the terms and conditions of a valid WPCO Water Pollution Control Ordinance (WPCO).	Contractor	Partially Implemented
Section 12.6 of the Approved EIA Report		• Regular site inspection of the construction works shall be carried out to determine compliance with the recommended mitigation measures. Inspection should be included:		
		(i) The functioning of onsite surface water collection channels and sediment traps.	Contractor	Partially Implemented
		(ii) The functioning of interception channels at the boundary of the works areas	Contractor	Partially Implemented
		(iii) The covering of stockpiles of fill and construction materials and the routing of any run off through the sediment traps.	Contractor	Implemented
		(iv) The pumping procedures for emptying trenches and other excavations and the use of silt traps prior to the discharge of the water to the storm water system.	Contractor	Partially Implemented
		(v) The use of washwater for hosing down concrete mixing and delivery vehicles and other vehicles leaving the site and the routine of excess water from the facility through sediment traps.	Contractor	Implemented
		(vi) The operation of the plant maintenance areas to control small spillages and the correct management of the fuel storage bunded area.	Contractor	Implemented
		(vii) The connection of the site office wastewater discharge to an existing foul sewer if appropriate or the operation of the kitchen wastewater grease trap and the regular emptying of the chemical toilets	Contractor	Implemented
		(viii) The operation of the roof rain water collection and drainage system.	Contractor	Implemented
<i>Landscape and Visual Mitigation Measures</i>				
Construction Phase				
Table 6.5	During construction within the Project Boundary.	• Existing trees shall be preserved as much as possible. Detailed tree preservation and transplanting proposals shall be submitted to relevant government departments for approval in accordance with DEVB TC (W) No. 7/2015.	Contractor	Implemented
		• Topsoil will be conserved as far as possible during the road improvement works and utilized during the replanting operations. The stock piling height of the topsoil will not be more than 2m.	Contractor	Implemented

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		• Old and valuable trees (OVTs) identified in the Project Boundary shall be protected in accordance with ETWB TCW no. 29/2004.	Contractor	Implemented	
		• Night-time lighting glare shall be properly managed and control during construction so as to minimize any adverse visual impact on adjacent VSRs.	Contractor	Implemented	
		• Decorative screen hoarding with design compatible with the surrounding landscape setting shall be erected along the southern boundary of Tai Po Road to mitigate any potential adverse impact on adjacent Pedestrian and Cyclists on Footpath/Bicycle Track.	Contractor	Not Applicable	
	Operation Phase				
	During construction within the Project Boundary.	• Compensatory planting shall be provided within and outside the project boundary where possible. Detailed compensatory planting proposal will be prepared in accordance with DEVB TC (W) No. 7/2015.	Contractor	Not Applicable	
		• Planting shall be undertaken at the earliest practical time in the construction period. The planting proposal shall aim to strengthen the existing tree species and supplement the existing tree planting to provide an effective screen to ameliorate any potential landscape and visual impacts. The proposed species to be utilized for road improvement works shall be agreed with LCSD and future maintenance authorities. All the proposed species for compensatory planting shall be suitable for roadside streetscape planting.	Contractor	Not Applicable	
		• Provision of visually pleasing noise barriers and enclosures design shall be proposed. The design of these structures aims to minimize any potential visual impact and visually integrate the proposed structures into the adjacent landscape context. This should be achieved through the use of form, color, tones, materials and planting materials.	Contractor	Not Applicable	
		• Aesthetically pleasing hard landscape treatment of the carriageway and roadside furniture shall be proposed, including development of chromatic themes in the architectural treatment of engineering structures, and the consideration of landscape lighting and special landscape features.	Contractor	Not Applicable	
		• Shrubs and climbers planting are proposed on the facade of Noise Enclosures and Barriers to mitigate any adverse impact on adjacent VSRs in area where space for tree planting is not feasible.	Contractor	Not Applicable	
	Waste Management Measures				
7.6.2 to 7.6.4	Within the boundaries of all construction	• In accordance with ETWB TC (W) No. 19/2005 - Environmental Management on Construction Sites", the Contractor shall prepare and implement a Waste Management Plan (WMP) as part of the Environmental Management Plan (EMP). The EMP shall describes the arrangements for avoidance, reuse, recovery, recycling, storage, collection, treatment and disposal of different	Contractor	Implemented	

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7.6.5 to 7.6.6	sites.	categories of waste to be generated from the construction activities. Such a management plan should incorporate site specific factors, such as the designation of areas for segregation and temporary storage of reusable and recyclable materials. The EMP should be submitted to the Engineer for approval.		
		• The Contractor should implement the waste management practices in the EMP throughout the construction stage of the Project. The EMP should be reviewed regularly and updated by the Contractor.	Contractor	Implemented
		• Recommendations of good site practices and waste reduction measures should be stated in order to achieve avoidance and minimization of waste generation in the hierarchy.	Contractor	Implemented
		• Environmental Management Plan (EMP) and trip-ticket system shall be implemented for monitoring management of waste.	Contractor	Implemented
7.6.7	Within the boundaries of all construction sites as well as transportation routes to designed areas for off-site disposal of materials/Prior to and during construction activities.	• Specific measures targeting the mitigation of impacts in works areas and the transportation of spoil off-site should be provided to minimize the potential impacts to the surrounding environment.	Contractor	Implemented
		• To facilitate adoption of the best-practice philosophy, training shall be provided to all personnel working on site. The training shall promote the concept of general site cleanliness and clearly explain the appropriate waste management procedures defined in the EMP. Overall, the training should encourage all workers to reduce, reuse and recycle wastes.	Contractor	Implemented
7.6.8 to 7.6.9		• The contractor's environmental performance shall be monitored and controlled through the weekly environmental walks. The items after the environmental walks shall include:		
		• A review of the EMP in particular the suitability of the environmental measures on nuisance abatement and waste management adopted by the contractor;	Contractor	Implemented
		• The environmental performance of the contractor and his sub-contractors;	Contractor	Implemented
		• The effectiveness of the environmental measures on nuisance abatement and waste management implemented on the site, and any complaints received; and	Contractor	Implemented
		• The promptness of rectification or improvement actions of the Contractor on the defects and deficiencies identified during inspections of the site.	Contractor	Implemented
		• Waste shall only be disposed of at licensed sites and the WMP should include procedures to ensure that illegal disposal of wastes does not occur. Only waste haulers authorized to collect the specific category of waste concerned should be employed and a trip ticket system shall be implemented for offsite disposal of inert C&D materials and non-inert C&D materials at public fill reception facilities and landfills, respectively. Appropriate measures should be employed to minimize windblown litter and dust during transportation by either covering trucks or transporting wastes in	Contractor	Implemented

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EIA Review Ref	Location	Environmental Protection Measures/	Implementation Agent	Implementation Status in Construction Phase
		enclosed containers.		
7.6.10		<ul style="list-style-type: none"> Work site(s) shall be arranged and managed to facilitate the proper management of wastes and materials. The WMP shall include plans indicating specific areas designated for the storage of particular types of waste, reusable and recyclable materials as well as areas and management proposals for any stockpiling areas. Waste storage areas should be well maintained and cleaned regularly. Specific provisions for different types of material are outlined below. In general, these areas should be designed to avoid cross contamination of materials as well as pollution of the surrounding environment. 	Contractor	Implemented
		<ul style="list-style-type: none"> In order to minimize the impact resulting from collection and transportation of C&D material for off-site disposal, the excavated fill materials should be reused on site as backfill material as far as possible. 	Contractor	Implemented
		<ul style="list-style-type: none"> Careful design, planning and good site management should be maintained in order to minimise over ordering and generation of surplus materials such as concrete, mortars and cement grouts. The design of formwork should maximise the use of standard wooden panels so that high reuse levels can be achieved. Alternatives such as steel formwork or plastic facing should be considered to increase the potential for reuse. 	Contractor	Implemented
7.6.11 to 7.6.14		<ul style="list-style-type: none"> C&D materials should be segregated on site into different waste and material types. The Contractor should clearly demonstrate in the EMP how he intends to maximise the reuse of C&D material on-site. Where reuse of materials on site is not feasible, the Contractor should explore opportunities for recycling materials off-site, and inert C&D materials shall be reused on site as much as possible. 	Contractor	Implemented
		<ul style="list-style-type: none"> Paving bricks arising from existing pavement should be recycled on site as much as possible. 	Contractor	Not Applicable
		<ul style="list-style-type: none"> Existing marginal roadside barriers comprise pre-cast units should be reused in the following widening works as much as possible, 	Contractor	Not Applicable
		<ul style="list-style-type: none"> Existing bridge parapets comprise aluminum post and railings, which have a recyclable value and should be sold for reconditioning or reused for scrap metal as much as possible 	Contractor	Not Applicable
		<ul style="list-style-type: none"> Any stockpile should be sited away from existing watercourses and suitably covered to prevent wind erosion and impacts on air and water quality. 	Contractor	Not Applicable
7.6.15 to 7.6.17		<ul style="list-style-type: none"> Chemical waste shall be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes as follows. Containers used for the storage of chemical wastes should: <ul style="list-style-type: none"> be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; 	Contractor	Partially Implemented

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EIA Review Ref	Location	Environmental Protection Measures/	Implementation Agent	Implementation Status in Construction Phase
		• have a capacity of less than 450L unless the specifications have been approved by the EPD; and	Contractor	Implemented
		• display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C).	Contractor	Partially Implemented
		The storage area for chemical wastes should:		
		• be clearly labelled and used solely for the storage of chemical waste;	Contractor	Partially Implemented
		• be enclosed on at least 3 sides;	Contractor	Implemented
		• have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest;	Contractor	Partially Implemented
		• have adequate ventilation;	Contractor	Implemented
		• be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste if necessary); and	Contractor	Partially Implemented
		• be arranged so that incompatible materials are adequately separated.	Contractor	Implemented
		The Contractor shall register with EPD as a Chemical Waste Producer. Waste oils and other chemical wastes as defined in the Waste Disposal (Chemical Waste) (General) Regulation will require disposal by appropriate means and could require pre-notification to EPD prior to disposal. Appropriate means include disposal:		
• via a licensed waste collector; and	Contractor	Implemented		
• to a facility licensed to receive chemical waste, such as the Chemical Waste Treatment Facility which also offers a chemical waste collection service and can supply the necessary storage containers; or	Contractor	Implemented		
• to a reuser of the waste, under approval from EPD.	Contractor	Not Applicable		
7.6.18 to 7.6.20		• General refuse generated on-site should be stored in enclosed bins or compaction units separate from construction and chemical wastes. A reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from construction and chemical wastes, on a daily or every second day basis to minimize odour, pest and litter impacts. The burning of refuse on construction sites is prohibited by law.	Contractor	Implemented
		• Separate labelled bins should be provided if feasible.	Contractor	Implemented
		• Office waste can be reduced through recycling of paper if volume is large enough to warrant collection. Participation in a local collection scheme should be considered if one is available.	Contractor	Implemented
7.7.1		• All wastes produced during the construction of the Project shall be handled, stored, and disposed of in accordance with good waste management practices and relevant regulations and	Contractor	Implemented

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EIA Review Ref	Location	Environmental Protection Measures/	Implementation Agent	Implementation Status in Construction Phase
		requirements.		
		<ul style="list-style-type: none"> The mitigation measures recommended in the EIA/EIA review report should form a basis of the WMP to be developed by the Contractor in the construction phase of the Project. 	Contractor	Implemented
EP 1.5	<u>General Condition</u>			
N.A	During construction within the Project Boundary.	<ul style="list-style-type: none"> The Permit Holder shall display conspicuously a copy of this Permit on the Project site(s) at all vehicular site entrance/exits or at a convenient location for public information at all times. The Permit Holder shall ensure that the most updated information about the Permit, including ant amended Permit, is displayed at such locations. If the Permit Holder surrenders a part or the whole of the Permit, the notice he sends to the Director shall also be displayed at the same locations as the original Permit. The suspended, varied or cancelled Permit shall be removed from display at the Project site(s). 	Contractor	Partially Implemented

Implementation status: Implemented / Partially Implemented / Not Implemented / Not Observed / Not Applicable

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Appendix K

Weather and Meteorological Conditions during Reporting Month

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Date	Mean Pressure (hPa)	Air Temperature			Mean Relative Humidity (%)	Total Rainfall (mm)
		Maximum (deg. C)	Mean (deg. C)	Minimum (deg. C)		
September 2021						
1	1009.9	32.1	28.7	26.7	85	5.9
2	1009.0	33.0	29.5	27.7	80	-
3	1007.4	33.6	29.8	27.8	79	Trace
4	1008.3	33.6	29.8	27.9	79	0.9
5	1010.0	33.2	29.8	28.3	79	Trace
6	1010.5	32.5	29.7	28.0	77	-
7	1010.4	33.4	30.1	28.1	78	0.2
8	1009.4	34.3	30.6	28.2	74	-
9	1009.3	33.5	30.1	27.8	73	-
10	1008.3	33.7	30.5	28.6	71	-
11	1004.5	33.4	30.5	28.4	75	-
12	1002.0	34.5	31.2	29.0	76	-
13	1006.7	33.6	30.9	29.5	77	-
14	1011.5	30.2	29.0	26.7	83	33.8
15	1011.2	33.0	30.2	27.9	75	-
16	1009.4	31.9	29.2	26.8	77	Trace
17	1009.2	34.1	29.5	27.5	77	7.6
18	1011.1	33.2	30.2	28.3	79	0.2
19	1011.3	32.1	29.3	27.4	86	21.2
20	1010.4	32.3	29.3	27.9	84	9.4
21	1009.5	31.7	29.0	26.7	82	10.2
22	1010.5	34.0	30.3	27.9	77	0.5
23	1013.0	30.2	28.0	26.0	87	38.4
24	1013.6	32.0	29.4	27.8	81	1.2
25	1012.8	32.3	29.6	27.9	76	0.1
26	1012.3	31.6	29.1	27.8	72	-
27	1010.8	32.8	29.5	28.1	75	-
28	1009.6	32.2	29.6	27.9	75	-
29	1008.3	32.7	29.7	27.9	77	-
30	1008.1	32.9	30.3	28.4	78	-

Source: Hong Kong Observatory

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Appendix L

Cumulative statistics on Environmental Complaints, Notifications of Summons and Successful Prosecutions

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**Environmental Complaints Log**

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Investigation summary & Conclusion	Date of Reply
COM-2019-005	2/2/2019	EPD	CCZJV	Noise	13/2/2019	According to the photo taken from the complainant, the complaint was related to the project. Although the tree felling works were covered by the valid CNP (GW-RN0783-18), Contractor was reminded to strictly follow and fully comply with the CNP conditions and the mitigation measures stipulated in the EM&A Manual when construction activities are operating during restricted hour. Contractor was recommended to increase the frequency of using the electrical chain saw instead of the diesel chain saw for reducing the noise impact. Environmental Team conducted additional ad-hoc noise monitoring on 19:00 14 th February 2019 to 07:00 15 th February 2019 for evaluate the effectiveness on the proposed mitigation measures. No project-related noise exceedance case on 14-15 Feb 2019 Contractor's night tree-felling and removal works. The proposed mitigation measures were effective for noise impact.	20/2/2019
COM-2019-006	22/2/2019	Project Hotline of NE/2017/05	CCZJV	Noise	26/2/2019	According to the location of complainant from Kwai Wo House, the complaint was related to the project. Although the tree felling works were covered by the valid CNP (GW-RN0783-18), Contractor was reminded to strictly follow and fully comply with the CNP conditions and the mitigation measures stipulated in the EM&A Manual when construction activities are operating during restricted hour. An extended barrier at the top acts as a cantilever shape was recommended to	4/3/2019

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						modify the existing semi-enclosure installed in the cherry picker Also, three sides with top as a semi-enclosure to be used and those tree felling activities should be inside the semi-enclosure in the ground slope. The main contractor had been recommended to review their works program and methods of tree felling as to minimize the night time tree felling activities.	
COM-2019-0010	28/3/2019	Project Hotline of NE/2017/05	CCZJV	Noise	28/3/2019	The complaint case should be related to the MTR night time maintenance works. Main Contractor used portable phones and head-set only for communication, and none of loudspeakers were allowed to be used. Main Contractor handled of tree debris into the lorry skip in care when loading. Besides, a layer of soft material (soil/tree debris) was observed leaving inside the skip of the grab lorry to reduce the loading noise. Contractor was reminded to strictly follow and fully comply with the CNP (GW-RN0132-19) conditions and the mitigation measures stipulated in the EM&A Manual when construction activities are operating during restricted hour.	4/4/2019
COM-2019-0033	26/7/2019	Police visit on-site	CCZJV	Noise	26/7/2019	The complaint is related to the project. The Main Contractor comply with CNP No.: GW-RN0443-19 allowable construction site and within the site boundary to carry out night work on tree felling and the clearance of felled tree debris during the restricted hour. Contractor was reminded to strictly follow and fully comply with the CNP (GW-RN0443-19) conditions and the mitigation measures stipulated in the EM&A Manual when	30/7/2019

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						construction activities are operating during restricted hour. Contractor was recommended to increase the frequency of using the electrical chain saw instead of the diesel chain saw for reducing the noise impact. Contractor was reminded to reschedule of tree felling arrangement that most of the fell branches and trunks were temporary laid on slope and arranged to cut smaller on Day Time to minimize the noise nuisance to the nearby NSRs.	
COM-2019-0045	30/8/2019	1823	CCZJV	Noise	30/8/2019	The complaint is related to the project. Contractor was reminded to strictly follow and fully comply with the CNP (GW-RN0443-19) conditions and the mitigation measures stipulated in the EM&A Manual when construction activities are operating during restricted hour. Contractor should strictly follow the use of acoustic enclosure as in condition 3.d.5. of the CNP during the operation of breaker, hand-held, mass $\leq 10\text{kg}$ (CNP023) shall only be operated inside the acoustic enclosure composed of four side-panels and one top-panel, so that no part of such equipment is visible from any nearby noise sensitive receiver. The panels shall be made of minimum 10mm thick plywood or 1mm thick steel outer skin and minimum 50mm thick sound absorbing lining, or equivalent construction. Contractor was reminded to use portable phones and head-set only for communication, and none of loudspeakers is allowed for night work activities.	19/9/2019

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COM-2019-0056	9/10/2019	Project Hotline of NE/2017/05 and EPD	CCZJV	Noise	19/10/2019	The complaint of the construction noise especially the breaker noise is project related. Due to the concern of road safety, the Contractor conducted the emergency road repair works under an Emergency Excavation Permit (EXP) of Plan ID: EO13123 issued by Highways Department (HyD). The main contractor's PR / hotline staff was reminded to enhance communication with sufficient information provided for replying any enquiry / complaint in the future. The main contractor was also reminded that noise mitigation measures should be provided as far as practicable subject to the emergency situation. For construction works covered by the CNP issued by EPD, the main contractor should fully complied with the conditions as stipulated and provided all noise mitigation measures as required under the conditions of the CNP. For works subject to the emergency situation, noise mitigation measures such as noise barrier, enclosure etc. should be provided as far as practicable to minimise the noise nuisance to the NSRs.	4/11/2019
COM-2019-0057	9/10/2019	EPD	CCZJV	Noise	18/10/2019	The complaint of the generator noise nuisance is related to the project. The concerned portable generator is supplying electric power for the Variable Message Sign (VMS) showing the speed limit in 50 km/hr. It is switched on and off manually by manpower, and would only be operated between daytime 07:00-19:00. No construction noise permit (CNP) should be	21/10/2019

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						required as the portable generator is not operating in restricted hours. The main contractor was reminded to strictly follow the use of their proposed semi-enclosure as the mitigation measures for the portable generator and the generator operates in daytime 07:00-19:00 only.	
COM-2019-0066	6/11/2019	EPD	CCZJV	Noise	7/11/2019	The complaint of the emergency road repair work is related to the project. The works on on 5 th November 2019 between 22:00 and 06:00 the next day at southbound slow lane of Tai Po Road outside Wai Wah Centre, including breaking operation. The main contractor should inform the EPD in advance of any emergency opening works of the Project in future to facilitate the effective handling of noise complaint that may arise.	12/11/2019
COM-2020-0083	29/02/2020	Project email of NE/2017/05	CCZJV	Noise and Dust	29/02/2020	The complaint of the dust and noise nuisance near Wai Wah Centre during both the day and night works was at zone 2. The construction works at zone 2 was the mini-piling operation during the day time was same as the complaint. Thus, the complaint in daytime is related to the project. Furthermore, loading and unloading works was carried in night time. Contractor was reminded to enhance the water spray frequency on the construction site for mitigation measures on dust control. Also, Contractor should provide green tarpaulin curtain and additional acoustic Sound Proof Canvas as a secondary layer at the bottom of the mini-pile drilling machine to secure the total enclose condition to minimize the visual and noise impacts	19/03/2020

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						<p>to nearby NSRs.</p> <p>ET checked the regular impact air and noise monitoring data between day time and night-time regular noise monitoring data, no exceedance case was found on both regular impact air and noise monitoring measurement.</p> <p>The main contractor should carry out further review the effectiveness of the enclosure or noise barrier with their mitigation measure and propose alternative noise mitigation measures to enhance the noise reduction on similar day works or night works in restricted hours.</p>	
COM-2020-0089	24/03/2020	Project hotline	CCZJV	Noise	24/03/2020	<p>A resident of Wai Wah Centre complained that noise generated from construction activities at night disturbing the nearby resident. According to the Contractor's information, loading/unloading, steel bar cutting, steel plate grinding and asphalt compaction were carried out in the early hours of 24th Mar 2020. The night work activities were within the site boundary. Also, 4 sides with top cover acoustic enclosure for the portable generator was used during the night work. Furthermore, mitigation measures listed in the CNP were implemented for PME and works activities. Three sides with top cover enclosure and additional acoustic comprised with 50 mm sound absorbing lining were used for night works activities. ET analysed that the complaint noise source should not be project-related construction noise.</p>	07/04/2020

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COM-2020-0090	27/03/2020	Project hotline	CCZJV	Noise	27/03/2020	Both complaint cases were concerning about the noise nuisance generated from the construction work activities at night time disturbing the nearby Wai Wah Centre residence. According to the Main Contractor, similar nature of major construction works carried out between 03:00 a.m. and 04:00 a.m. on 27 th & 28 th March 2020 was the asphalt compaction for the road surface remedial works at zone 2 south lane adjacent to Wai Wah Centre. The Main Contractor complied with CNP No.: GW-RN0002-20 that is within the allowable construction site location and within the site boundary to carry out night work on loading and unloading works. ET conduct regular night-time noise monitoring at all monitoring stations between 23:00 26 th March 2020 to 04:00 27 th March 2020, and between 23:00 2 nd April 2020 to 04:00 3 rd April respectively. No exceedance cases were found on both ET regular night-time noise monitoring measurement. ET did not remark on-site any noise related to construction works at above noise monitoring nights for which the results were lower than baseline noise level. Hence, ET analysed that the dominant noise source should be road traffic noise but not the project-related construction noise.	04/05/2020
COM-2020-0091	28/03/2020	Project hotline	CCZJV	Noise	28/03/2020		
COM-2020-0093	06/04/2020	Project hotline	CCZJV	Noise	06/04/2020	The complaint case on 6 th Apr was received by project hotline. The major construction works between (10:00pm – 11:00pm) on 6 th April 2020 was TTA implementation works and asphalt removal works for the road surface remedial work	28/04/2020

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						at zone 2 adjacent to Wai Wah Centre. The Main Contractor complied with CNP No.: GW-RN0152-20 that is within the allowable construction site location and within the site boundary to carry out night work on loading and unloading works. The five noise monitoring stations close to the concerned works area are NMS3, NMS4, NMS5A, NMS6A & NMS7, and NMS5A & NMS6A locate nearest to Wai Wah Centre. The night time noise monitoring results measured at NMS3, 4 & 6A were all lower than that of measured in the baseline, two exceedance case were found at NMS 5A especially NMS 5A & NMS 6A monitoring stations where locate at the Wai Wah Centre. The corrected noise level measured at NMS 7 is lower than the night time limit 55dB (A). Therefore, there was no exceedance cases were found on ET regular night-time noise monitoring measurement. ET analyzed that the dominant noise source should be road traffic noise but not the project-related construction noise.	
COM-2020-0096	20/04/2020	Project hotline	CCZJV	Noise	20/04/2020	A continues complaint were received on 20 Apr and 21 Apr 2020. A resident of Wai Wah Centre filed three complaints about the noise nuisance generated by the nearby construction activities during daytime. Two complaints were made through project hotline on 20 th Apr 2020 at 10:57 a.m. and 21 st Apr 2020 at 9:03 a.m., while the other one was through project email on 20 th Apr 2020 at 12:43 p.m. The noise source(s) of the concerned nuisance during complaint period	19/05/2020
COM-2020-0097	20/04/2020	Project Email	CCZJV	Noise	20/04/2020		
COM-2020-0098	21/04/2020	Project hotline	CCZJV	Noise	21/04/2020		

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						<p>should be mini piling works, which is opposite to Wai Wah Centre. According to the contractor's work schedule, major day work activity was mini-piling operation since early Feb 2020 at zone 2 in central median at non-restricted hours, from Mondays to Saturdays between 0800 and 1800 not including General Holidays. The mini piling operation on 20th & 21st Apr 2020 was carried out at non restricted hours. The limited level of noise generated by the construction of the Project during the non-restricted daytime hours will be 75 dB (A) for dwelling. The mini piling operation on 20th and 21st Apr 2020 was carried out at non restricted hours with green tarpaulin curtain and sound proof canvas. The noise level of NMS 5A and NMS 6A on 22nd Apr 2020 were 73.5 dB (A) and 72.6 dB (A) respectively. No noise exceedance was occurred at NMS 5A and NMS 6A. The construction activity on 22nd Apr 2020 was similar to 20th and 21st Apr 2020. Therefore, ET's day-time monitoring result on 22nd April 2020 at NMS5A and NMS6A can act as a reference for impact noise from the similar mini-piling operation on 20th and 21st April 2020. ET analyzed that the dominant noise source should be road traffic noise but not the project-related construction noise.</p>	
COM-2020-0099	21/04/2020	Project hotline	CCZJV	Noise	21/04/2020	<p>The complaint cases on 21st Apr 2020 was received by project hotline from Police. According to the complainant who is the local resident at Wai Wah Centre, the noise source(s) of the concerned</p>	05/05/2020

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						nuisance during night works was at zone 2 is opposite to Wai Wah Centre. The major construction works was road surface remedial work since 15 th April 2020 conducted at restricted hours along zone 2 south boundary adjacent to Wai Wah Centre. The Main Contractor complied with CNP No.: GW-RN0152-20 that is within the allowable construction site location and within the site boundary to carry out night work on road surface remedial works. Environmental Team (ET) conduct a regular night-time noise monitoring at all monitoring stations between 23:00 23 rd April 2020 to 04:00 24 th April 2020. The five noise monitoring stations close to the concerned works area are NMS3, NMS4, NMS5A, NMS6A & NMS7, and NMS5A & NMS6A locate nearest to Wai Wah Centre. There were no exceedance on the night time noise monitoring, especially measured at NMS 5A & NMS 6A where locate at the Wai Wah Centre, the measured result at NMS 5A & 6A were all lower than that of measured in the baseline. Therefore, no exceedance cases were found on ET regular night-time noise monitoring measurement. ET analyzed that the dominant noise source should be road traffic noise but not the project-related construction noise.	
COM-2020-0100	23/04/2020	Project hotline	CCZJV	Noise	23/04/2020	The complaint was received via project hotline on 23 rd April 2020 at 10:45 a.m. A resident of Wai Wah Centre complained that noise generated from operation of the two piling machines	11/05/2020

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						<p>disturbing her daughter's study for DSE examination, and demanding limitation on operation hours of the machines only at two separate periods between 12 noon and 1p.m and 3 p.m. to 6 p.m. According to the Main Contractor, the major construction works at day time (08:00-18:00) on 23rd April 2020 was mini-piling operation at Zone 2 Central Median of Tai Po Road near Wai Wah Centre. According to the photo records of day-time site condition on 23rd April 2020 provided by Main Contractor, the green tarpaulin curtain was provided for the mini-pile drilling machines so that the bottom part of the mini-pile drilling machine was blocked from view of nearby NSR (e.g. residents at Wai Wah Centre) and an additional layer of sound proof canvas was installed at lower level to mitigate the noise from mini-pile drilling operation. The day-time noise monitoring results measured at NMS3, 4, 5A, 6A and 7 were all lower than the limit level, especially NMS 5A & NMS 6A monitoring stations where locate at the Wai Wah Centre. The monitoring results show no noise exceedance occurred at both locations. Thus, ET day-time monitoring result on 22nd April 2020 at NMS5 & NMS6 can be act as a reference for impact noise from the similar mini-piling operation activities on 23rd April 2020. Therefore, there was no exceedance cases were found in ET regular day-time noise monitoring measurement. ET analyzed that the dominant noise source should be road</p>	

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						traffic noise but not the project-related construction noise.	
COM-2020-0101	28/04/2020	1823	CCZJV	Noise	28/04/2020	The complainant on via ICC1823 on 28 th April 2020 complained about the noise and odor nuisance generated from the night-time asphalt laying construction works at Shatin Rural Committee Road (Zone 3) area. Although the main contractor no work at zone 3, but the major night-time construction works was road surface remedial work which was related to the complainant concerned. The major construction works was road surface remedial work since 15 th April 2020 at approved restricted hours along zone 2 south boundary adjacent to Wai Wah Centre. Also, Tai Po Road is the main strategic route, implementation of temporary traffic diversion at day time due to loading and unloading material or plant work or road surface remedial work is not feasible. The lorry had been used in TTA implementation & road opening, portable generator and electric handheld breaker had been used in asphalt removal work, dump truck with grab had been used for loading and unloading of asphalt or rubble, vibratory compactor had been used in asphalt compaction for road surface remedial works on 27 th 28 April 2020. The Main Contractor complied with CNP No.: GW-RN0152-20 that allowed PME used in Group C or Group F. According to the Main Contractor, advance "Notice to Affected Residents" had been issued and distributed on	15/05/2020

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						26 th March 2020 in accordance with the CNP advice that prior notification should be given to nearby residents. Besides, the road re-surfacing work would be carried out at approximately 14 night-time works between 2 nd and 28 th April 2020 listed in the distributed notices. No exceedance cases were found on ET regular night-time noise monitoring measurement at all noise monitoring stations, especially measured at NMS 5A & NMS 6A where locate close to the works area (Wai Wah Centre in Zone 2), the measured result at NMS 5A & 6A were all lower than that of measured in the baseline. ET analyzed that the dominant noise source should be road traffic noise but not the project-related construction noise.	
COM-2020-0151	10/11/2020	EPD	CCZJV	Water	10/11/2020	The complainant on 10 th November 2020 complained about water discharge onto the traffic lanes of Northbound towards Sha Tin Section of Tai Po Highway. According to the Main Contractor, there is one active site access located at Zone 1 (R1) near Pai Tau, site access no. is N02. Restricted opening hours of the site access Zone 1 (R1) is between 10:00 to 16:00. The operation which might be related to the complaint was water flow from water-filled barriers before the opening of site access and no water spilling onto the traffic lanes from the access area of Zone 1 (R1). The released water was directed towards to the work areas facing Zone 1 (R1) and no water was flowed towards the high-speed road	27/11/2020

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						or traffic lanes. ET conducted ad-hoc site inspection on 17 th November 2020. ET had no particular findings related to the complaint and conducted trial to open the bottom of the water barrier valve for testing and checking on the water flow to the construction site at Zone 1. Contractor performed well on environmental preventive measures for soil or silt leakage protection as impervious sheet with sand bags had been provided at the site boundary of Zone 3. ET analyzed that released water was directed towards to the work areas facing Zone 1 (R1) and no water was flowed towards the high-speed road or traffic lanes.	
COM-2020-0152	20/11/2020	1823	CCZJV	Noise	20/11/2020	The complainant on via ICC1823 on 20 th November 2020 complained about the noise generated from the night-time asphalt laying construction works between Sha Tin Station and nearby Wo Che Estate. Although the main contractor no work at zone 5, but the major night-time construction works was road surface remedial work which was related to the complainant concerned. According to the Main Contractor, the major construction works was road surface remedial work since 19 th November 2020 conducted at restricted hours along zone 3 to zone 4 north bound of Tai Po Road Sha Tin section. 3.20 No exceedance cases were found on ET regular night-time noise monitoring measurement (Appendix F) at all noise monitoring stations. Contractor placed acoustic enclosure	7/12/2020

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						<p>“SilentCUBE” with four sides and a top cover at asphalt removal works to mitigate. The Main Contractor was reminded to pay attention to CNP other condition 3.d.3, the electric hand-held breaker shall only be used for carrying out construction work between 22:00 – 23:30 hours. It is prohibited to use the electric hand-held breaker beyond the CNP condition 3.d.3 stated that the using limitation on 23:30. The Main Contractor was reminded to re-arrange their proposed night-time construction activities to fulfill the complainant expectation that noise emitting work should be paused during 00:00 to 06:00 sleeping time.</p>	
COM-2020-153	26/11/2020	EPD	CCZJV	Water	24/11/2020	<p>According to EPD Mr. Bryan Kwok, EPD carried out a site inspection on 24 November 2020, revealing that muddy effluent was discharged from an outfall at Fo Tan near Jockey Club Ti-I College while construction work of the abovementioned project site at Zone 5 opposite to Wo Che Estate was in progress. EPD team inspected the condition of waste water treatment facilities on site (slope F133) and observed that the water in the first and second sedimentation tanks was muddy; muddy water was observed at the outlet level of the WetSep (waste water treatment plant) though there was no discharge and piling works at the time. EPD team reminded the Main Contractor that effluent does not comply with the discharge license standard should NOT be allowed to discharge. The waste</p>	23/12/2020

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						water treatment system should be improved and maintained to ensure the effluent discharge standard. EPD team requested in both works area of Slope F133 and Slope F163 the Main Contractor to locate the network of drainage, connecting manhole(s) and downstream manhole, check if any presence of muddy materials and clear-out. The main contractor was reminded to strictly follow and fully comply with the water discharge license (WT00032446-2018) conditions and the mitigation measures stipulated in the EM&A Manual for effluent discharge on the wastewater treatment system.	
COM-2020154	27/11/2020	1823	CCZJV	Noise	30/11/2020	The complaint was received via ICC1823 on 27 th November 2020, the complainant expressed concern of construction noise nuisances near Wo Che Estate at around 01:14 am on 27 th November 2020. According to the Main Contractor, there were no construction works near Wo Che Estate (Zone 5) on 26 th & 27 th November 2020. The major construction works were works related to removal of central median (at night-time) under the approved road closure with CNP no.GW-RN0799-20. According to Main Contractor EO Kimberly, she sent prior notification to the EPD on 20 th November 2020 through logging in the webpage of EPD before the commencement of the construction work in relation to the CNP GW-RN0799-20 (conditions 3.d.11 and 4.d.8). The Main Contractor provided photo records showing that mitigation measures of the movable acoustic	14/12/2020

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						enclosure "SilentCUBE" with four sides and a top cover were implemented for night work on removal of existing central median: drill hole with percussive drill for temporary steel module spiral installation, drill hole at existing central median with concrete corer and asphalt compaction with portable roller. Main Contractor was reminded to strictly follow and fully comply with the CNP No.: GW-RN0799-20 conditions. 5.11 The Main Contractor was reminded to re-arrange their proposed night-time construction activities to fulfill the complainant expectation that noise emitting work should be paused during 00:00 to 06:00 sleeping time.	
COM-2020155	26/11/2020	1823	CCZJV	Dust	30/11/2020	According to the complainant, the dust nuisance concerned at day time was at the slip road to Fo Tan Road near Lok King Street near Zone 5 works area. According to the Main Contractor, the major day time construction works at Zone 5 works area in November were mini-piling works and slope works of soil replacement. Regular movement of vehicle for transportation was also carried out on site. Thus, the complaint was considered to be related to the project. ET conducted regular day-time air quality monitoring in November 2020 and on the 3 rd December 2020 at selected air monitoring stations AMS6, 8, 11A & 13 and AMS5, 4A, 7A & 12 respectively. The two air quality monitoring stations closed to the works area at zone 5 (where the complainant concerned of dust nuisance) were AMS12 and	5/1/2021

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						AM13; and AMS13 locate nearest to Zone 5. The ET regular air quality results measured at AMS13 and AM12 in November 2020 and on the 3 rd December 2020 show that there was no exceedance case found in air quality monitoring measurement and the results were all below the action level. The Main Contractor was reminded to enhance the mitigation measures in dust control such as increase the water spray frequency at the construction site to suppress dust emission. The Main Contractor proposed to properly maintain the coverings on exposed slopes and keep them in good condition for minimizing dust impact. The Main Contractor proposed to frequently spraying of haul road especially at area where active movement of vehicles and pave the haul road where necessary to reduce dust impact.	
COM-2020157	7/12/2020	STDC	CCZJV	Dust	7/12/2020	According to the complainant, the dust nuisance concerned at day time was generated from the construction works area of the Tai Po Road Widening project at Zone 5. According to the Main Contractor, major day time construction works of mini-piling and soil replacement at slopes were carried out at Zone 5 works area in December 2020. There was also regular movement of vehicle for transportation within the works area. Thus, the complaint was considered to be related to the project. ET conducted regular day-time air quality monitoring (Appendix C) on the 3 rd , 9 th & 15 th December 2020 respectively which was close	29/12/2020

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						to the date of complaint, at selected air monitoring stations AMS5, AMS4A, AMS7A & AMS12. ET regular day-time air quality monitoring measurement results at air quality monitoring stations AMS12, closest to Zone 5. The ET regular air quality results measured at AM12 on 3 rd , 9 th & 15 th December 2020 show that there was no exceedance case was found in air quality monitoring measurement and the results were all below the action level. The Main Contractor was reminded to reduce the travelling speed of transportation vehicles on site and plan the schedule of delivery transport in order to reduce dust impact. The Main Contractor proposed to continue in maintaining the coverings on exposed slopes in good condition for minimizing dust impact. The Main Contractor proposed to increase water spraying at area where active movements of vehicle transportation occur.	
COM-2020161	18/12/2020	EPD	CCZJV	Noise	18/12/2020	The complaint was received via email notification by EPD on 18 th December 2020, the complainant expressed concern of construction noise nuisances near Wo Che Estate during night-time on 7 th & 8 th December 2020. According to the Main Contractor, the major construction works was removal of central median works since 7 th & 8 th December 2020 conducted at restricted hours along Zone 4 central median of Tai Po Road Sha Tin section. Thus, the complaint is considered to be related to the project. 3.4 According to the Main Contractor, portable generator with hand-	5/1/2021

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						held breaker had been used for breaking of asphalt (on existing central median edge); lorry with crane, portable generator and concrete corer had been used for remove (lifting) the existing central median and coring of central median joint; dump truck with grab had been used for loading and unloading of rubble; portable roller had been used in asphalt compaction; lorry with crane, percussive and hand-held drill and portable generator had been used for installation of temporary steel module between 00:30 to 04:30 am on 7 th December 2020. The Main Contractor complied with CNP No.: GW-RN0799-20 that allowed the usage of PMEs. The noise emanated from the concrete corer for drilling hole at existing central median and portable roller for asphalt compaction might cause a noise nuisance. To further alleviate the noise nuisance, the Contractor placed acoustic enclosure "SilentCUBE" with four sides and a top cover at removal of existing central median and asphalt compaction works to mitigate as shown in the site condition photo record. No exceedance cases were found on ET regular night-time noise monitoring measurement (Appendix F) at all noise monitoring stations, especially measured at six noise monitoring stations mentioned in above section 3.15 where locate close to the works area (Sha Tin station to nearby Fung Wo Estate in Zone 4), the measured result at NMS16, NMS18 and NMS26 were lower than that of measured in	

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						the baseline. Besides, the measured result after correction of baseline at NMS13, NMS14 and NMS15 were lower than that of the limit level. The Main Contractor was reminded to re-arrange their proposed night-time construction activities especially in quiet construction works to minimize the noise nuisance to nearby residences. The Main Contractor was reminded to re-arrange their proposed night-time construction activities to fulfill the complainant expectation that noise emitting work should be paused during night sleeping time.	
COM-2020167	22/02/2021	1823	CCZJV	Dust	22/02/2021	A complainant who did not wish to disclose his identity called 1823 hotline on 22 nd February 2021 regarding the dust nuisance at slip road to Fo Tan Road. A repetitive case with reference no. 3-6566315922 was referred to the Main Contractor of the captioned Project and ET on 23 rd February 2021. According to the complainant, the dust nuisance concerned at day time was at the slip road to Fo Tan Road near Zone 5 works area. According to the Main Contractor, the major day time construction works at Zone 5 works area in February 2021 was mini-piling works. Regular movement of vehicle for transportation was also carried out on site. Thus, the complaint was considered to be related to the project. The Main Contractor was reminded to reduce the travelling speed of transportation vehicles on site and plan the schedule of delivery transport in order to minimize the dust impact. The Main Contractor	5/3/2021

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						proposed to reduce the exposed surface by providing covers or paving (e.g. with cement grout) to the newly excavated slope.	
COM-2020168	20/02/2021	1823	CCZJV	Noise	23/02/2021	The complaint was received via 1823 on 20 th February 2021 01:00am concerning about the night-time construction works near Sha Tin Police Station at 19 [^] 20 February 2021. According to the Main Contractor, there was night-time construction works near Sha Tin Police Station (Zone 3 & 4) on 19 [^] 20 February 2021. The major construction works were lane shifting works conducted on 19 [^] 20 February 2021 at night-time under approved road closure setup with in-force Construction Noise Permit (CNP) no.GW-RN0798-020. According to the Main Contractor, since Tai Po Road is the main strategic route, implementation of temporary traffic diversion at day time due to loading and unloading material or plant work or road surface remedial work is not feasible. The concerned night work could only be conducted during off-peak period at night time under temporary traffic diversion to avoid causing traffic congestion. According to the Main Contractor, no concurrent operation of Power Mechanical Equipment (PME) and idling were switched off during the loading and unloading of materials and rubble by manual handling of road surface remedial works. Environmental Team (ET) conduct a regular night-time noise monitoring at all monitoring stations between 23:00 25 th February to 03:00 26 th February 2021. 3.13 The	8/3/2021

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						five noise monitoring stations close to the complaint receiving area of Zone 3 & 4 are NMS13, NMS14, NMS15, NMS16 & NMS26. No exceedance cases were found on ET regular night-time noise monitoring measurement at all noise monitoring stations, especially measured at five noise monitoring stations where locate close to the works area (near Sha Tin Police Station in Zone 3&4), the measured result at NMS15, NMS16 and NMS26 were lower than that of measured in the baseline. Besides, the measured result after correction of baseline at NMS13 and NMS14 were lower than that of the limit level in 55 dB(A). The Main Contractor was reminded to strictly follow and fully comply with the CNP (GW-RN0798-20) conditions and the mitigation measures stipulated in the EM&A Manual when construction activities are operating during the restricted hour.	
COM-2021-0170	03/03/2021	1823	CCZJV	Dust and Noise	04/03/2021	The complaint on 3rd March 2021 at 1:25 pm complained about the noise, dust nuisance generated and insufficient dust mitigation works during the night-time construction works near King Wo House and Wo Che Estate area. A repetitive case with reference no. 3-6638500887 was referred to the Main Contractor and ET of the captioned project on 4th March 2021. According to the Main Contractor, there was night time road works at King Wo House and Wo Che Estate (Zone 4 & 5) on 3rd March 2021. Thus, the complaint considered to be related to the project.	25/03/2021

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						According to ET investigation, the Main Contractor complied with the CNP No.: GW-RN0798-020, with the permission of using Powered Mechanical Equipment (PMEs). No exceedance cases were found on ET regular night-time noise monitoring measurement (Appendix G). The Main Contractor was reminded to close all the doors of the acoustic enclosure, included the "SilentCUBE" for hand-held breaker and metallic enclosure. Consider the dust nuisance, no exceedance cases were found on ET regular air quality monitoring measurement (Appendix F). According to the Main Contractor, vapour was emitted from the bottom of the miller, when the milled asphalt falling from the drop point of the conveyor belt to the dump truck container, fugitive dust was generated. The Main Contractor was reminded to enhance the water spray frequency and keep the road surface wet before milling as the mitigation measures on fugitive dust control.	
COM-2021-0172	03/03/2021	1823	CCZJV	Noise	08/03/2021	The second complaint was received on 3rd March 2021 at 1:40 pm complained about the noise nuisance generated during the night-time construction works near Shatin Pui Ying College area. A repetitive case with reference no. 3-6638578830 was referred to the Main Contractor and ET on 8th March 2021. According to the main contractor, there was a night-construction activity near Shatin Pui Ying College and Wo Che Estate (Zone 4 & 5). Thus, the complaint considered to	25/03/2021

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						be related to the project. According to ET investigation, the Main Contractor complied with the CNP No.: GW-RN0798-020, with the allowed usage of PMEs. No exceedance cases were found on ET regular night-time noise monitoring measurement (Appendix G). The Main Contractor was reminded to strictly follow and fully comply with the CNP No.: GW-RN0798-20 conditions and the mitigation measures stipulated in the EM&A Manual when construction activities were operated during the restricted hour. The contractor was also reminded to use a movable noise barrier/blanket to block the line of sight from the engine or noise emission part to the nearby NSRs when using PMEs.	
COM-2021-0193	09/05/2021	1823	CCZJV	Noise	17/05/2021	The complaint was first received on 6 th May 2021 at 9:27 a.m. via FEHD email. The complaint was then referred to 1823 case: 3-6727963845 on 9 th May 2021 at 2:52 p.m. A follow-up complaint was received on 11 th May 2021 at 8:20 a.m. The two complaints were referred from 1823 to CEDD on 14 th May 2021 at 6:26 p.m. The complaint cases was referred from AECOM to ET on 17 th May 2021 at 11:46 a.m. According to the Main Contractor, the major construction works at daytime (08:00-18:00) between 6 th to 11 th May 2021 near Mei Wo House were soil replacement works (involved excavation, loading and unloading of materials and pour the no fine concrete) at the works area 1 (between Wo Che Estate King Wo House and Shatin Pui Ying	27/05/2021

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						school) and demolition of existing central divider works (involved breaking, loading and unloading of materials) at the work area 2 (opposite to Wo Che Estate Man Wo House). The ET regular daytime noise monitoring measurement results of NMS16, NMS17, NMS18, NMS19, NMS20 & NMS26 on 6 th , 7 th , 12 th and 13 th May 2021, no exceedance case found. The noise monitoring results were lower than the noise limit of 75 dB(A) L_{eq} (30 minutes) at the facade of dwellings and 70 dB(A) L_{eq} (30 minutes) at the facades of schools (65 dB (A) during examinations). The Main Contractor installed an acoustic blanket, enclosed at the breaker to minimize the noise impacts to nearby NSRs. The Main Contractor was reminded to maintain the newly implemented noise mitigation measure during breaking works. The Main Contractor was reminded to provide additional mitigation measures to minimize the noise nuisance to the NSRs (similar to night-time construction works) during the construction works, for example moveable noise barrier or blanket to block the line of sight from the engine and noise emission parts to the nearby NSRs.	
COM-2021-0200 and COM-2021-0202	07/06/2021	1823	CCZJV	Noise	08/06/2021	Ms. So, a resident of Wo Che Estate, Mei Wo House complained about the noise generated from the daytime construction work located outside Mei Wo House, the tunnel entrance (direction towards Fo Tan). Until 7 th June 2021, total six complaints were received via 1823 (case: 3-6727963845) from the same complainant.	22/06/2021

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						<p>According to the Main Contractor's daytime working schedule from 12th May to 7th June 2021 at zone 5 were soil replacement works (involved excavation, loading and unloading of materials, pour the no fine concrete and formation of haul road) and demolition of existing central divider works (involved loading and unloading of materials, minor breaking and corning operation). According to CEDD, a reply was sent to Ms. So on 27th May 2021. The Resident Site Staff (RSS) of AECOM contacted the complainant on 7th June 2021 night to explain the detail of upcoming construction work and associated noise mitigation measures to minimize the construction noise arising from the concerned construction work. The complainant was also informed that she could contact the RSS directly if she had any further enquiry in future. ET conducted regular daytime noise monitoring at NMS16-20 and NMS26 monitoring stations on 6th, 7th, 12th, 13th, 17th, 18th, 24th, 25th of May and 4th, 5th, 10th, 11th of June 2021. No exceedance case was found and the noise monitoring results were lower than the noise limit of 75 dB(A) $L_{eq(30\text{ minutes})}$ at the facade of dwellings and 70 dB(A) $L_{eq(30\text{ minutes})}$ at the facades of schools (65 dB (A) during examinations). ET reminded the Main Contractor to implement additional mitigation measures to minimize the noise nuisance generated from daytime construction works to the nearby Noise Sensitive Receivers (NSRs). The Main Contractor agreed to</p>	

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						install an acoustic blanket, enclosed at the breaker to minimize the noise impact generated from the demolition of central divider works. The Main Contractor was reminded to maintain the noise mitigation measure during the breaking works. The Main Contractor was reminded to provide additional mitigation measures during the construction works to minimize the noise nuisance to the NSRs (similar to nighttime construction works), for example, a temporary moveable noise barrier to lower the noise impact and an acoustic blanket to block the line of sight from the engine and noise emission parts to the nearby NSRs. The Main Contractor was also reminded to display the project hotline number 5613-3367 on-site for public enquiry.	
EN-2021-0094	26/07/2021	EPD	CCZJV	Air (Odour)	27/07/2021	<p>A resident of Paris Park Villa complained about the poor air quality around his living area between 19th and 26th July 2021. He suspected that the odour nuisance may be generated from the construction site's diesel machineries. The complaint was received by the EPD's Regional Office (North) on 26th July 2021 with reference no.: RN17367-21.</p> <p>According to the Main Contractor's daytime working schedule between 19th July and 26th July 2021 involved: (1) Zone 4 and 5 North boundary, the construction activities involved the formation of temporary access, backfilling works for noise barrier stem wall, loading and unloading works. Excavations were mainly performed in</p>	13/08/2021

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						<p>areas EX1 and EX2. (2) Zone 4 and 5 South boundaries, the construction activities involved the noise barrier foundation works and the formation of temporary access. Excavations were mainly performed in areas EX3 and EX4. While rebar fixing and formwork erection were also carried out in EX3 area. For area TW1 in Zone 5 South boundary, tree works were performed. There were no work activities carried out at night-time, Sunday and under the hosting of typhoon signals.</p> <p>According to AECOM's Resident Engineer and the Main Contractor, no particular malpractice was observed during the construction activities at Zone 4 and 5 between 19th and 26th July 2021. According to the Main Contractor, only machineries with valid NRMM labels and regular maintenance are being used on-site. The Main Contractor sent the Ultra-Low Sulphur Diesel (ULSD) sample for laboratory testing since Feb 2019. There is no exceedance of the Sulphur content of more than 0.005% by weight in the past and the latest sample collected on 7th July (Cap. 311I Air Pollution Control (Fuel Restriction) Regulations).</p> <p>No particular finding on odour nuisance was found by the ET's staff when performing air monitoring in AMS 14 Ha Wo Che (close to 73A Ha Wo Che) on 21st and 22nd July 2021. ET also inspected the construction site on 29th July 2021 (between 9:00 to 10:15 a.m., weekly</p>	

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						<p>environmental inspection). There was no particular observation on odour nuisance or diesel smell generated from the Non-Road Mobile Machineries (NRMMS) and construction activities in the North and South boundary at Zone 4 and 5. No dark smoke was observed from the excavator, power generator, piling and pre-drilling machines under operation. ET inspected the area around Paris Park Villa and Ha Wo Che on 29th July 2021 between 10:30 a.m. to 11:30 a.m. There was no particular finding on odour nuisance in AMS14 Ha Wo Che (close to 73A Ha Wo Che). ET reminded the Main Contractor to strictly implement the air pollution control measures and minimize the air pollution impact generated from the construction work activities. The Main Contractor also is reminded that only approved or exempted NRMMS include regulated machines and non-road vehicles with proper labels are allowed to be used in specific activities on-site. The NRMMS should be well maintained. The Main Contractor was also be reminded that odour emissions from construction sites need to be controlled. Potential emission includes particulate matter, diesel and hazardous chemicals need to be considered for their odour impact. Use of ULSD should be maintained and dark smoke emission should be prevented in accordance with the Air Pollution Control (Smoke) Regulation and ETWB TCW 19/2005. The Main Contractor was also be reminded to display the project hotline</p>	

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						number 5613-3367 on-site for public enquiry.	
DSD Ref: MS 8/0/CE2815 /0 pt.6	01/09/21	DSD	CCZJV	Water	02/09/21	<p>Drainage Services Department (DSD) issued a notice (Ref: MS 8/0/CE2815/0 pt.6) to the Engineer's Representative (AECOM) after their morning inspection on 1st September 2021 concerning the improperly treated water being discharged from the construction site near Fung Wo Estate of the Project to nearby public stormwater drainage system, and of the consequence of contaminating the watercourse at Shing Mun River. The letter of concern was referred to Environmental Team (ET) on 2nd September 2021 at 3:24 p.m. for investigation.</p> <p>According to the Main Contractor and AECOM, the major construction work at Zone 5 south boundary was mini-piling works (at the end of August). Two piling machines were operating either individually or simultaneously. There are approximate 130 nos. of pile planned to be installed, and mini-piling works are scheduled to be finished in January 2022. Originally, one WetSep (TW-WS1) and two sedimentation tanks (ST1 and ST2) were provided for handling the wastewater generated from the piling works and site surface runoff at the zone 5 south boundary. According to the information report and photo records provided by the Main Contractor, the sedimentation tanks (ST1 and ST2) were filled with muddy water and silt on 1st September 2021.</p>	Expected to be submitted to EPD on early October

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						<p>ET inspected the area at Zone 5 south boundary on 2nd, 9th, 16th and 29th September 2021. Observation, reminders and follow-up action were proposed and monitored by the ET on handling the wastewater generated from piling works and site surface run-off. Moreover, EPIs from EPD conducted the site inspection on 9th and 29th September 2021. The two inspections conducted by the EPIs focused on reviewing the general site condition, wastewater treatment facilities set-up, mitigation measures for preventing muddy water formation, handling the wastewater and surface run-off. Observation, recommendations and reminders proposed by the EPIs and ET are grouped and shown in Appendix M.</p> <p>Rectification have been reported by the Main Contractor according to the observation and recommendation from ET and EPIs on 8th, 17th and 27th September 2021. During the 2nd joint site inspection, EPIs agreed the piling works can be restarted. However, EPIs reminded that the 2nd piling machine can only be operated until the 2nd WetSep is functioned properly and the effluent quality is acceptable. EPIs mentioned that follow-up inspection expected to be conducted in early or mid-October, focus on inspecting the wastewater treatment efficiency for piling works, paving of the soil surface, mitigation measures for handling the surface run-off. EPIs also mentioned that surprise inspection may be conducted in the</p>	

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						<p>future. According to the AECOM, the pilling work was restarted on 30th September 2021.</p> <p>According to this incident, the Main Contractor was reminded by ET to analyze and review the efficiency of the wastewater treatment system according to the construction activities regularly. The Contractor should provide regular maintenance, water quality testing and related checklist for ET and IEC review during the site inspection. The Main Contractor and related Sub-Contractor was reminded by ET and AECOM that the discharge of effluent needs to fulfil the requirement stated in the Water Discharge License (No. WT00032446 – 2018). AECOM and ET requested the Main Contractor to update the Temporary Drainage Management Plan according to the latest work activities. ET also requested the Main Contractor to update the description of the wastewater mitigation measures inside the Environmental Management Plan (EMP) and Environmental Management Report (EMR) and strictly implement to prevent similar case happen in the future.</p>	

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Cumulative Statistics on Complaints

Environmental Parameters	Cumulative No. Brought Forward	No. of Complaints This Month	Cumulative Project-to-Date
Air	5	0	5
Noise	27	0	27
Water	2	1	3
Waste	0	0	0
Total	33*	1	34*

*The 1st complaint in March 2021 included both the air and noise parameters, hence the total no. of complaints are deducted by 1.

Cumulative Statistics on Notification of Summons and Successful Prosecutions

Environmental Parameters	Cumulative No. Brought Forward	No. of Notification of Summons and Prosecutions This Month	Cumulative Project-to-Date
Air	0	0	0
Noise	0	0	0
Water	0	0	0
Waste	0	0	0
Total	0	0	0

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Appendix M

Summary of Site Audit in the Reporting Month



Summary of Site Audit in the Reporting Month

Parameters	Date	Observations and Recommendations	Follow-up
Air Quality	2 September 2021	Reminder: 1. The stockpile of excavated soil waiting for backfilling should be covered with tarpaulin (Zone 4, NF40).	-
	16 September 2021	Reminder: 1. NRMM labels should be provided for on-site machineries (Zone 4, SB).	-
	24 September 2021	Observation: 1. Decolorized NRMM label should be replaced with a new one and displayed at a conspicuous position (Zone 3, South Boundary, SR3).	1. NRMM label has been replaced (Zone 3).
Noise	No specific observation was identified in the reporting month.		
Water Quality	2 September 2021	Observation: 1. Soil runoff to the u-channel should be concerned and enhanced the mitigation measures. The function of the on-site u-channel should be checked and de-silted regularly to avoid silt accumulation, channel blockage, or muddy water outflow at the discharge point (Zone 3, S06, Tank TP401). 2. The contractor should review the sedimentation tanks treatment efficiency for handling the muddy water generated from pilling works. Although alum was added into the sedimentation tank, there was insufficient time for reaction and settling. Muddy water was observed at the public drainage system outside the site entrance. The public drainage should be cleaned immediately and avoid muddy water discharge (Zone 3, S05, near site entrance). 3. According to the contractor, the pilling works were stopped during the ET site walk. However, ET strongly advises the contractor to review the sedimentation tanks treatment efficiency for handling the muddy water generated from pilling works (either single or double machine operation). A poor condition was observed at multiple sedimentation tanks, which were filled with concentrated muddy water and silt. A proper rectification is needed to prevent any muddy water from entering the public drainage system. Moreover, the on-site drainage channel was filled with rock and silt. Cleaning, de-silting and mitigation measures are needed to ensure no muddy water outflow to the cycling track or enter into the public drainage system (Zone 5 South Boundary, near NF66).	1. The U-channel has been cleared (Zone 3). 2. The U-channel has been cleared/The wastewater treatment facilities have been reviewed and new sedimentation tank has been deployed (Zone 3). 3. The wastewater treatment facilities have been reviewed and new sedimentation tanks have been deployed (Zone 5).
	9 September 2021	Observation: 1. Surface runoff trap should be deeper or added with sedimentation tank to collect the surface water incoming from the highway (Zone 5 SB). 2. The mitigation measures for the discharge points and manholes should be enhanced with sandbags or cement bunding to prevent muddy water inflow (Zone 5 SB). 3. Slope should be covered with tarpaulin to avoid erosion, minimized the area exposed and prevented	1. The surface runoff trap has been excavated deeper for collection (Zone 5). 2. Mitigation Measure for discharge point has been enhanced to prevent muddy water inflow (Zone 5). 3. Slope has been



Parameters	Date	Observations and Recommendations	Follow-up
		<p>muddy water runoff to the u-channel (Zone 5 SB).</p> <p>4. Gully that are next to the unpaved area or soil surface should be blocked to prevent muddy water entering (Zone 5 SB).</p> <p>5. U-channel should be cleaned and desilted regularly. Moreover, particular attention should be paid for the water collection efficiency under normal construction work activities and adverse weather condition for preventing muddy water overflow to the cycling track (Zone 5 SB).</p> <p>6. The pH meter of the WetSep was observed as malfunction. The contractor should repair the pH meter and ensure the pH of the water discharge is fulfilled the requirement listed in the water discharge license (Zone 5 SB).</p>	<p>applied by cementitious material to minimize the soil surface next to the U-channel.</p> <p>4. Gully has been blocked (Zone 5).</p> <p>5. The U-channel has been cleared (Zone 5).</p> <p>6. The pH meter of WetSep has been repaired and well functioning (Zone 5).</p>
		<p>Reminder:</p> <p>1. WetSeps and sedimentation tanks for muddy water treatment should be closed to the pilling location. It is for ensuring the treatment efficiency is acceptable (Zone 5 SB).</p>	-
	16 September 2021	<p>Follow-up and Observation:</p> <p>Follow-up 1. The silt trap for collecting muddy water should be reviewed to ensure the pump, muddy water outfall location are appropriate, also have enough capacity and depth (Zone 5, SB).</p> <p>Follow-up 2. The mitigation measure for the discharge point and manhole were enhanced with cement bunding and wood board to prevent muddy water and silt inflow (Zone 5, SB).</p> <p>Follow-up 3. Slope have been paved for minimizing the soil surface exposed and u-channel have been desilted (Zone 5, SB).</p> <p>Follow-up 4 and Observation 1: Two gullies that are next to the highway were covered with sandbag. However, tarpaulin should be provided for temporary coverage to prevent silt from entering. Another two gullies that are closed to the pilling work location, unpaved area and soil surface are blocked (Zone 5, SB).</p> <p>Follow-up 5 and Observation 2. The pH meter in the left WetSep have been fixed. However, the pH meter of the right WetSep needs to be installed and ensure it is function properly. A checklist should also be provided for recording the pH value of the water being discharged (Zone 5, SB).</p> <p>Follow-up 6 and Observation 3. U-channel have been cleaned. However, cement bunding/sandbag/paved/soil cleaning should be provided to prevent soil runoff to the discharge point (Zone 5, SB).</p>	<p>1. The tarpaulin have been provided for coverage (Zone 5)</p> <p>2. The WetSep on the right is not in use and the daily pH monitoring record has been prepared/ provided and waiting for EPD review and comment (Zone 5).</p> <p>3. Mitigation Measure for discharge point has been provided to prevent soil runoff (Zone 5).</p>

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Parameters	Date	Observations and Recommendations	Follow-up
		Reminder: 1. Water accidentally outflow to the cycling track should be prevented and cleaned (Zone 5, SB).	-
	24 September 2021	Reminder: 1. Stagnant water should be cleaned before rainfall to avoid site surface water overflow at the site boundary (Zone 3, South Boundary, S06). 2. Stockpile of excavated material should be covered with tarpaulin before rainfall, also prevent washing of the materials and muddy water from entering the highway (Zone 3, South Boundary, S06).	-
		Observation: 1. The soil surface next to the gullies should be paved or covered with tarpaulin to prevent muddy water formation. Housekeeping should also be maintained (Zone 5 South Boundary and near the TPT4 sedimentation tank).	1. Cementitious materials have been applied to minimize the soil surface next to the gullies and Housekeeping has been improved (Zone 5).
	29 September 2021	Reminder: 1. Sedimentation tanks and wastewater treatment systems should be maintained and review regularly. Desilting of the sedimentation tank and silt trap should be performed regularly (Zone 5 South Boundary S3E1). 2. The second WetSep (TW-WS2) should ensure it is functioning properly (either with maintenance or replacement) before operating the second piling machine. Routine pH monitoring and record in the checklist are also needed to ensure the effluent is fulfilled the requirement stated in the Water Discharge License (WT00032446-2018) (Zone 5 South Boundary S3E1).	-
		Follow-up: 1. Mitigation measures near the catchpit are enhanced with wood boards and cement bunding to prevent silt and muddy water from entering (Zone 5 South Boundary S3E1). 2. Sandbags were placed to divert the surface water coming from the highway towards the inlets. The surface water collection channels are constructed. Rainwater coming from the highway is collected with the inlets, connected to the underground water pipes, by-passed the construction site towards the gullies and catchpit (Zone 5 South Boundary). 3 and 4. Most of the soil surface was either paved or covered with tarpaulin. Sandbags are provided along the highway boundary and slope to prevent a large amount of surface water from washing into the construction site and u-channel (Zone 5 South Boundary). 5. Unblocked gullies were temporarily covered with	-

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Parameters	Date	Observations and Recommendations	Follow-up
		tarpaulin and placed sandbags alongside with to prevent silt and muddy water from entering (Zone 5 South Boundary).	
Chemical and Waste Management	24 September 2021	<p>Observation:</p> <p>1. Drip tray filled with chemical and rainwater should be cleaned with a chemical absorbent pad and treated as chemical waste. A drip tray should be provided for the chemical container to prevent soil contamination. The chemical storage tank should also be clearly labeled in English and Chinese following the requirement listed in the Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C, Part IV, Section 12) (Zone 3, South Boundary, S06).</p>	1. Water in drip tray has been cleaned /Chemical drum has been removed (Zone 3).
Land Contamination	No specific observation was identified in the reporting month.		
Landscape and Visual Impact	No specific observation was identified in the reporting month.		
General Condition	No specific observation was identified in the reporting month.		
Permit / Licenses	24 September 2021	<p>Observation:</p> <p>1. A copy of the environmental permits should be displayed at the site entrance for public information at all time. The contractor should ensure the permits being displayed are the most updated one (Zone 3, South Boundary, SR6).</p>	1. The Environmental Permit has been displayed (Zone 3).