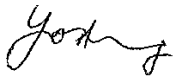
FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

MONTHLY EM&A REPORT

February 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/0569A

Prepared by	**:**	Jimmy Lui
Reviewed by	**:**	Cyrus Lai
Certified by	**:**	

David Hung
Environmental Team Leader
Fugro Technical Services Limited

Our ref: PL-202103027

Unit 1501, Level 15,
Tower I, Metroplaza,
223 Hing Fong Road, Kwai Fong,
N.T., Hong Kong.

Attention: Miss FUNG Cannifer

12 March 2021

Dear Miss Fung,

NE/2017/05
Road Widening and Retrofitting Noise Barriers on Tai Po Road (Sha Tin Section)
Monthly EM&A Report for February 2021

I refer to the email of the ET regarding to the captioned Monthly EM&A Report with report No. 0064/18/ED/0569A, we 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,

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 12 March 2021
Our Ref. MCL/ED/0121/2021/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 February 2021 (0064/18/ED/0569A)

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/0569A) 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. Kevin Yip / Ms. Cannifer Fung (by E-mail)
	AECOM	Attn: Mr. Albert Yu / Mr. Jacky Tse / Mr. Andrew Cheng / Mr. Matthew Ma (by E-mail)
	IEC	Attn: Mr. Kevin Li / Mr. Tandy Tse (by E-mail)
	CCZJV	Attn: Mr. Chung Sing Chu / Ms. Kimberly Wong / Mr. Aaron Au (by E-mail)

Encl.

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

TABLE OF CONTENTS

FIGURES

LIST OF APPENDICES

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

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 February 2021 and 28 February 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
• Tree Works (including Preservation / Felling / Pruning / Transplantation) • Underground utilities diversion • Mini pile works • Noise barrier foundation works • Trial pits excavation	• Tree Works (including Preservation / Felling / Pruning / Transplantation) • Underground utilities diversion • Noise barrier foundation works • Trial pits excavation	• Tree Works (including Preservation / Felling / Pruning / Transplantation) • Underground utilities detections • Underground utilities diversion • Pier construction works • Sign Gantry footing works • Noise barrier foundation works • Construction of Lagging wall and retaining wall • Demolition of existing parapet • Pre-drilling works • Demolition works for existing central median and temporary highway guard installation • Lane shifting works	• Underground utilities detections • Underground utilities diversion • Demolition works for existing central median • Foundation works for Footbridge NF66 and NF40 • Mini Pile works • Temporary road and site access construction works • Lane shifting works	• Trial pits excavation • Tree Works (including Preservation / Felling / Pruning / Transplantation) • Underground utilities detections • Underground utilities diversion • Noise Barrier Foundation Works • Soil replacement works on slopes • Mini Pile works • Construction for temporary haul road and site access • Lane shifting works • Pre-drilling 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.

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

v. Regular night time noise monitoring was carried out on 4, 10, 18 and 25 February 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. Two complaint cases were referred by 1823 hotline concerning about the noise and dust nuisance to local residents on 19th to 20th February and 22nd February 2021 respectively.

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.

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

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

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 27th 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 February 2021 and 28th February 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**.

1.2.3

Table 1.1 Contact Information of Key Personnel

Party	Position	Name	Telephone
Project Proponent (CEDD)	Senior Engineer	Ms. Cannifer Fung	3152 3446
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. Aaron Au	6345 0754
	Environmental Officer	Ms. Kimberly Wong	5542 1669
ET (FTS)	Environmental Team Leader	Mr. David Hung	3565 4371

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

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
• Tree Works (including Preservation / Felling / Pruning / Transplantation) • Underground utilities diversion • Mini pile works • Noise barrier foundation works • Trial pits excavation	• Tree Works (including Preservation / Felling / Pruning / Transplantation) • Underground utilities diversion • Noise barrier foundation works • Trial pits excavation	• Tree Works (including Preservation / Felling / Pruning / Transplantation) • Underground utilities detections • Underground utilities diversion • Pier construction works • Sign Gantry footing works • Noise barrier foundation works • Construction of Lagging wall and retaining wall • Demolition of existing parapet • Pre-drilling works • Demolition works for existing central median and temporary highway guard installation • Lane shifting works	• Underground utilities detections • Underground utilities diversion • Demolition works for existing central median • Foundation works for Footbridge NF66 and NF40 • Mini Pile works • Temporary road and site access construction works • Lane shifting works	• Trial pits excavation • Tree Works (including Preservation / Felling / Pruning / Transplantation) • Underground utilities detections • Underground utilities diversion • Noise Barrier Foundation Works • Soil replacement works on slopes • Mini Pile works • Construction for temporary haul road and site access • Lane shifting works • Pre-drilling 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 – Zone 5)	WT00032446-2018	09/11/2018	30/11/2023
Construction Noise Permit for Road Closure works at restricted hours	GW-RN0917-20	20/1/2021	15/3/2021
	GW-RN0798-20	12/11/2020	11/5/2021

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-5R	Sibata Portable TSP Monitors	761106
2	AMS 8	*Sibata	Model LD-5R	Sibata Portable TSP Monitors	892187
3	AMS 11A	*Sibata	Model LD-5R	Sibata Portable TSP Monitors	892189
4	AMS 12	*Sibata	Model LD-5R	Sibata Portable TSP Monitors	761105

*Notes: As electricity supply is not available and accessible for the High Volume Samplers (HVS) at AMS 6, 8, 11A and 13 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-5R	Sibata Portable TSP Monitors	761106
2	AMS 8	Sibata	Model LD-5R	Sibata Portable TSP Monitors	892187
3	AMS 11A	Sibata	Model LD-5R	Sibata Portable TSP Monitors	892189
4	AMS 12	Sibata	Model LD-5R	Sibata Portable TSP Monitors	761105

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.

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

- 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 (ALS Technichem (HK) Pty Ltd./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 ±3°C; the relative humidity (RH) is < 50% and not variable by more than ±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 ±3°C; the relative humidity (RH) should be < 50% and not vary by more than ±5%. A convenient working RH is 40%. Weighing results are returned to MCL for further analysis of TSP concentrations collected by each filter.

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

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 February 2021 is 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	Village
AMS 8	Lek Yuen Estate	Residential
AMS 11A	Sheung Wo Che	Village
AMS 12	Fung Wo Estate	Residential

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, 8, 11A and 12 in the reporting month.

2.6.3 During the reporting month, major dust sources including trial pits excavation, pre-drilling, mini pile works, soldier pile, sheet pile works and Pre Bored H-pile 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 ($\mu g/m^3$)	Range ($\mu g/ m^3$)	Action Level ($\mu g/ m^3$)	Limit Level ($\mu g/ m^3$)
24-hr TSP in $\mu g/m^3$	AMS 5	50	44 - 53	156	260
	AMS 8	52	44 - 69	161	
	AMS 11A	63	57 - 68	165	
	AMS 12	50	47 - 55	168	

Table 2.5 Summary of 1-hr TSP Monitoring Results

Parameter	Monitoring Station	Average ($\mu g/m^3$)	Range ($\mu g/ m^3$)	Action Level ($\mu g/ m^3$)	Limit Level ($\mu g/ m^3$)
1-hr TSP in $\mu g/m^3$	AMS 5	62	50 - 73	340	500
	AMS 8	67	45 - 97	336	
	AMS 11A	76	52 - 86	335	
	AMS 12	65	52 - 70	296	

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	1488272
3	Casella	CEL-63X Series	Integrating Sound Level Meter	1488314
4	Casella	CEL-120 Series	Calibrator	1677126
5	Casella	CEL-120 Series	Calibrator	2383207
6	Casella	CEL-120 Series	Calibrator	2383886
7	Casella	CEL-120 Series	Calibrator	4386289

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 2**.

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 No raining and wind with speed over 5 m/s was observed during day time noise monitoring according to the onsite observation. 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	$L_{eq\ (30min)}$ Range, dB(A) Construction Noise Level	$L_{eq\ (30min)}$ Limit Level, dB(A)
NMS1	60.8 – 63.6	75
NMS2	51.6 – 57.6	75
NMS3	62.7 – 67.8	75
NMS4	62.5 – 64.4	75
NMS5A	64.9 – 69.8	75
NMS6A	70.3 – 73.1	75
NMS7	60.6 – 66.2	75
NMS8	64.2 – 68.5	75
NMS9	62.3 – 69.4	75
NMS10A	62.2 – 69.5	70*
NMS11	54.5 – 57.3	75
NMS12	62.3 – 67.0	70*
NMS13	60.9 – 70.0	75
NMS14	57.4 – 60.4	75
NMS15	60.8 – 66.1	75
NMS16	58.8 – 62.4	75
NMS17	60.6 – 66.8	70*
NMS18	56.0 – 61.1	75
NMS19	59.3 – 65.7	75
NMS20	58.2 – 66.8	75
NMS23	58.9 – 66.2	75
NMS24	62.3 – 68.4	75
NMS25A	60.2 – 66.5	75
NMS26	67.3 – 68.4	75
NMS27	64.3 – 69.8	70*

Note: 1. $L_{eq\ (30min)}$ was measured at day-time (0700-1900) on normal weekdays.
2. 70 dB(A) for schools and 65 dB(A) for schools during examination period.
3. The examination schedule was provide in **Appendix E**.

3.7.6 Regular night time noise monitoring were conducted on 4, 10, 18 and 25 February 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	$L_{eq\ (15min)}$ Range, dB(A) Construction Noise Level	$L_{eq\ (15min)}$ Limit Level, dB(A)	$L_{eq\ (15min)}$ Baseline, dB(A)
NMS1	58.1 – 60.0	55	61.4
NMS2	51.6 – 53.1	55	49.7
NMS3	61.4 – 63.3	55	70.9
NMS4	57.3 – 58.7	55	62.6
NMS5A	59.4 – 62.4	55	67.9
NMS6A	67.7 – 71.1	55	71.5
NMS7	42.7 – 58.5[2]	55	59.0
NMS8	58.2 – 64.2	55	64.4
NMS9	51.9 – 54.2[2]	55	53.5
NMS11	50.6 – 54.8[2]	55	53.2
NMS13	49.7 – 57.2[2]	55	57.3
NMS14	49.5 – 54.5[2]	55	54.1
NMS15	57.2 – 58.7	55	58.8
NMS16	58.1 – 59.5	55	60.1
NMS18	59.0 – 60.2	55	63.2
NMS19	59.1 – 59.9	55	61.7
NMS20	57.1 – 57.6	55	57.7
NMS23	49.7 – 59.6[2]	55	59.9
NMS24	51.6 – 57.7[2]	55	58.0
NMS25A	57.4 – 58.7	55	59.7
NMS26	57.1 – 61.0	55	61.2

Note: 1) $L_{eq\ (15min)}$ was measured at night-time (2300-0700).
2) When the Average Measured Noise Level is greater than Limit Level and baseline level, Average Construction Noise Level (CNL) will be applied, where Calculated CNL = Measured Noise Level during operation – Baseline
3) Detailed analysis of each monitoring location is provided in **Appendix G**.

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 construction noise monitoring, no exceedance case was recorded between 2300 and 0700 of the next day 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**.

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

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.

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

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**.

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

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, 4 site inspections were carried out on 4, 10, 18 and 25 February 2021. The site inspection held on 25 February 2021 was joint inspection with the IEC, ER, the Contractor and the ET during the reporting period.

6.1.3 All the follow-up actions requested by ET and IEC during the site inspections were completed and 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**.

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

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 4, 10, 18 and 25 February 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 Two complaint cases were referred by 1823 hotline concerning about the noise and dust nuisance to local residents on 19th to 20th February and 22nd February 2021 respectively.

7.2.2 A complainant who did not wish to disclose his identity called 1823 hotline on 22nd 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 23rd 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 had maintained the frequency of water spraying on site at the haul roads and soil slope area, water spray time was recorded in the log book which had been kept on site for reminding and recording the mitigation activity. The Main Contractor had covered the soil slope to minimize the exposed surface area for reducing dust emission. 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 proposed to reduce the exposed surface by providing covers or paving (e.g. with cement grout) to the newly excavated slope.

7.2.3 The complaint was received via 1823 on 20th 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. According to the site record, electrical hand-held breaker and portable generator were used during the night works and the Main Contractor had provided acoustic enclosure with 4 side-panels and a top panel for them to operate inside the enclosure; Related road miller, asphalt paver and roller were installed with internal sound absorbing lining for engine compartments and engine doors closed during operation. The Main Contractor used a “SilentCUBE” (a product from Acoustic Innovation) as a movable acoustic enclosure for night road surface work. Environmental Team (ET) conduct a regular night-time

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

noise monitoring at all monitoring stations between 23:00 25th February to 03:00 26th February 2021. The 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.

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

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

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
- Increase the frequency of water spray to reduce the air impact (Zone 1, R1)
- Provide complete label of NRMM. (Zone 4, SB)
- Provide clear and complete label of NRMM. (Zone 5)

Construction Noise Impact
- No specific observation was identified in the reporting month.

Water Quality Impact
- The contractor is reminded to treat the waste water (e.g. by Wetsep) to ensure discharge quality standard before disposal (Zone 4 south bound).
- The contractor is reminded to clear the water ponding at the cycle track area (Zone 4).
- Sedimentation tank should be cleaned and desilted to maintain the efficiency. (Zone 4, SB)
- Mitigation measure shall be provided for site boundary to prevent soil leakage. (Zone 4)

Chemical and Waste Management
- Keep site area clean and tidy, housekeeping. (TKO, storage area)
- Provide mitigation facility (e.g. drip tray) for the chemicals to avoid spillage (Zone 3).
- Waste storage tank should be cleared regularly to maintain good site hygiene. (Zone 3)
- Provide drip tray for chemical storage to prevent chemical leakage. (Zone 4, SB)
- Drip tray shall be provided for chemicals to prevent chemical leakage. (Zone 4, NF40)
- Remove the general waste or provide storage area/ tank for waste storage. (Zone 4, NF40)
- Contaminated soil shall be treated as chemical waste. (Zone 4)

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
- No specific observation was identified in the reporting month.

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

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 & 5.
(2) Pre-drill works in Zone 1 & 2.
(3) Mini pile Works in Zone 1, 4 & 5.
(4) Backfilling for underground utilities trench in Zone 1 & 2.
(5) Pile Cap Construction Works in Zone 1, 2 & 3.
(6) Trial Pits Excavation in Zone 3, 4 & 5.
(7) Underground utilities detections in Zone 3, 4 & 5.
(8) Noise Barrier Foundation Works in Zone 3 & 5.
(9) Lagging wall and Retaining wall in Zone 3.
(10) Construction/ Diversion of underground utilities in Zone 3.
(11) Relocation of Traffic Light in Zone 3.
(12) Soldier Pile Construction Works in Zone 3.
(13) Pre Bored H Pile Construction Works in Zone 3.
(14) Pier Construction Works in Zone 3.
(15) Demolition of Central Median, and Temporary Median Module Installation Works in Zone 3 & 4.
(16) Demolition of NF40 Footbridge Existing Staircases in Zone 4.
(17) NF66 Footbridge Footing Construction Works in Zone 4.
(18) Soil Replacement Works on Slope 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**.

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

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 4, 10, 18 and 25 February 2021 respectively and no exceedance case was recorded between 2300 and 0700 of the next day during the reporting month.

10.1.4 4 site inspections were carried out on 4, 10, 18 and 25 February 2021. Recommendations on mitigation measures on air quality, chemical and waste management and water were given to the Contractor for remediating the deficiencies identified during the site inspections.

10.1.5 Two complaint cases were referred by 1823 hotline concerning about the noise and dust nuisance to local residents on 19th to 20th February and 22nd February 2021 respectively.

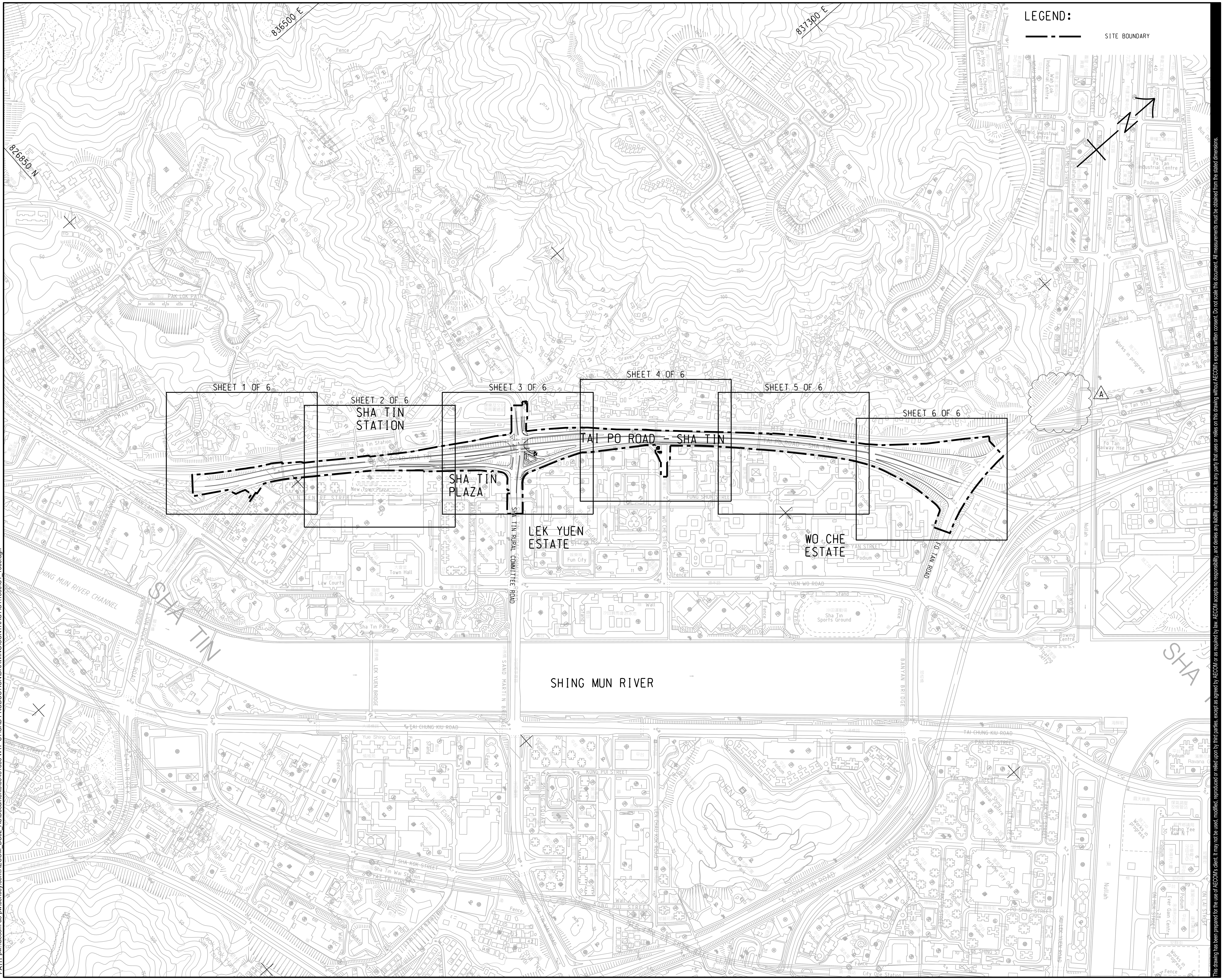
FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

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

Figure 1

Project General Layout



Project Management Initials: Designer: FMSC Checked: BCC Approved: CWN ISO A1 594mm x 841mm

Plot File by: aecompw06ics01$ 2/22/2018
PATH: pw:\\aecom-as-pw.bentley.com:AECOM_DS02_AS\Documents\60481656 WTP ST\CAD PRODUCTION\DRAWING\CONTRACT\C1\1000\C1_1000.dgn

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT 項目

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

CLIENT 業主

CEDD 土木工程拓展署 Civil Engineering and Development Department

CONSULTANT 工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
A	FEB. 18	TENDER ADDENDUM NO.2	BBC
-	JAN. 18	TENDER DRAWING	BCC

STATUS 階段

SCALE 比例 A1 1 : 4000

DIMENSION UNIT 尺寸單位 METRES

KEY PLAN 索引圖 **FIGURE 1.1a**

CONTRACT NO. 合約編號

NE/2017/05

SHEET TITLE 圖紙名稱

KEY PLAN
FIGURE 1.1a

SHEET NUMBER 圖紙編號

60481656/C1/1000A

Project Management Initials: | Designer: FMSC | Checked: BCC | Approved: CWN | ISO A1 594mm x 841mm

NOTES:

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60481656/C1/1002 TO 1006 AND 1021 TO 1023.
2. ALL DIMENSIONS ARE IN METERS AND REFER TO PRINCIPAL DATUM.
3. ALL CO-ORDINATES ARE IN ACCORDANCE WITH HK (1980) GAUSS CO-ORDINATE SYSTEM.
4. 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.
5. FOR SETTING OUT OF SITE BOUNDARY, REFER TO DRAWING NOS. 60481656/C1/1011 TO 1016.
6. FOR THE ARRANGEMENT OF RETAINING WALL, REFER TO DRAWING NOS. 60481656/C1/7011 TO 7016.
7. FOR SETTING OUT OF ROAD ALIGNMENT, REFER TO DRAWING NOS. 60481656/C1/1101 TO 1107.

LEGEND:

- SITE BOUNDARY
- N1 NOISE BARRIER WITH VARIOUS HIGH (10.7m TO 8.5m) WITH 2m CANTILEVER (30°) AT BOTH SIDES
- N2 1.2m HIGH NOISE BARRIER ON PARAPET (VERTICAL)
- N3 5m HIGH NOISE BARRIER (VERTICAL)
- N4 5m HIGH NOISE BARRIER (VERTICAL) WITH 2m CANTILEVER (30°)
- N5 5.5m HIGH NOISE BARRIER (VERTICAL) WITH 2m CANTILEVER (30°)
- N6 6m HIGH NOISE BARRIER (VERTICAL) WITH 2m CANTILEVER
- R1 RETROFITTING 6m HIGH NOISE BARRIER (VERTICAL)
- R2 RETROFITTING 5m HIGH NOISE BARRIER (VERTICAL) WITH 3m CANTILEVER (30°)
- R4 RETROFITTING 5m HIGH NOISE BARRIER (VERTICAL)
- RETAINING WALL
- R5 RETROFITTING 5m HIGH NOISE BARRIER (VERTICAL) WITH 2m CANTILEVER (30°)
- R6 RETROFITTING NOISE BARRIER (VERTICAL) WITH VARIOUS HEIGHT (5m TO 2m)
- EXISTING BOX CULVERT
- NOISE SEMI-ENCLOSURE WITH 2m CANTILEVER (30°)
- CYCLE TRACK
- FOOTPATH
- 6.0m HEIGHT OF NOISE SEMI-ENCLOSURE
- OLD AND VALUABLE TREE (OVT)
- LIFT

837000 E

826650 N

SEE DRAWING NO. 60481656/C1/1002

CUT LINE A-A

EXISTING FOOTBRIDGE, NF71A

RSE1

RSE2

FIGURE 1.1a

AECOM

PROJECT 項目

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

CLIENT 業主

土木工程拓展署
Civil Engineering and Development Department

CONSULTANT 工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

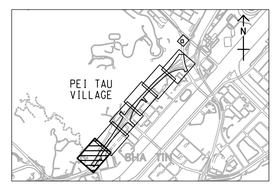
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
-	JAN. 18	TENDER DRAWING	BCC

STATUS 階段

SCALE 比例
A1 1 : 500

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 40000



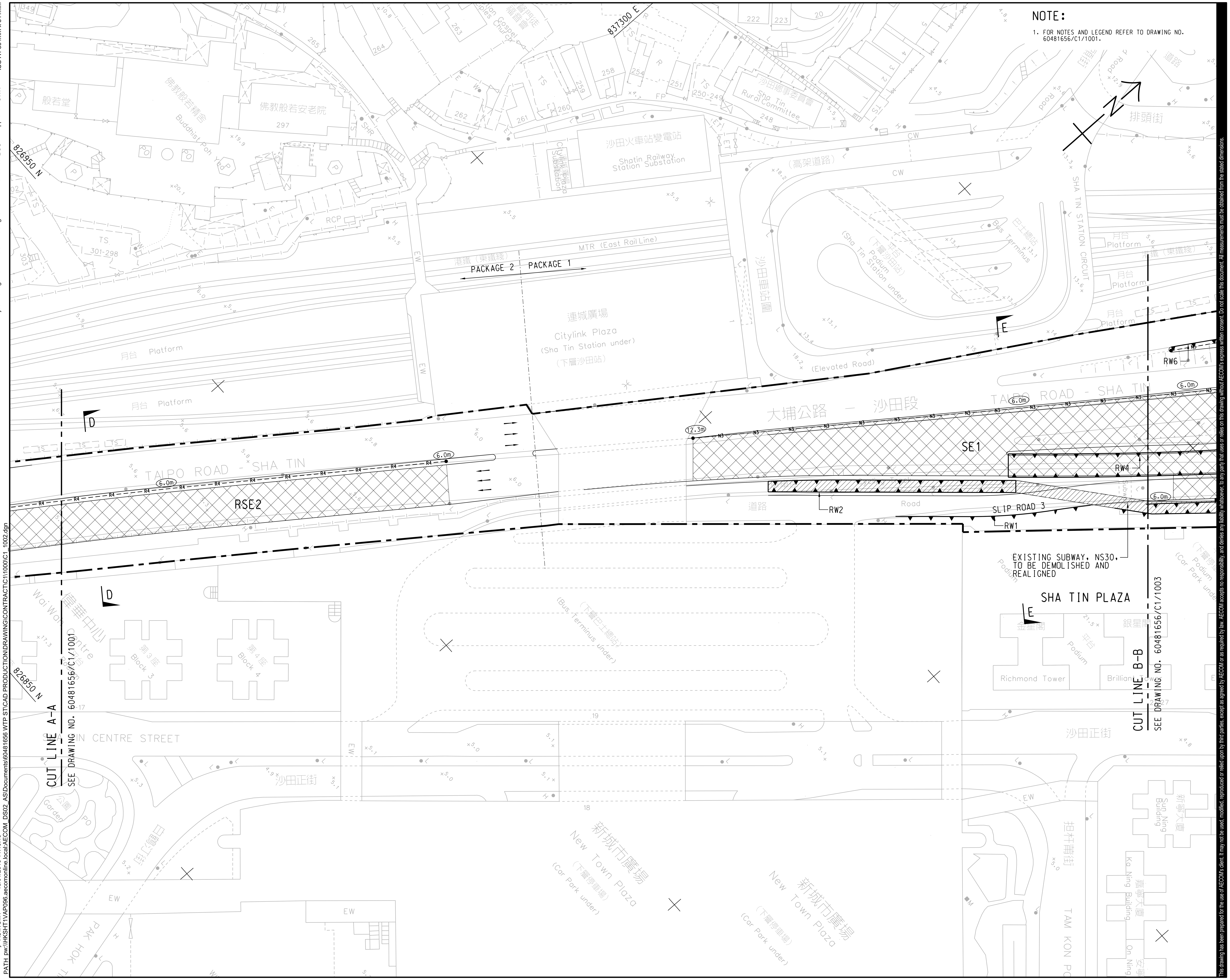
CONTRACT NO. 合約編號
60481656 NE/2017/05

SHEET TITLE 圖紙名稱
GENERAL LAYOUT PLAN
FIGURE 1.1 b

SHEET 1 OF 6

SHEET NUMBER 圖紙編號
60481656/C1/1001

Plot File by: XIEJB
PATH: pw:\\HKSHT1VAP096.aecomonline.local:AECOM_DS02_ASIDocuments\60481656 WTP STCAD PRODUCTION\DRAWING\CONTRACT\C1\1000\C1_1001.dgn
16/1/2018


NOTE:
1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60481656/C1/1001.
837300 E
826950 N
826850 N
佛教般若精舍
Buddhist Poh Yea
佛教般若安老院
般若堂
沙田火車站變電站
Shatin Railway Station Substation
沙田鄉事委員會
Sha Tin Rural Committee
排頭街
MTR (East Rail Line)
港鐵(東鐵綫)
PACKAGE 2
PACKAGE 1
連城廣場
Citylink Plaza
(Sha Tin Station under)
(下層沙田站)
月台 Platform
(高架道路)
(Elevated Road)
沙田車站圍
SHA TIN STATION CIRCUIT
巴士總站
Bus Terminus
(Sha Tin Station under)
大埔公路 — 沙田段
TAI PO ROAD - SHA TIN
SE1
RSE2
RW1
RW2
RW4
RW6
SLIP ROAD 3
6.0m
12.3m
EXISTING SUBWAY, NS30, TO BE DEMOLISHED AND REALIGNED
SHA TIN PLAZA
Richmond Tower
Podium
CUT LINE A-A
SEE DRAWING NO. 60481656/C1/1001
CUT LINE B-B
SEE DRAWING NO. 60481656/C1/1003
SHA TIN CENTRE STREET
沙田正街
偉華中心
Wai Wah Centre
第3座 Block 3
第4座 Block 4
(Bus Terminus under)
新城市廣場
New Town Plaza
(下層停車場)
(Car Park under)
Sun Ning Building
Ka Ning Building
TAM KON PO
PAK HOK TING
D
E

Project Management Initials: Designer: FMSC Checked: BCC Approved: CWN ISO A1 594mm x 841mm

Plot File by: ASIWUMT 15/01/2018 11:15:13
PATH pw:\\HKSHT1VAPP096.aecomonline.local:AECOM_DS02_AS\Documents\60481656 WTP ST\CAD PRODUCTION\DRAWINGS\CONTRACT\C1\1000\C1_1002.dgn

AECOM

PROJECT 項目

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

CLIENT 業主

土木工程拓展署
CEDD Civil Engineering and Development Department

CONSULTANT 工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
-	JAN. 18	TENDER DRAWING	BCC

STATUS 階段

SCALE 比例: A1 1 : 500

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖 A1 1 : 40000

CONTRACT NO. 合約編號

NE/2017/05

SHEET TITLE 圖紙名稱

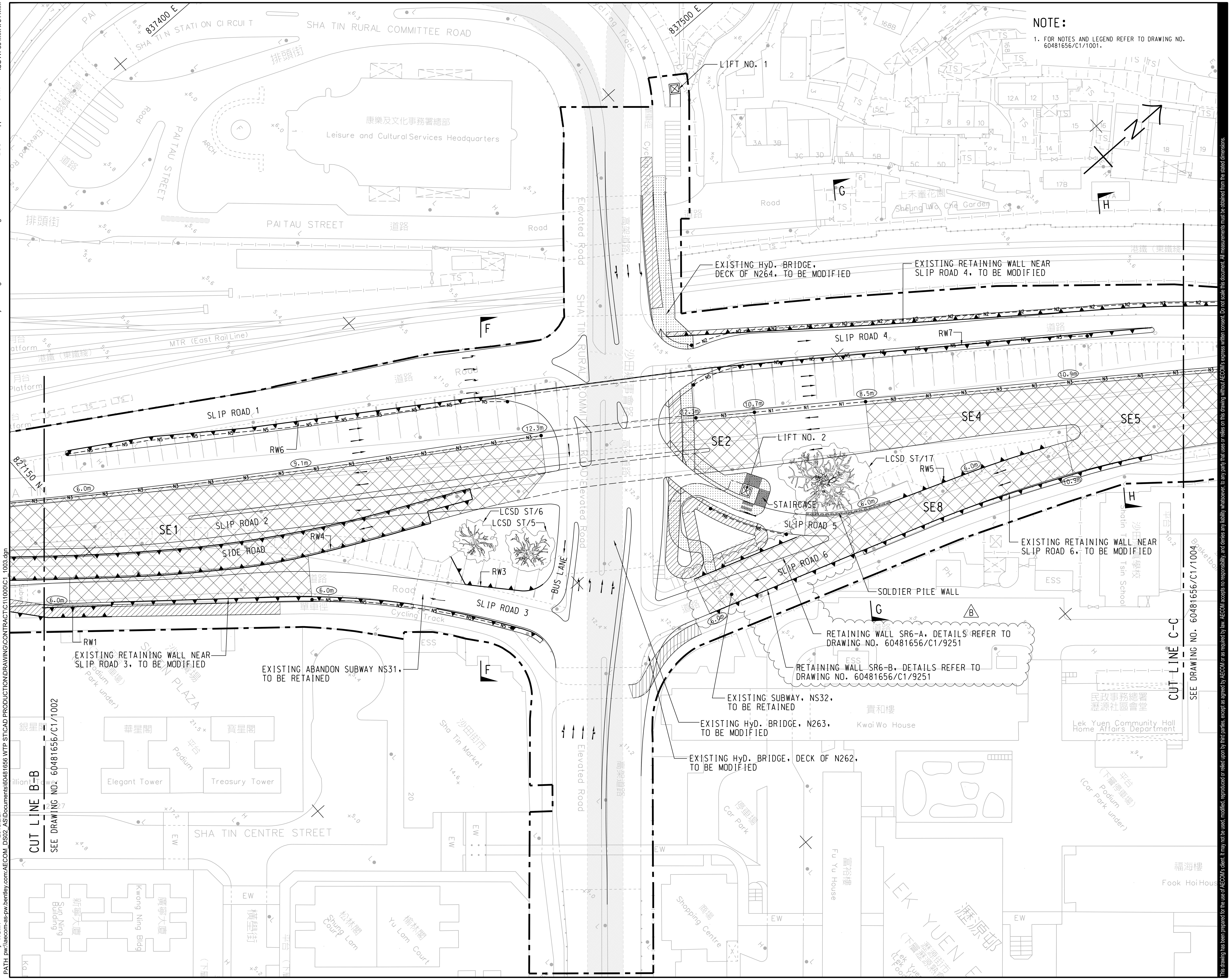
GENERAL LAYOUT PLAN

FIGURE 1.1b

SHEET 2 OF 6

SHEET NUMBER 圖紙編號

60481656/C1/1002



NOTE:
1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60481656/C1/1001.
837400 E
837500 E
827150 N
SHA TIN RURAL COMMITTEE ROAD
SHA TIN STATION CIRCUIT
PAI TAU STREET
Leisure and Cultural Services Headquarters
MTR (East Rail Line)
LIFT NO. 1
LIFT NO. 2
EXISTING HyD. BRIDGE, DECK OF N264, TO BE MODIFIED
EXISTING RETAINING WALL NEAR SLIP ROAD 4, TO BE MODIFIED
EXISTING RETAINING WALL NEAR SLIP ROAD 6, TO BE MODIFIED
EXISTING RETAINING WALL NEAR SLIP ROAD 3, TO BE MODIFIED
EXISTING ABANDON SUBWAY NS31, TO BE RETAINED
EXISTING SUBWAY, NS32, TO BE RETAINED
EXISTING HyD. BRIDGE, N263, TO BE MODIFIED
EXISTING HyD. BRIDGE, DECK OF N262, TO BE MODIFIED
RETAINING WALL SR6-A, DETAILS REFER TO DRAWING NO. 60481656/C1/9251
RETAINING WALL SR6-B, DETAILS REFER TO DRAWING NO. 60481656/C1/9251
SOLDIER PILE WALL
STAIRCASE
SLIP ROAD 1
SLIP ROAD 2
SLIP ROAD 3
SLIP ROAD 4
SLIP ROAD 5
SLIP ROAD 6
SIDE ROAD
BUS LANE
Elevated Road
SE1
SE2
SE4
SE5
SE8
RW1
RW3
RW4
RW5
RW6
RW7
LCSD ST/5
LCSD ST/6
LCSD ST/17
CUT LINE B-B
SEE DRAWING NO. 60481656/C1/1002
CUT LINE C-C
SEE DRAWING NO. 60481656/C1/1004
SHA TIN CENTRE STREET
Elegant Tower
Treasury Tower
Sha Tin Market
Kwai Wo House
Lek Yuen Community Hall
Home Affairs Department
Fu Yu House
Fook Hoi House
Yu Lam Court
Shung Lam Court
Kwong Ning Bldg
Sun Ning Building
Shopping Centre

AECOM

PROJECT 項目

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

CLIENT 業主

土木工程拓展署 CEDD Civil Engineering and Development Department

CONSULTANT 工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

I/R	DATE	DESCRIPTION	CHK.
B	FEB. 18	TENDER ADDENDUM NO. 2	BCC
A	FEB. 18	TENDER ADDENDUM NO. 1	BCC
-	JAN. 18	TENDER DRAWING	BCC

STATUS 階段

SCALE 比例: A1 1 : 500

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖 A1 1 : 40000

CONTRACT NO. 合約編號: NE/2017/05

SHEET TITLE 圖紙名稱

GENERAL LAYOUT PLAN
FIGURE 1.1 b

SHEET 3 OF 6

SHEET NUMBER 圖紙編號: 60481656/C1/1003B

Designer: FMSC Checked: BCC Approved: CWN
ISO A1 594mm x 841mm
Project Management Initials:
2018/2/27
Plot File by: WUMT

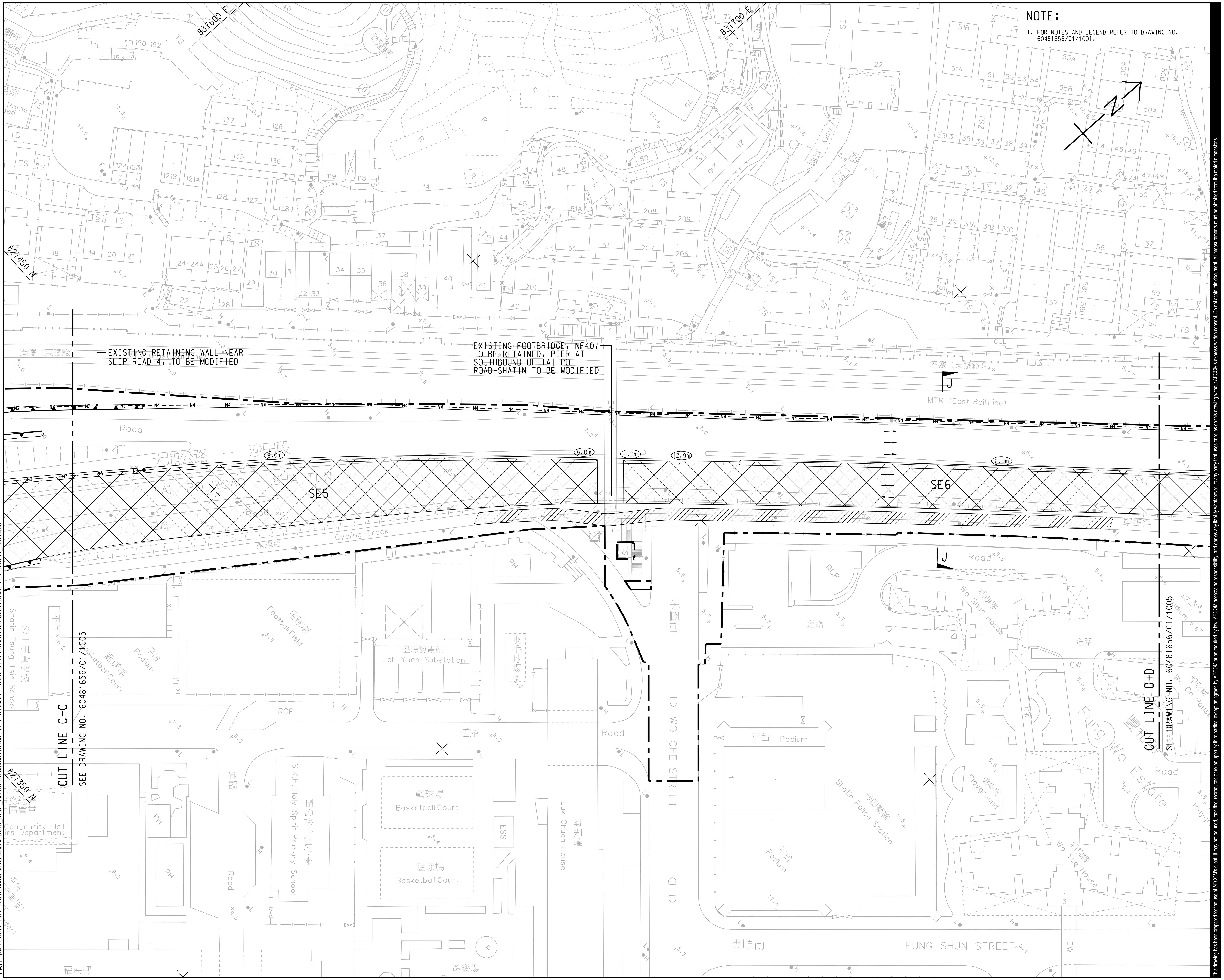
ISO A1 594mm x 841mm

Approved: CWN

Checked: BCC

Designer: FMSC

Project Management Initials:



AECOM

PROJECT
項目

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

CLIENT
業主

CEDD 土木工程拓展署 Civil Engineering and Development Department

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

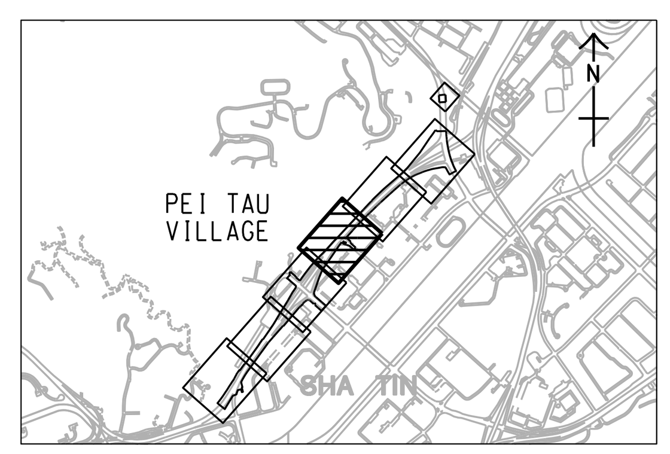
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
-	JAN. 18	TENDER DRAWING	BCC

STATUS
階段

SCALE 比例: A1 1 : 500

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖 A1 1 : 40000



CONTRACT NO.
合約編號

NE/2017/05

SHEET TITLE
圖紙名稱

GENERAL LAYOUT PLAN

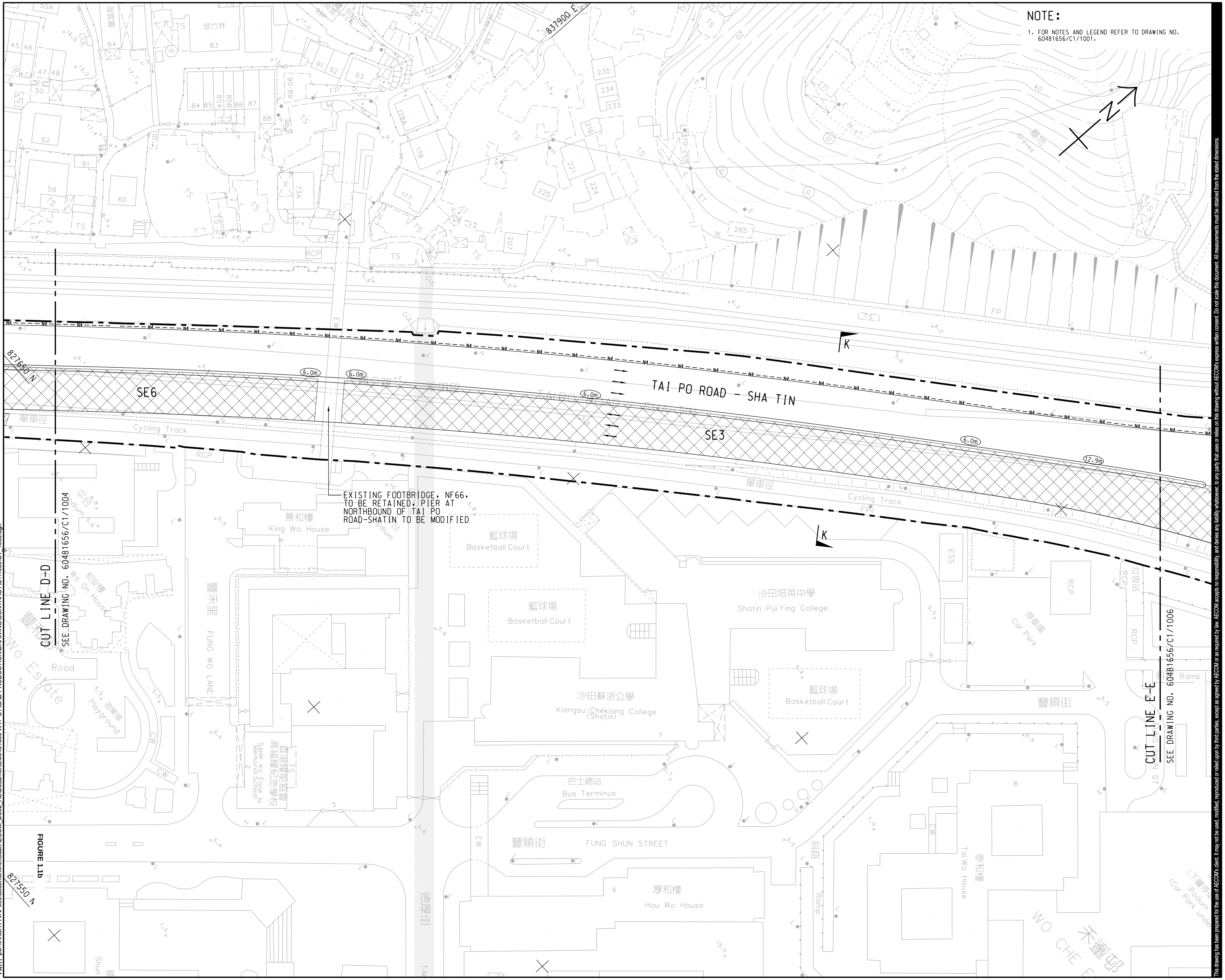
FIGURE 1.1b

SHEET 4 OF 6

SHEET NUMBER
圖紙編號

60481656/C1/1004

Plot File by: AS\WUMT 15/01/2018 11:15:19
PATH: pw:\\HKSHT1VAP096.aecomonline.local:AECOM_DS02_AS\Documents\60481656 WTP ST\CAD PRODUCTION\DRAWINGS\CONTRACT\C1\1000\C1_1004.dgn



Approved: CWN
Checked: BCC
Designer: FMSC
Project Management Initials:

16/1/2018
Plot File by: XIEJB
PATH pw:\\HKSHT1VAP096.aecomonline.local:AECOM_DS02_AS\Documents\60481656 WTP ST\CAD PRODUCTION\DRAWING\CONTRACT\C1\1000\C1_1005.dgn

FIGURE 1.1b

AECOM

PROJECT 項目

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

CLIENT 業主

土木工程拓展署
CEDD Civil Engineering and Development Department

CONSULTANT 工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

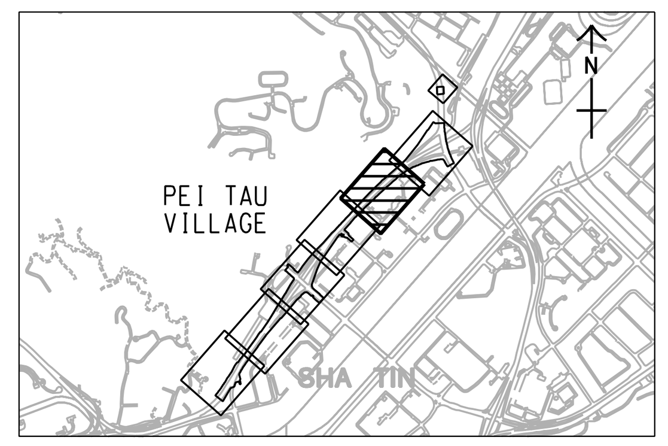
ISSUE/REVISION 修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
-	JAN. 18	TENDER DRAWING	BCC

STATUS 階段

SCALE 比例: A1 1 : 500
DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖: A1 1 : 40000



CONTRACT NO. 合約編號

NE/2017/05

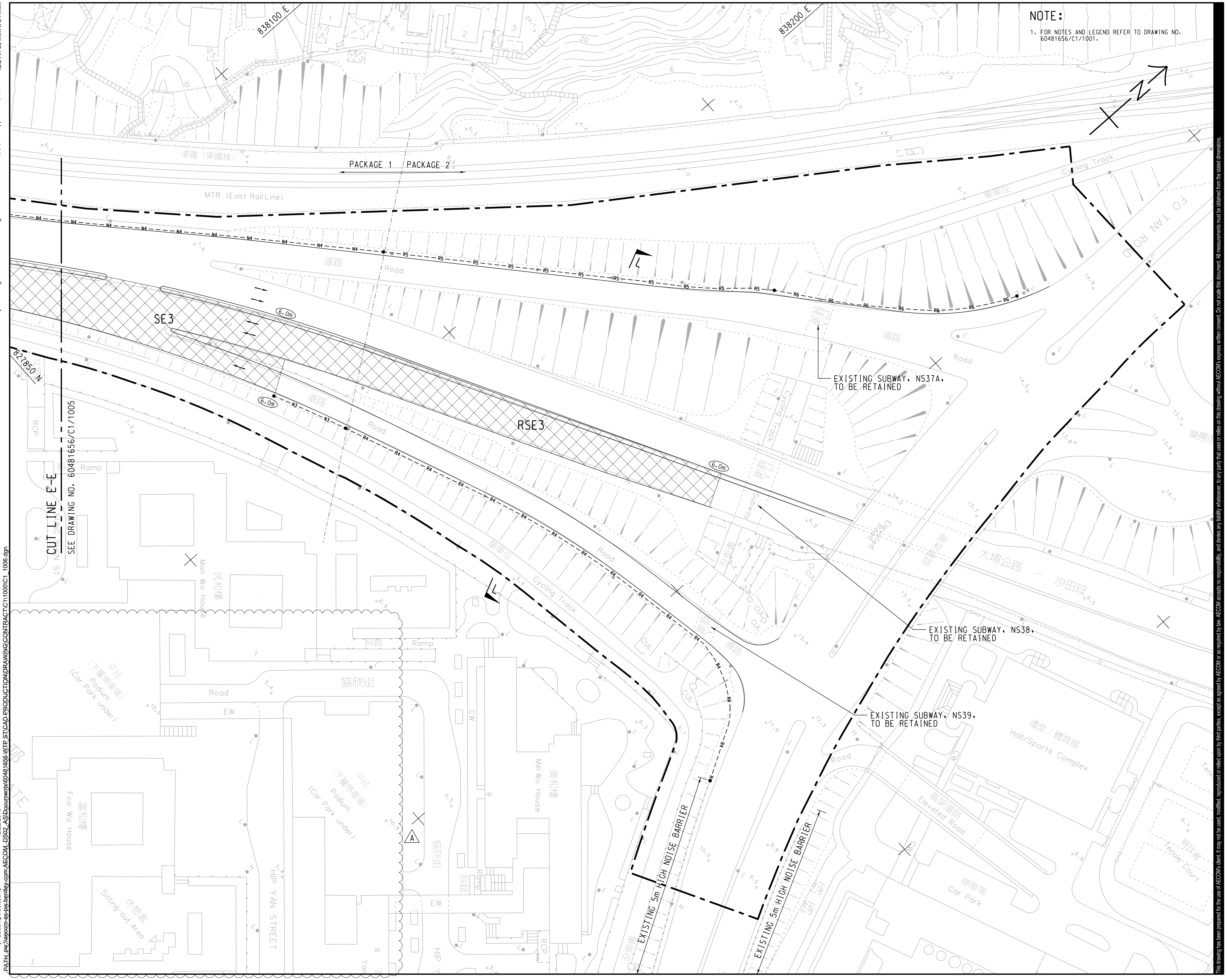
SHEET TITLE 圖紙名稱

GENERAL LAYOUT PLAN
FIGURE 1.1b

SHEET 5 OF 6

SHEET NUMBER 圖紙編號

60481656/C1/1005



AECOM

PROJECT 項目

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

CLIENT 業主

CEDD 土木工程拓展署 Civil Engineering and Development Department

CONSULTANT 工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

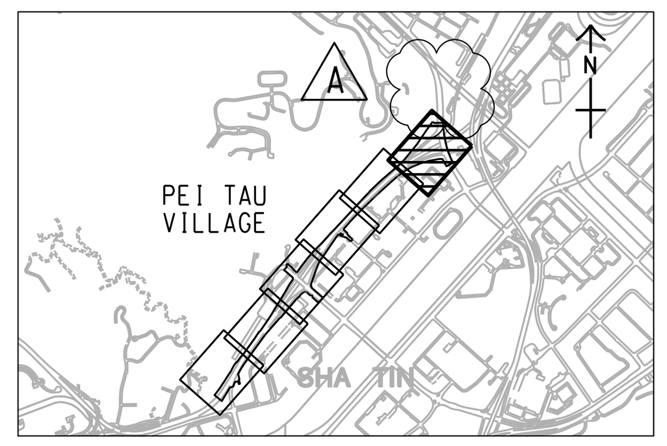
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
A	FEB. 18	TENDER ADDENDUM NO.2	BCC
-	JAN. 18	TENDER DRAWING	BCC

STATUS 階段

SCALE 比例: A1 1 : 500

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖 A1 1 : 40000



CONTRACT NO. 合約編號: NE/2017/05

SHEET TITLE 圖紙名稱

GENERAL LAYOUT PLAN

FIGURE 1.1b

SHEET 6 OF 6

SHEET NUMBER 圖紙編號

60481656/C1/1006A

ISO A1 594mm x 841mm
Approved: CWN
Checked: BCC
Designer: FMSC
Project Management Initials:

Plot File by: aecompw06ics01$ 2/22/2018
PATH: pw:\\aecom-as-pw.bentley.com:AECOM_DS02_AS\Documents\60481656 WTP ST\CAD PRODUCTION\DRAWING\CONTRACT\C1\1000\C1_1006.dgn

FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

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

Figure 2a

Air Monitoring Locations

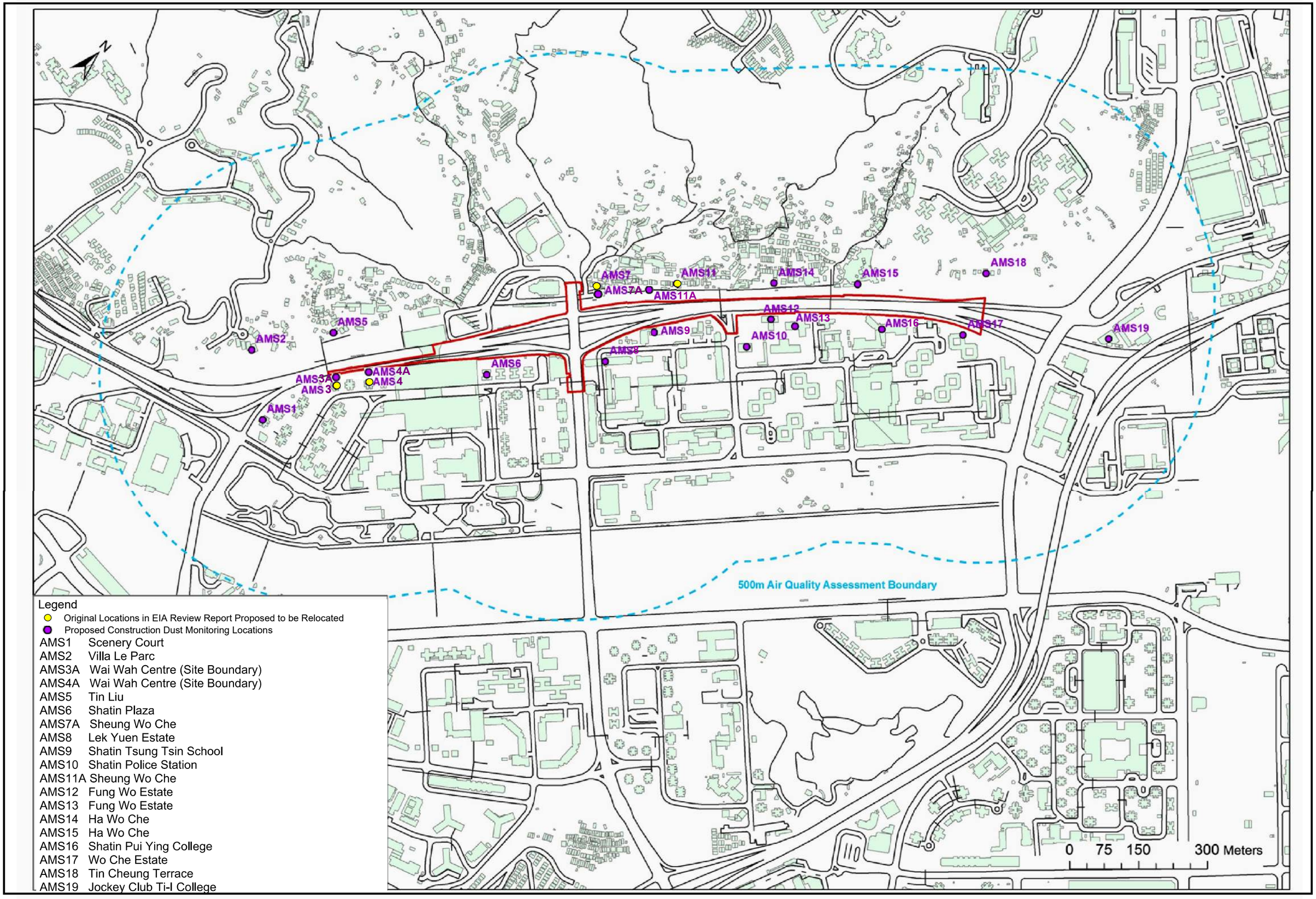


Figure 2a Air Quality Monitoring Locations

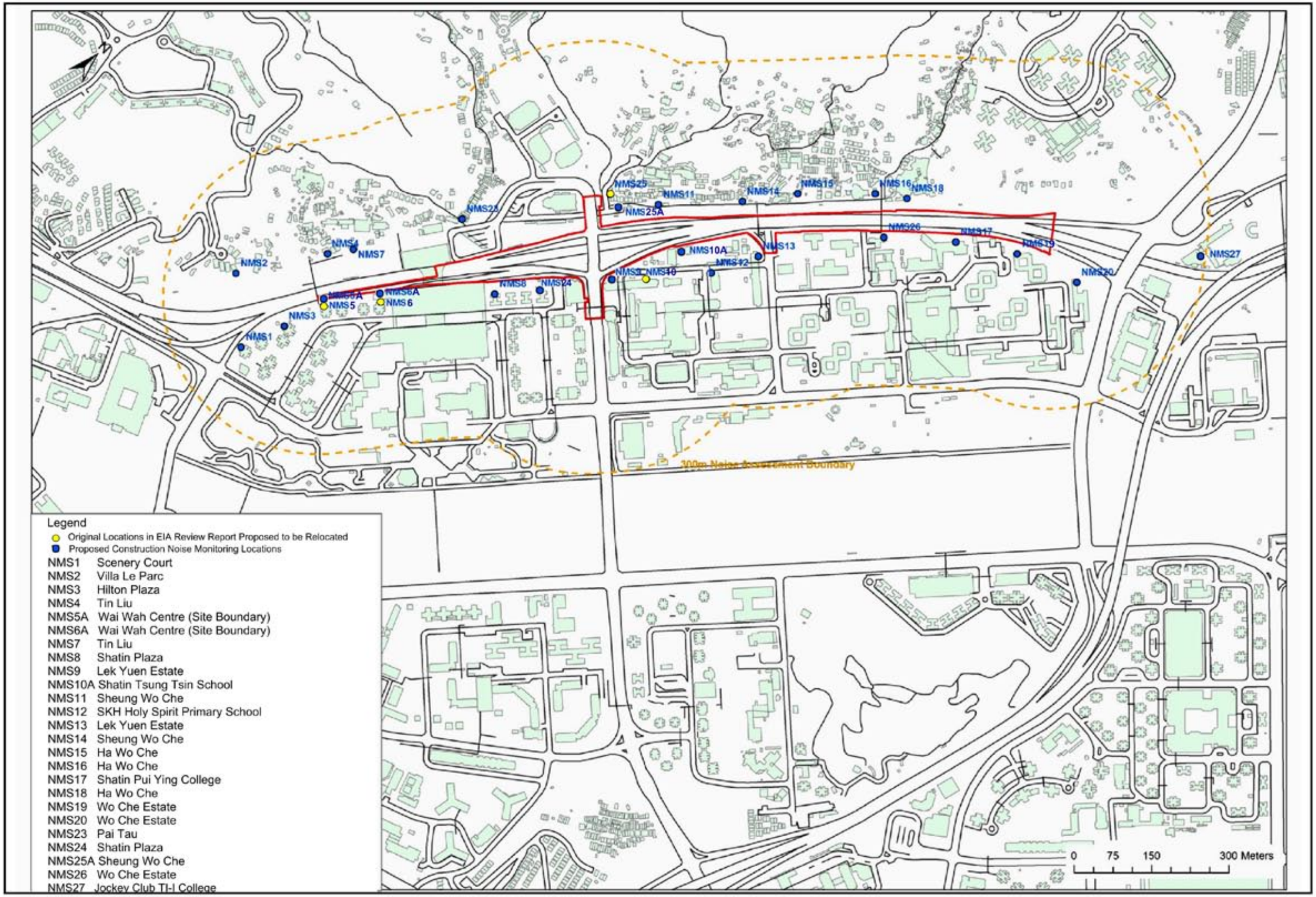
FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

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

Figure 2b

Noise Monitoring Locations



Legend

- Original Locations in EIA Review Report Proposed to be Relocated
- Proposed Construction Noise Monitoring Locations

NMS1 Scenery Court
NMS2 Villa Le Parc
NMS3 Hilton Plaza
NMS4 Tin Liu
NMS5A Wai Wah Centre (Site Boundary)
NMS6A Wai Wah Centre (Site Boundary)
NMS7 Tin Liu
NMS8 Shatin Plaza
NMS9 Lek Yuen Estate
NMS10A Shatin Tsung Tsin School
NMS11 Sheung Wo Che
NMS12 SKH Holy Spirit Primary School
NMS13 Lek Yuen Estate
NMS14 Sheung Wo Che
NMS15 Ha Wo Che
NMS16 Ha Wo Che
NMS17 Shatin Pui Ying College
NMS18 Ha Wo Che
NMS19 Wo Che Estate
NMS20 Wo Che Estate
NMS23 Pai Tau
NMS24 Shatin Plaza
NMS25A Sheung Wo Che
NMS26 Wo Che Estate
NMS27 Jockey Club TI-I College

Figure 2b Noise Monitoring Locations

FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

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

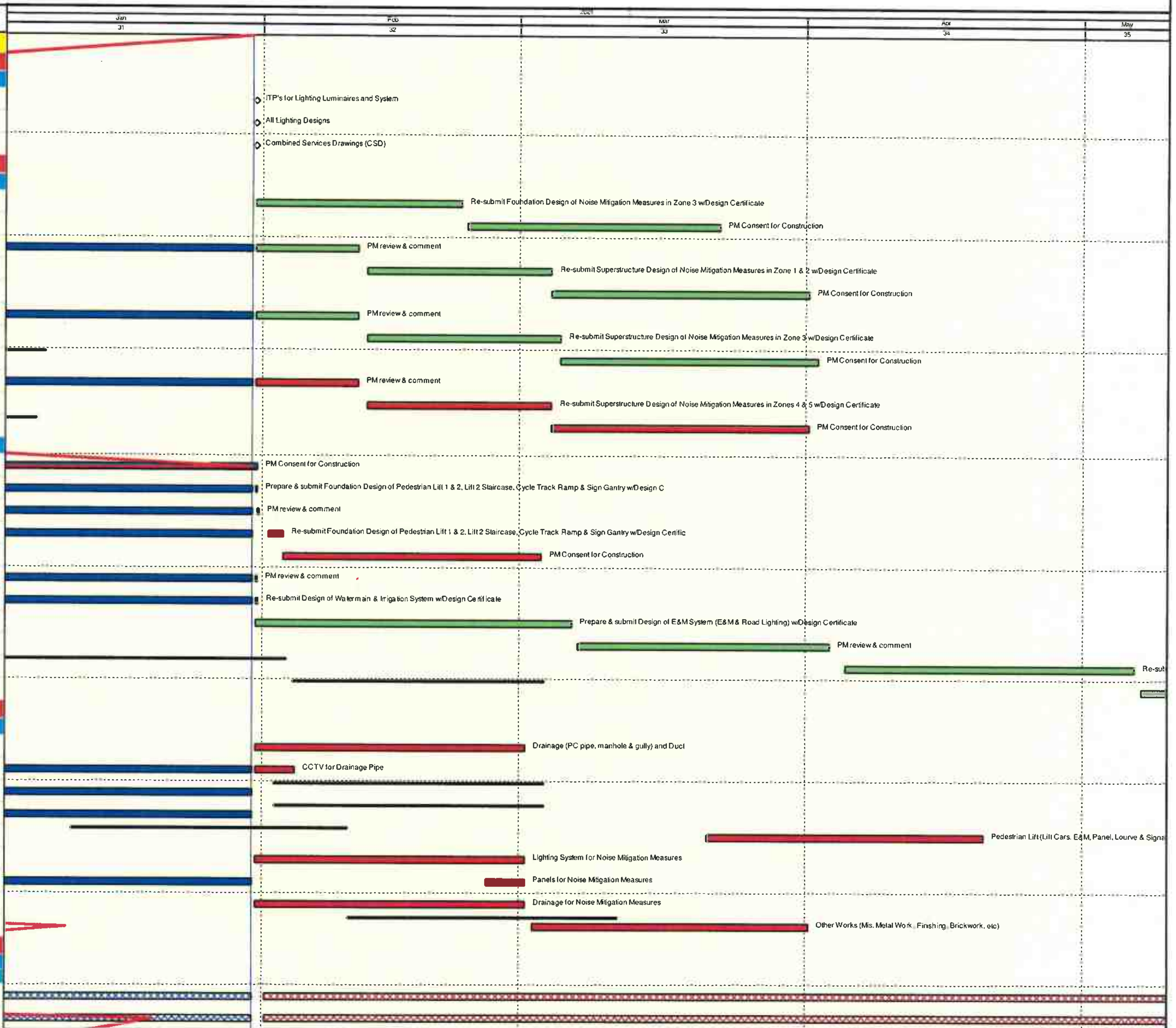
Appendix A

Construction Programme

CHINA RAILWAY - CHINA RAILWAY FIRST GROUP - ZHEN HUA ENGINEERING JOINT VENTURE
中國中鐵-中鐵一局-振華工程聯營

10-Feb-21

Activity ID	Activity Name	Original Duration	Remaining Duration	3MRP Start	3MRP Finish	AP10 Start	AP10 Finish
Contract NE/2017/05 Road Widening and Retrofitting Noise Barriers on Tai Po							
PRELIMINARIES & GENERAL REQUIREMENT							
GENERAL SUBMISSION							
SUB1403	ITP's for Lighting Luminaires and System	0	0	31-Jan-21*		31-Oct-20	
SUB1405	All Lighting Designs	0	0	31-Jan-21*		31-Oct-20	
SUB1410	Combined Services Drawings (CSD)	0	0	31-Jan-21*		31-Oct-20	
DESIGN SUBMISSION							
NOISE MITIGATION MEASURES							
DES1260	Re-submit Foundation Design of Noise Mitigation Measures in Zone 3 w/Design	23	23	31-Jan-21	22-Feb-21	01-Nov-20	23-Nov-20
DES1270	PM Consent for Construction	28	28	23-Feb-21	22-Mar-21	24-Nov-20	21-Dec-20
DES1290	PM review & comment	28	11	07-Aug-19 A	11-Feb-21	31-Aug-19	27-Sep-19
DES1300	Re-submit Superstructure Design of Noise Mitigation Measures in Zone 1 & 2 w/Design	20	20	12-Feb-21	04-Mar-21	12-Nov-20	02-Dec-20
DES1310	PM Consent for Construction	28	28	04-Mar-21	01-Apr-21	02-Dec-20	30-Dec-20
DES1330	PM review & comment	28	11	07-Aug-19 A	11-Feb-21	31-Aug-19	27-Sep-19
DES1340	Re-submit Superstructure Design of Noise Mitigation Measures in Zone 3 w/Design	21	21	12-Feb-21	05-Mar-21	20-Nov-20	11-Dec-20
DES1350	PM Consent for Construction	28	28	05-Mar-21	02-Apr-21	11-Dec-20	08-Jan-21
DES1370	PM review & comment	28	11	07-Aug-19 A	11-Feb-21	31-Aug-19	27-Sep-19
DES1380	Re-submit Superstructure Design of Noise Mitigation Measures in Zones 4 & 5 w/Design	20	20	12-Feb-21	04-Mar-21	20-Nov-20	10-Dec-20
DES1390	PM Consent for Construction	28	28	04-Mar-21	01-Apr-21	10-Dec-20	07-Jan-21
REMAINING WORKS							
DES1470	PM Consent for Construction	28	0	11-Mar-19 A	31-Jan-21 A	31-Jul-19	27-Aug-19
DES1480	Prepare & submit Foundation Design of Pedestrian Lift 1 & 2, Lift2 Staircase, Cycle	21	0	26-Nov-18 A	31-Jan-21	31-Dec-18	20-Jan-19
DES1490	PM review & comment	28	1	25-Jan-19 A	31-Jan-21	04-Aug-19	01-Sep-19
DES1500	Re-submit Foundation Design of Pedestrian Lift 1 & 2, Lift2 Staircase, Cycle Track Ramp & Sign	35	1	13-Apr-20 A	03-Feb-21	02-Jun-20	07-Jul-20
DES1510	PM Consent for Construction	28	28	03-Feb-21	03-Mar-21	03-Nov-20	01-Dec-20
DES1530	PM review & comment	28	1	02-Jan-19 A	31-Jan-21	31-Jan-19	27-Feb-19
DES1540	Re-submit Design of Watermain & Irrigation System w/Design Certificate	32	1	02-Jan-19 A	31-Jan-21	02-Apr-19	03-May-19
DES1560	Prepare & submit Design of E&M System (E&M & Road Lighting) w/Design Certificate	35	35	31-Jan-21	06-Mar-21	31-Oct-20	04-Dec-20
DES1570	PM review & comment	28	28	07-Mar-21	03-Apr-21	05-Dec-20	01-Jan-21
DES1580	Re-submit Design of E&M System (E&M & Road Lighting) w/Design Certificate	32	32	05-Apr-21	06-May-21	03-Jan-21	03-Feb-21
DES1590	PM Consent for Construction	28	28	07-May-21	03-Jun-21	04-Feb-21	03-Mar-21
SUBLETTING & PROCUREMENT SCHEDULE							
SUBLETTING							
SPS1210	Drainage (PC pipe, manhole & gully) and Duct	30	30	31-Jan-21	01-Mar-21	31-Oct-20	29-Nov-20
SPS1220	CCTV for Drainage Pipe	30	5	31-Mar-20 A	04-Feb-21	01-Jun-20	30-Jun-20
SPS1330	Road Lighting System (Excluding Noise Mitigation Measures)	30	25	31-Aug-20 A	03-Jun-21	02-Feb-21	03-Mar-21
SPS1390	E&M Works	30	25	31-Aug-20 A	03-Jun-21	02-Feb-21	03-Mar-21
SPS1410	Pedestrian Lift (Lift Cars, E&M, Panel, Louvre & Signature)	30	30	21-Mar-21	20-Apr-21	11-Jan-21	10-Feb-21
SPS1420	Lighting System for Noise Mitigation Measures	30	30	31-Jan-21	01-Mar-21	31-Oct-20	29-Nov-20
SPS1430	Panels for Noise Mitigation Measures	30	5	31-Mar-20 A	01-Mar-21	02-Aug-20	31-Aug-20
SPS1440	Drainage for Noise Mitigation Measures	30	30	31-Jan-21	01-Mar-21	31-Oct-20	29-Nov-20
SPS1450	Other Works (Mis. Metal Work, Finishing, Brickwork, etc)	30	30	02-Mar-21	01-Apr-21	10-Feb-21	11-Mar-21
WORK BETWEEN SHING MUN TUNNELS ROAD AND FOOT BRIDGE NF71A (ZONE							
PRELIMINARIES WORKS							
SUMMARY PROGRAMME							
Z1SU1030	Zone 1 Stage 1 RSE1 CM foundation	328	124	28-Dec-19 A	07-Jul-21	31-Dec-19	05-Feb-21
Z1SU1032	Zone 1 Stage 1 R1 structure R1-01 to 08	268	127	28-Jul-20 A	10-Jul-21	31-Jul-20	26-Jun-21

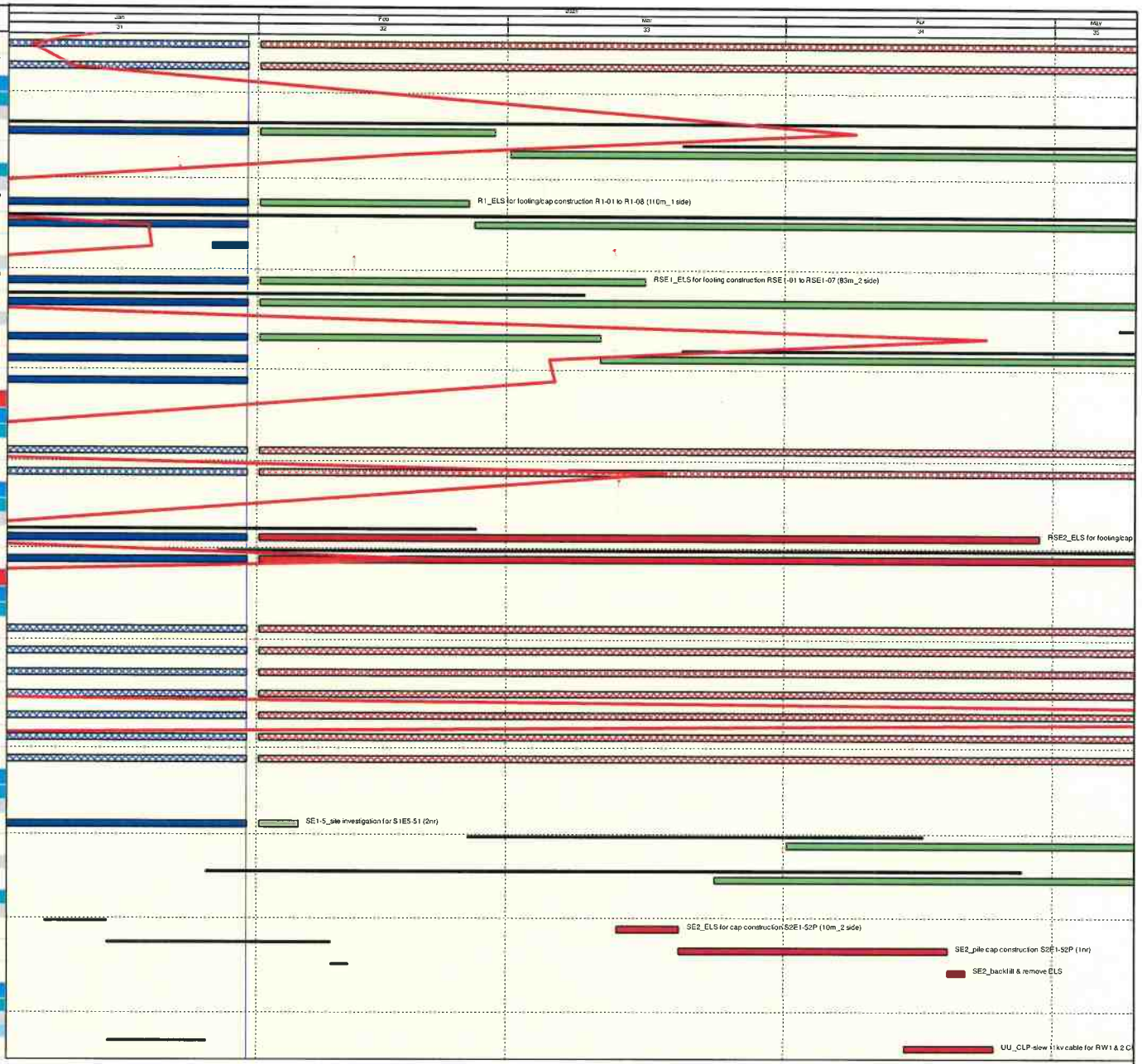


Remaining Level of Effort — Remaining Work — Primary Baseline
Actual Level of Effort — Critical Remaining Work — Baseline Milesto...
Actual Work — Milestone

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

Date	Revision	Checked	Approved
08-Feb-21	3MRP DWP 2101	Tim	

Activity ID	Activity Name	Original Duration	Remaining Duration	3MRP Start	3MRP Finish	AP10 Start	AP10 Finish
Z1SU1034	Zone 1 Stage 1 R1 structure R2	435	201	20-Feb-20 A	08-Oct-21	20-Mar-20	07-Sep-21
Z1SU1040	Zone 1 Stage 2 RES1 SB foundation	107	326	02-Sep-20 A	10-Mar-22	05-Oct-21	15-Feb-22
NOISE BARRIER AND SEMI-ENCLOSURE							
PILE FOUNDATION WORKS							
SOUTHBOUND							
Z1_1060	R2_mini piles for R2-02P to 06P (13nr raking, 22nr ver)	175	21	01-Jun-20 A	27-Feb-21	19-Oct-20	25-May-21
Z1_1540	RSE1_mini piles for RSE1-51P to 56P (40nr ver)	160	160	01-Mar-21	11-Sep-21	20-Mar-21	05-Oct-21
PILE CAP AND FOOTING							
NORTHBOUND							
Z1_1000	R1_ELS for footing/cap construction R1-01 to R1-08 (110m_1 side)	30	18	19-Oct-20 A	24-Feb-21	31-Oct-20	04-Dec-20
Z1_1002	R1_footing construction R1-01, R1-03 to R1-08 (7nr)	147	88	27-Nov-20 A	16-Jun-21	28-Nov-20	01-Jun-21
Z1_1004	R1_pile cap construction R1-02P (1nr)	21	21	27-Jan-21 A	10-Jul-21	02-Jun-21	26-Jun-21
CENTRAL BARRIER							
Z1_1130	RSE1_ELS for footing construction RSE1-01 to RSE1-07 (83m_2 side)	46	35	02-Sep-20 A	16-Mar-21	29-Oct-20	22-Dec-20
Z1_1147	RSE1_footing/cap construction RSE1-01P to RSE1-05 (5nr)	105	79	02-Nov-20 A	12-May-21	31-Oct-20	09-Mar-21
SOUTHBOUND							
Z1_1070	R2_ELS for footing/cap construction R2-01 to R2-06P (68m_2 side)	38	30	04-Sep-20 A	11-Mar-21	08-May-21	24-Jun-21
Z1_1092	R2_footing/cap construction R2-01 to R2-06P(6nr)	126	101	23-Oct-20 A	16-Jul-21	29-Mar-21	24-Aug-21
Z1_1100	R2_backfill & remove ELS	12	11	15-Dec-20 A	29-Jul-21	24-Aug-21	07-Sep-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	219	21-Nov-19 A	29-Oct-21	08-Aug-19	10-Aug-21
Z2SU1010	Construction Zone 2_Stage 2 RSE2 SB foundation	254	449	24-Sep-20 A	09-Aug-22	25-Nov-21	06-Oct-22
NOISE BARRIER AND SEMI-ENCLOSURE							
PILE CAP AND FOOTING							
CENTRAL BARRIER							
Z2_1040	RSE2_ELS for footing/cap construction RSE2-01 to RSE2-15P (174m_2 side)	96	69	06-Aug-20 A	29-Apr-21	29-Oct-20	25-Feb-21
Z2_1060	RSE2_footing/cap construction RSE2-01P to 15P (14nr)	147	121	01-Sep-20 A	03-Jul-21	27-Jan-21	30-Jul-21
WORK BETWEEN CITYLINE PLAZA AND FOOTBRIDGE NF40 (ZONE 3)							
PRELIMINARIES WORKS							
SUMMARY PROGRAMME							
Z3SU5000	Zone 3a (TPR area) Stage 1 RW6, RW7 & SR4	354	244	20-Nov-19 A	27-Nov-21	02-Sep-19	10-Nov-20
Z3SU5030	Zone 3b (near SR6) Stage 1 Construct N263 & N264 foundation	393	130	09-Feb-20 A	14-Jul-21	31-Jul-19	23-Nov-20
Z3SU5040	Zone 3b (SB near SR6) Stage 1 Construct Lift Tower 2 & staircase	256	172	31-Mar-20 A	01-Sep-21	29-Jun-20	11-May-21
Z3SU5050	Zone 3b (near SR6) Stage 1 SE8 and SR6 foundation and N262 bridge	344	413	02-Jun-20 A	27-Jun-22	26-Jan-21	25-Mar-22
Z3SU5070	Zone 3b (near SR6) Stage 3 Construct SR5	682	417	28-Oct-20 A	02-Jul-22	01-Dec-20	21-Mar-23
Z3SU5100	Zone 3c (near SR3) Stage 1 construct RW1, SR3 & subway NS30	162	218	24-Jul-20 A	28-Oct-21	01-Dec-20	22-Jun-21
Z3SU5110	Zone 3c (near SR3) Stage 1 SR2 foundation & RW4 410 to 414	106	384	07-Sep-20 A	23-May-22	30-Jan-21	15-Jun-21
NOISE BARRIER AND SEMI-ENCLOSURE							
PILE FOUNDATION WORKS							
SOUTHBOUND							
Z3_1522	SE1-5_site investigation for S1E5-51 (2nr)	10	5	02-Jul-20 A	05-Feb-21	31-Aug-20	10-Sep-20
Z3_1524	SE1-5_mini piles for S1E5-51 (8nr ver)	40	40	01-Apr-21	24-May-21	24-Feb-21	16-Apr-21
SOUTHBOUND SLIP ROAD							
Z3_1765	SE8-1_mini piles for SR6 1-B & 2-B (9nr raking, 9nr vertn)	72	72	24-Mar-21	23-Jun-21	26-Jan-21	27-Apr-21
PILE CAP AND FOOTING							
SOUTHBOUND							
Z3_5650	SE2_ELS for cap construction S2E1-52P (10m_2 side)	6	6	13-Mar-21	20-Mar-21	08-Jan-21	15-Jan-21
Z3_5660	SE2_pile cap construction S2E1-52P (1nr)	21	21	20-Mar-21	19-Apr-21	15-Jan-21	09-Feb-21
Z3_5670	SE2_backfill & remove ELS	2	2	19-Apr-21	21-Apr-21	09-Feb-21	11-Feb-21
BRIDGE AND STRUCTURE WORKS							
PRELIMINARIES WORKS							
UTILITIES DIVERSION							
SOUTHBOUND							
Z3_2940	UU_CLP-slew 11kv cable for RW1 & 2 CH1500-1580 80m	9	9	14-Apr-21	24-Apr-21	15-Jan-21	26-Jan-21

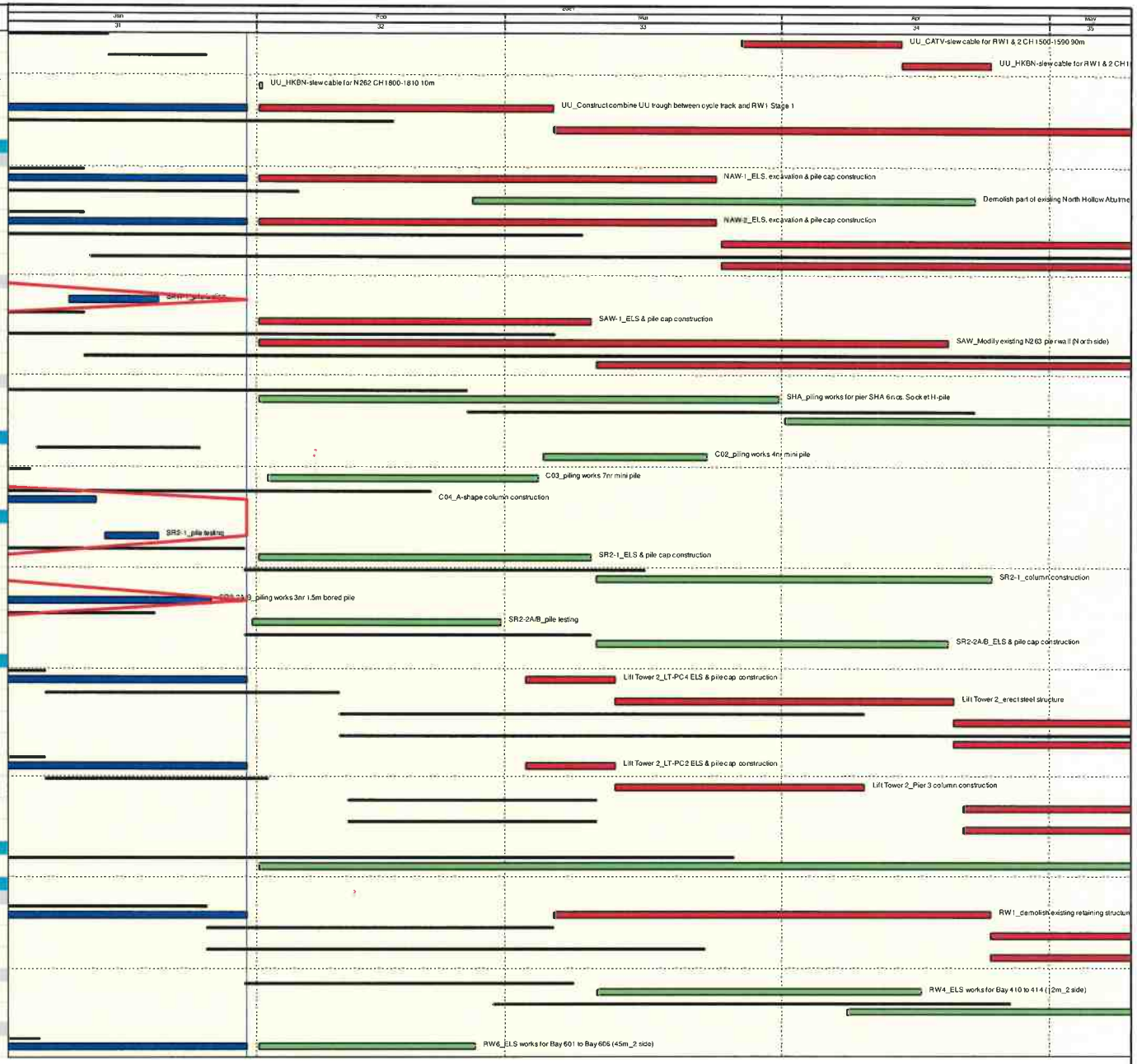


Remaining Level of Effort | Remaining Work | Primary Baseline
Actual Level of Effort | Critical Remaining Work | Baseline Milesto...
Actual Work | Milestone

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

Date	Revision	Checked	Approved
08-Feb-21	3MRP DWP 2101	Tim	

Activity ID	Activity Name	Original Duration	Remaining Duration	3MRP Start	3MRP Finish	AP10 Start	AP10 Finish
Z3_2950	UU_CATV-slew cable for RW1 & 2 CH1500-1590 90m	11	11	27-Mar-21	14-Apr-21	02-Jan-21	15-Jan-21
Z3_2960	UU_HKBN-slew cable for RW1 & 2 CH1500-1580 80m	9	9	14-Apr-21	24-Apr-21	15-Jan-21	26-Jan-21
Z3_3100	UU_HKBN-slew cable for N262 CH1800-1810 10m	1	1	01-Feb-21	01-Feb-21	05-Dec-20	05-Dec-20
Z3_5680	UU_Construct combine UU trough between cycle track and RW1 Stage 1	75	26	08-Jun-20 A	06-Mar-21	31-Jul-20	29-Oct-20
Z3_5685	UU_Construct combine UU trough between RW1 to SR3 Stage 2	60	60	06-Mar-21*	22-May-21	01-Dec-20	16-Feb-21
	MODIFICATION OF BRIDGE N263						
	RECONSTRUCTION ABUTMENT WALL AT NHA						
Z3_4140	NAW-1_ELS, excavation & pile cap construction	60	42	23-Oct-20 A	24-Mar-21	31-Oct-20	12-Jan-21
Z3_4145	Demolish part of existing North Hollow Abutment wall for construction new wall	45	45	25-Feb-21	22-Apr-21	12-Dec-20	05-Feb-21
Z3_4180	NAW-2_ELS, excavation & pile cap construction	60	42	28-Sep-20 A	24-Mar-21	31-Oct-20	12-Jan-21
Z3_4190	NAW_construct new abutment wall (North side)	60	60	25-Mar-21	09-Jun-21	23-Dec-20	09-Mar-21
Z3_4195	NAW_construct new abutment wall (Remaining)	100	100	25-Mar-21	28-Jul-21	13-Jan-21	18-May-21
	MODIFICATION EXISTING PIER WALL OF N263						
Z3_3890	SAW-1_pile testing	28	0	11-Jan-21 A	21-Jan-21 A	07-Nov-20	04-Dec-20
Z3_3900	SAW-1_ELS & pile cap construction	30	30	01-Feb-21	10-Mar-21	04-Dec-20	12-Jan-21
Z3_3940	SAW_Modify existing N263 pier wall (North side)	60	60	01-Feb-21	19-Apr-21	19-Dec-20	06-Mar-21
Z3_3945	SAW_construct new abutment wall (Remaining)	100	100	11-Mar-21	14-Jul-21	12-Jan-21	18-May-21
	MODIFICATION EXISTING SOUTH HOLLOW ABUTMENT WALL						
Z3_3950	SHA_piling works for pier SHA 6nos. Socket H-pile	48	48	01-Feb-21	31-Mar-21	23-Dec-20	24-Feb-21
Z3_3960	SHA_ELS & pile cap construction	45	45	01-Apr-21	29-May-21	24-Feb-21	22-Apr-21
	MODIFICATION OF BRIDGE N262						
Z3_3510	C02_piling works 4nr mini pile	16	16	05-Mar-21	23-Mar-21	07-Jan-21	25-Jan-21
Z3_3540	C03_piling works 7nr mini pile	24	24	02-Feb-21*	04-Mar-21	07-Dec-20	06-Jan-21
Z3_3590	C04_A-shape column construction	60	0	09-Dec-20 A	14-Jan-21 A	07-Dec-20	20-Feb-21
	NEW SLIP ROAD 2						
Z3_5340	SR2-1_pile testing	28	0	15-Jan-21 A	21-Jan-21 A	19-Nov-20	16-Dec-20
Z3_5350	SR2-1_ELS & pile cap construction	30	30	01-Feb-21	10-Mar-21	22-Dec-20	30-Jan-21
Z3_5360	SR2-1_column construction	35	35	11-Mar-21	24-Apr-21	30-Jan-21	16-Mar-21
Z3_5412	SR2-2A/B_piling works 3nr 1.5m bored pile	30	0	17-Dec-20 A	27-Jan-21 A	18-Nov-20	23-Dec-20
Z3_5414	SR2-2A/B_pile testing	28	28	31-Jan-21	28-Feb-21	24-Dec-20	20-Jan-21
Z3_5416	SR2-2A/B_ELS & pile cap construction	30	30	11-Mar-21	19-Apr-21	30-Jan-21	10-Mar-21
	LIFT TOWER 2 & STAIRCASE						
Z3_3680	Lift Tower 2_LT-PC4 ELS & pile cap construction	30	9	29-Dec-20 A	13-Mar-21	01-Dec-20	08-Jan-21
Z3_3690	Lift Tower 2_erect steel structure	28	28	13-Mar-21	20-Apr-21	08-Jan-21	10-Feb-21
Z3_3700	Lift Tower 2_external finishing	45	45	20-Apr-21	15-Jun-21	10-Feb-21	10-Apr-21
Z3_3710	Lift Tower 2_lift installation	90	90	20-Apr-21	07-Aug-21	10-Feb-21	05-Jun-21
Z3_3790	Lift Tower 2_LT-PC2 ELS & pile cap construction	30	9	29-Dec-20 A	13-Mar-21	01-Dec-20	08-Jan-21
Z3_3800	Lift Tower 2_Pier 3 column construction	21	21	13-Mar-21	10-Apr-21	08-Jan-21	02-Feb-21
Z3_3802	Lift Tower 2_Pier 2 column construction	21	21	21-Apr-21	17-May-21	11-Feb-21	11-Mar-21
Z3_3804	Lift Tower 2_Pier 1 column construction	21	21	21-Apr-21	17-May-21	11-Feb-21	11-Mar-21
	NEW SLIP ROAD 5						
Z3_5490	SR5-3_piling works 21nr mini pile	84	84	01-Feb-21	18-May-21	12-Dec-20	26-Mar-21
	RETAINING WALL & SUBWAY						
	RETAINING WALL NO.1						
Z3_4550	RW1_demolish existing retaining structure between Bay 101 and Bay 104	45	38	02-Dec-20 A	24-Apr-21	01-Dec-20	26-Jan-21
Z3_4560	RW1_ELS works for Bay 101 to Bay 104 (56m_2 side)	31	31	24-Apr-21	02-Jun-21	26-Jan-21	06-Mar-21
Z3_4600	RW1_demolish existing retaining structure between Bay 105 and Bay 107	45	45	24-Apr-21	19-Jun-21	26-Jan-21	23-Mar-21
	RETAINING WALL NO.4						
Z3_4840	RW4_ELS works for Bay 410 to 414 (12m_2 side)	28	28	11-Mar-21	16-Apr-21	30-Jan-21	08-Mar-21
Z3_4850	RW4_base slab construction for Bay 410 to 414	45	45	08-Apr-21	02-Jun-21	27-Feb-21	26-Apr-21
	RETAINING WALL NO.6						
Z3_1218_10	RW6_ELS works for Bay 601 to Bay 606 (45m_2 side)	25	19	18-Nov-20 A	25-Feb-21	07-Dec-20	07-Jan-21



Remaining Level of Effort | Remaining Work | Primary Baseline
Actual Level of Effort | Critical Remaining Work | Baseline Mileste...
Actual Work | Milestone

ROAD WIDENING & RETROFITTING NOISE BARRIERS ON TAI PO ROAD (SHA TIN SECTION)
3 Months Rolling Programme (31/1/21)
Page 3 of 5

Date	Revision	Checked	Approved
08-Feb-21	3MRP DWP 2101	Tim	

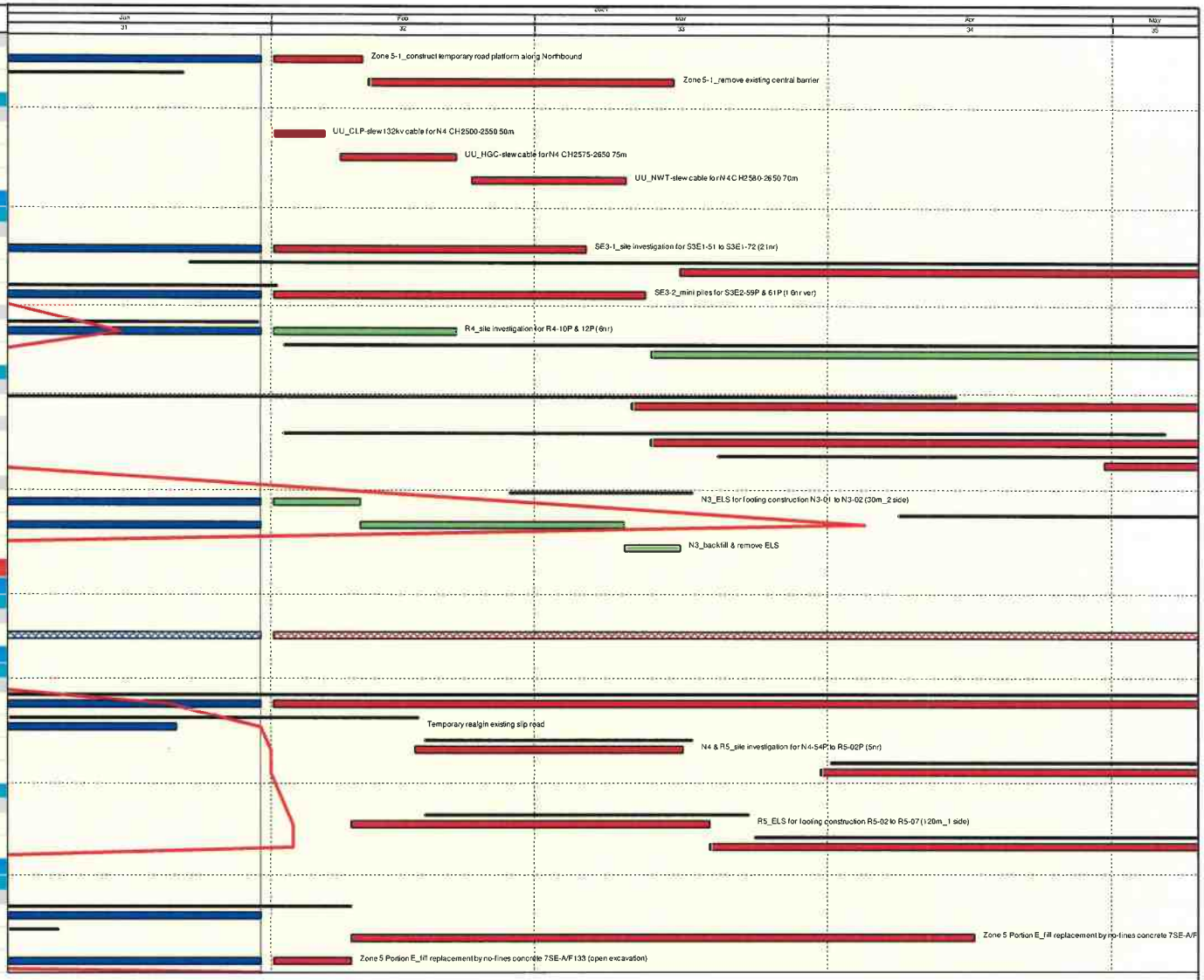
Activity ID	Activity Name	Original Duration	Remaining Duration	Early Start	Early Finish	AP10 Start	AP10 Finish
Z3_1218_10	RW6_base slab construction for Bay 601 to Bay 606	48	42	09-Jan-21 A	24-Mar-21	22-Dec-20	22-Feb-21
Z3_1218_10	RW6_retaining wall construction for Bay 601 to Bay 606	72	72	06-Feb-21	10-May-21	22-Jan-21	23-Apr-21
Z3_1218_10	RW6_base slab construction for Bay 613 & Bay 614	16	16	25-Mar-21	16-Apr-21	23-Feb-21	12-Mar-21
	RETAINING WALL NO.7						
	MODIFY EXISTING RETAINING WALL SR3						
Z3_4920	SR3_ELS works for Bay SR301 to Bay SR306 (67m_1 side)	19	19	24-Jul-20 A	25-Feb-21	05-Nov-20	26-Nov-20
Z3_4940	SR3_base slab construction for Bay SR301 to Bay SR306	48	48	25-Feb-21	27-Apr-21	02-Dec-20	29-Jan-21
Z3_4950	SR3_retaining wall construction for Bay SR301 to SR306	72	72	25-Mar-21	25-Jun-21	02-Jan-21	30-Mar-21
Z3_5020	SR3_ELS works for Bay SR307 to Bay SR311 (60m_1 side)	17	16	18-Dec-20 A	16-Mar-21	02-Dec-20	21-Dec-20
Z3_5040	SR3_base slab construction for Bay SR307 to Bay SR311	40	40	27-Apr-21	16-Jun-21	30-Jan-21	20-Mar-21
	MODIFY EXISTING RETAINING WALL SR4						
Z3_5070	SR4_ELS works for Bay SR401 to Bay SR405 (90m_1 side)	26	0	22-Jun-20 A	28-Jan-21 A	26-Aug-20	24-Sep-20
Z3_5080	SR4_base slab construction for Bay SR401 to Bay SR405	40	8	10-Jul-20 A	09-Feb-21	31-Aug-20	19-Oct-20
Z3_5090	SR4_retaining wall construction for Bay SR401 to SR405	60	48	31-Oct-20 A	31-Mar-21	31-Oct-20	13-Jan-21
Z3_5100	SR4_remove ELS & backfill for Bay SR401 to SR405	10	10	01-Apr-21	16-Apr-21	06-Jan-21	18-Jan-21
Z3_5120	SR4_base slab construction for Bay SR406 to Bay SR409	32	0	10-Aug-20 A	15-Jan-21 A	19-Oct-20	26-Nov-20
Z3_5130	SR4_retaining wall construction for Bay SR406 to SR409	48	48	01-Apr-21	02-Jun-21	06-Jan-21	06-Mar-21
	MODIFY EXISTING SUBWAY NS30						
Z3_4542	Demolish existing subway & construct NS30	160	136	02-Dec-20 A	21-Aug-21	01-Dec-20	21-Jun-21
	WORK BETWEEN FOOTBRIDGE NF40 AND NF66 (ZONE 4)						
	PRELIMINARIES WORKS						
	SUMMARY PROGRAMME						
Z4SU1005	Zone 4 Stage 1 NB & SB foundation	434	236	06-Mar-20 A	19-Nov-21	31-Mar-20	16-Sep-21
Z4SU1100	Zone 4 NF66 Construction	220	109	20-Jul-20 A	18-Jun-21	31-Aug-20	31-May-21
Z4SU1110	Zone 4 NF40 Construction	387	224	12-Oct-19 A	05-Nov-21	06-Jan-20	28-Apr-21
	PREPARATORY WORKS						
	MODIFICATION EXISTING ROAD/TEMPORARY ROAD						
Z4_1335	Zone 4 & 5_construct temporary road platform along Northbound	60	12	04-Jan-21 A	17-Feb-21	07-Dec-20	20-Feb-21
	UTILITIES DIVERSION						
	NORTHBOUND						
Z4_1288	UU_CATV-slew cable for N4 CH2190-2400 210m	25	25	20-Apr-21	20-May-21	18-Mar-21	20-Apr-21
Z4_1300	UU_HKT-slew cable for N4 & NF66 CH2320-2360 40m	5	5	01-Feb-21	05-Feb-21	31-Oct-20	05-Nov-20
	NOISE BARRIER AND SEMI-ENCLOSURE						
	PILE FOUNDATION WORKS						
	NORTHBOUND						
Z4_1520	N4_mini piles for N4-12 to N4-27 (126nr ver)	128	128	01-Feb-21	12-Jul-21	04-Jan-21	11-Jun-21
	SOUTHBOUND						
Z4_1120	SE6_mini piles for S6E1-51P to S7P (48nr ver)	192	0	19-Aug-20 A	19-Jan-21 A	16-Sep-20	13-May-21
Z4_1540	SE6_mini piles for S6E1-58 to S6E1-69 (70nr ver)	140	74	05-Jun-20 A	07-May-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	48	22-Apr-21	21-Jun-21	09-Mar-21	10-May-21
	BRIDGE AND STRUCTURE WORKS						
	MODIFICATION WORKS FOR NF40						
NF40_1010	Demolish existing staircase	45	2	28-Oct-20 A	03-Feb-21	31-Oct-20	22-Dec-20
NF40_1080	Construct pile cap & part of new column	60	60	03-Feb-21	22-Apr-21	22-Dec-20	09-Mar-21
NF40_1090	Construct temporary support tower & jack up NF40	60	60	22-Apr-21	06-Jul-21	09-Mar-21	25-May-21
	MODIFICATION WORKS FOR NF66						
NF66_1020	Construct the new column & columnhead	60	60	08-Feb-21 A	24-Apr-21	14-Dec-20	27-Feb-21
NF66_1030	Erection temporary support tower	60	60	17-Mar-21	01-Jun-21	21-Jan-21	07-Apr-21
NF66_1040	Remove existing column	60	60	06-Apr-21	18-Jun-21	06-Feb-21	24-Apr-21
	WORK BETWEEN FOOTBRIDGE NF66 AND FO TAN ROAD (ZONE 5)						
	PRELIMINARIES WORKS						
	SUMMARY PROGRAMME						
Z5SU1005	Zone 5 Stage 1 NB & SB foundation	467	295	10-Feb-20 A	29-Jan-22	31-Mar-20	28-Oct-21
	PREPARATORY WORKS						

Remaining Level of Effort | Remaining Work | Primary Baseline
Actual Level of Effort | Critical Remaining Work | Baseline Milesto...
Actual Work | Milestone

ROAD WIDENING & RETROFITTING NOISE BARRIERS ON TAI PO ROAD (SHA TIN SECTION)
3 Months Rolling Programme (31/1/21)
Page 4 of 5

Date	Revision	Checked	Approved
08-Feb-21	3MRP DWP 2101	Tim	

Activity ID	Activity Name	Original Duration	Remaining Duration	Actual Start	Actual Finish	Actual Start	Actual Finish
MODIFICATION EXISTING ROAD/TEMPORARY ROAD							
Z5_1720	Zone 5-1_construct temporary road platform along Northbound	45	9	04-Jan-21 A	10-Feb-21	31-Oct-20	22-Dec-20
Z5_1730	Zone 5-1_remove existing central barrier	21	21	11-Feb-21	15-Mar-21	23-Dec-20	22-Jan-21
UTILITIES DIVERSION							
NORTHBOUND							
Z5_1610	UU_CLP-slew 132kv cable for N4 CH2500-2550 50m	6	6	01-Feb-21	06-Feb-21	31-Oct-20	06-Nov-20
Z5_1630	UU_HGC-slew cable for N4 CH2575-2650 75m	9	9	08-Feb-21	20-Feb-21	07-Nov-20	17-Nov-20
Z5_1640	UU_NWT-slew cable for N4 CH2580-2650 70m	15	15	22-Feb-21	10-Mar-21	18-Nov-20	04-Dec-20
NOISE BARRIER AND SEMI-ENCLOSURE							
PILE FOUNDATION WORKS							
SOUTHBOUND							
Z5_1170	SE3-1_site investigation for S3E1-51 to S3E1-72 (21nr)	55	26	05-May-20 A	06-Mar-21	15-Jul-20	16-Sep-20
Z5_1180	SE3-1_mini piles for S3E1-51 to S3E1-72 (132nr ver)	132	132	16-Mar-21	25-Aug-21	23-Jan-21	08-Jul-21
Z5_2000	SE3-2_mini piles for S3E2-59P & 61P (16nr ver)	64	32	27-Nov-20 A	12-Mar-21	16-Nov-20	01-Feb-21
SOUTHBOUND SLIP ROAD							
Z5_1290	R4_site investigation for R4-10P & 12P (6nr)	30	15	13-Aug-20 A	20-Feb-21	24-Dec-20	30-Jan-21
Z5_1300	R4_mini piles for R4-10P (12nr raking, 11nr ver)	92	92	13-Mar-21	07-Jul-21	02-Feb-21	29-May-21
PILE CAP AND FOOTING							
NORTHBOUND							
Z5_1020	N4_ELS for footing/cap construction N4-29 to N4-53 (322m_2 side)	89	89	11-Mar-21*	30-Jun-21	21-Dec-20	14-Apr-21
SOUTHBOUND							
Z5_1230	SE3-2_ELS for footing construction S3E2-51 to S3E2-61P (131m_2 side)	73	73	13-Mar-21	12-Jun-21	02-Feb-21	06-May-21
Z5_1245	SE3-2_footing/cap construction S3E2-51 to 61P (9nr)	189	189	30-Apr-21	14-Dec-21	20-Mar-21	08-Nov-21
SOUTHBOUND SLIP ROAD							
Z5_1260	N3_ELS for footing construction N3-01 to N3-02 (30m_2 side)	17	9	01-Oct-20 A	10-Feb-21	26-Feb-21	17-Mar-21
Z5_1270	N3_footing construction N3-01 to N3-02 (2nr)	42	21	24-Oct-20 A	10-Mar-21	08-Apr-21	31-May-21
Z5_1280	N3_backfill & remove ELS	5	5	10-Mar-21	15-Mar-21	19-Dec-20	28-Dec-20
PORTION E (ZONE 5)							
PRELIMINARIES WORKS							
SUMMARY PROGRAMME							
TPR NORTHBOUND							
PESU1000	Construction Zone 5 Portion E_Northbound structure	336	279	11-May-20 A	11-Jan-22	31-Jul-20	16-Sep-21
NOISE BARRIER AND SEMI-ENCLOSURE							
PILE FOUNDATION WORKS							
NORTHBOUND SLIP ROAD							
Z5E_1010	R6_mini piles for R6-02P & R6-06P (25nr raking, 16nr ver)	164	134	27-Oct-20 A	20-Jul-21	12-Dec-20	08-Jul-21
Z5E_1185	Temporary realgin existing slip road	35	0	04-Jan-21 A	22-Jan-21 A	04-Jan-21	16-Feb-21
Z5E_1190	N4 & R5_site investigation for N4-54P to R5-02P (5nr)	25	25	16-Feb-21*	16-Mar-21	17-Feb-21	17-Mar-21
Z5E_1200	N4 & R5_mini piles for N4-54P to R5-02P (16nr raking, 16nr ver)	128	128	31-Mar-21	04-Sep-21	01-Apr-21	06-Sep-21
PILE CAP AND FOOTING							
NORTHBOUND SLIP ROAD							
Z5E_1020	R5_ELS for footing construction R5-02 to R5-07 (120m_1 side)	30	30	09-Feb-21	19-Mar-21	17-Feb-21	23-Mar-21
Z5E_1030	R5_footing construction R5-03 to R5-07 (5nr)	63	63	19-Mar-21	08-Jun-21	24-Mar-21	11-Jun-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	24-Dec-21	09-Dec-20	09-Feb-21
Z5E_1160	Zone 5 Portion E_fill replacement by no-fines concrete 7SE-A/F136 (open excavation)	50	50	09-Feb-21*	16-Apr-21	09-Nov-20	09-Jan-21
Z5E_1170	Zone 5 Portion E_fill replacement by no-fines concrete 7SE-A/F133 (open excavation)	36	8	10-Feb-20 A	09-Feb-21	11-Sep-20	28-Oct-20



Remaining Level of Effort | Remaining Work | Primary Baseline
Actual Level of Effort | Critical Remaining Work | Baseline Milesto...
Actual Work | Milestone

ROAD WIDENING & RETROFITTING NOISE BARRIERS ON TAI PO ROAD (SHA TIN SECTION)
3 Months Rolling Programme (31/1/21)
Page 5 of 5

Date	Revision	Checked	Approved
08-Feb-21	3MRP DWP 2101	Tim	

FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

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

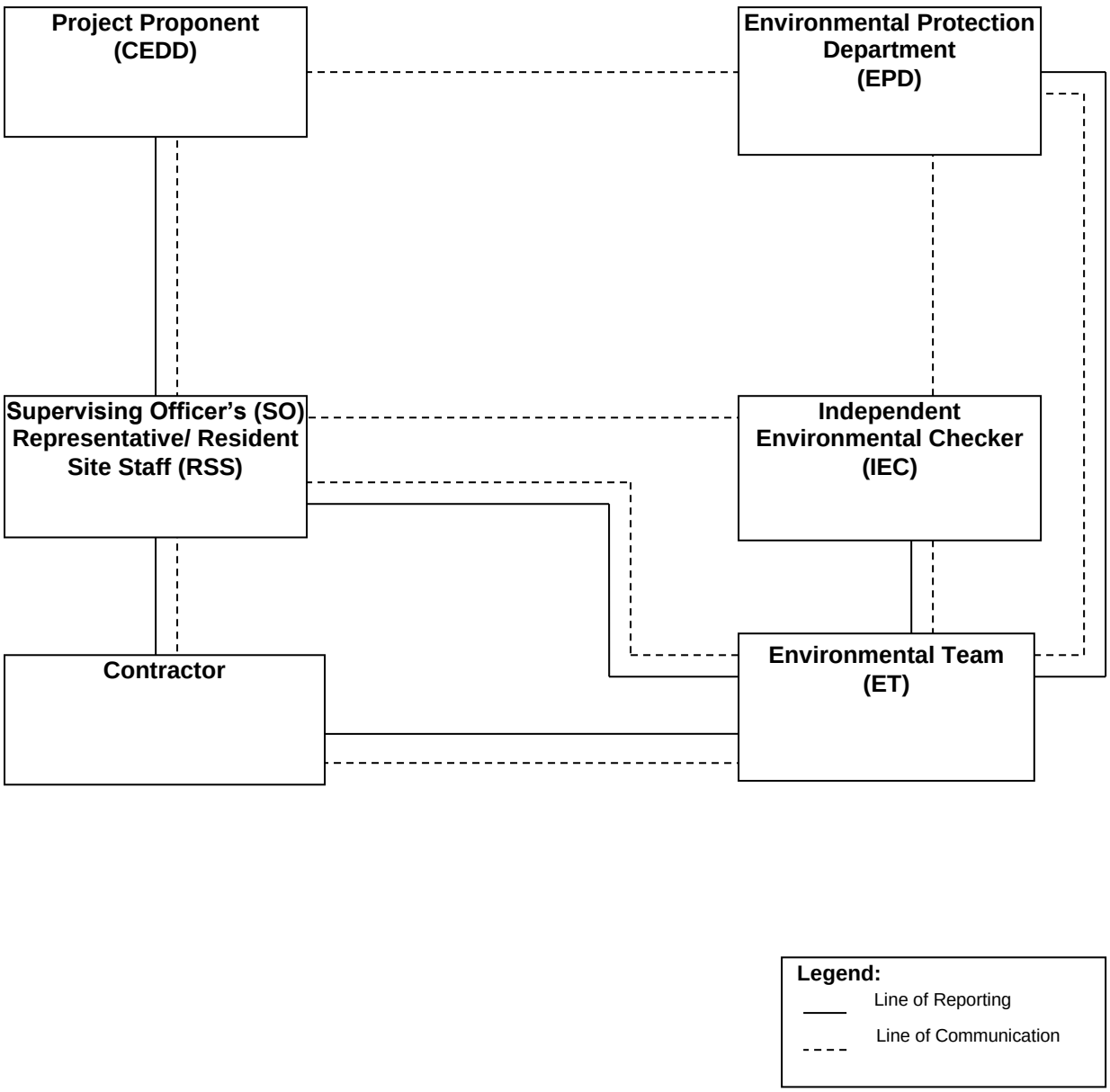
Appendix B

Project Organization Chart

FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

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



FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

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

Appendix C

Action and Limit Levels for Air Quality and Noise

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

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

Parameter	Monitoring Station	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/ m^3$)
24-hr TSP ($\mu g/m^3$)	AMS 5	156	260
	AMS 8	161	
	AMS 11A	165	
	AMS 12	168	
1-hr TSP ($\mu g/m^3$)	AMS 5	340	500
	AMS 8	336	
	AMS 11A	335	
	AMS 12	296	

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

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

* 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.

FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

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

Appendix D

Calibration Certificates of Monitoring Equipment

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report no. : 940891CA201915(2)

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.	: 761106
Specification Limit	: NA
Next Calibration Date	: 13-Aug-2021

Laboratory Information

Description	: Reference balance
Equipment ID.	: R-039-12
Date of Calibration	: 14-Aug-2020 Ambient Temperature : 33 °C
Calibration Location	: Calibration Laboratory of FTS
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)
0.0632	1555	25.92
0.0687	1627	27.12
0.0543	1456	24.27

Remarks:

1. The equipment being used in this calibration is traceable to recognized National Standards.
2. The interpolation equation : Concentration (mg/m^3) = K x [UUT reading (CPM)], where K = 0.002409
3. Correlation coefficient (r) : 0.9990

Checked by : Date : 16-9-2020 Certified by : Date : 21-9-2020

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

Leung Kwok Tai (Assistant Manager)

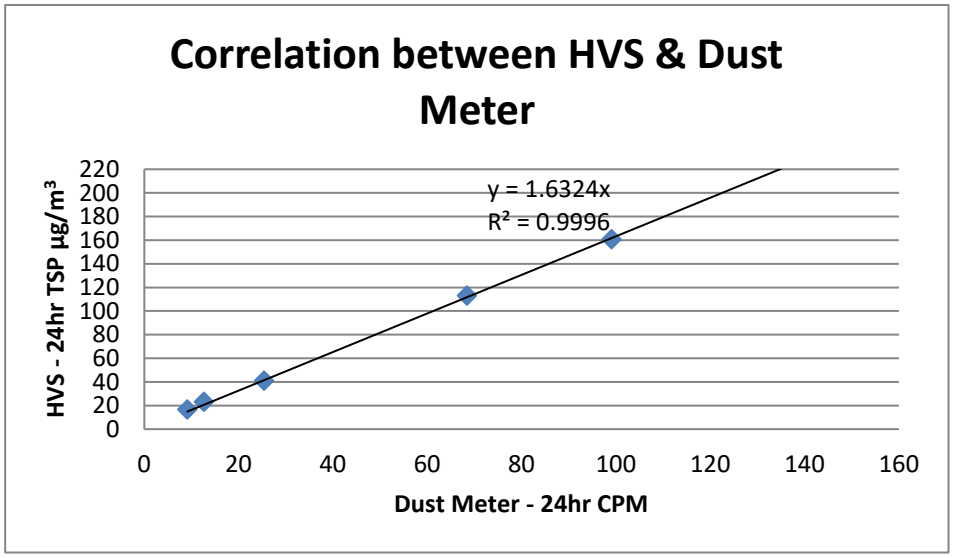
** End of Report **

Correlation between HVS & Dust Meter

Model: Sibata LD-5R

Serial No: 761106

HVS - 24hr TSP µg/m^3	16.56	23.11	41.02	112.97	160.87	220.44
Dust Meter - 24hr CPM	9.1	12.6	25.4	68.4	99.1	135.2



K factor = 1.6324

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report no. : 940891CA201915

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.	: 892187
Specification Limit	: NA
Next Calibration Date	: 13-Aug-2021

Laboratory Information

Description	: TSP high volume air sampler
Serial no.	: 4350
Date of Calibration	: 14-Aug-2020 Ambient Temperature : 33 °C
Calibration Location	: 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)
0.0632	1573	26.22
0.0687	1608	26.80
0.0543	1473	24.55

Remarks:

1. The equipment being used in this calibration is traceable to recognized National Standards.
2. The interpolation equation : Concentration (mg/m^3) = K x [UUT reading (CPM)], where K = 0.002401
3. Correlation coefficient (r) : 0.9908

Checked by : _____ Date : 16-9-2020 Certified by : K.T. Leung Date : 21-9-2020

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

Leung Kwok Tai (Assistant Manager)

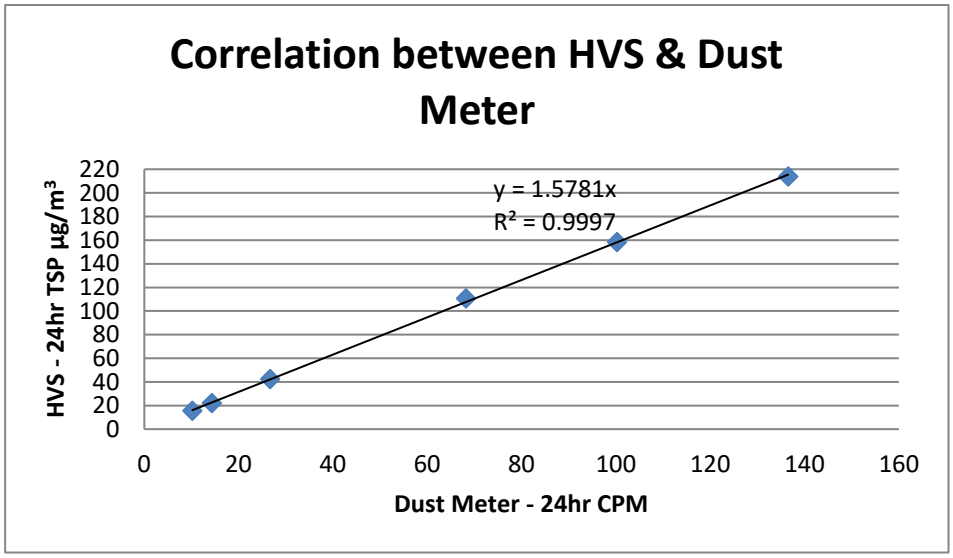
** End of Report **

Correlation between HVS & Dust Meter

Model: Sibata LD-5R

Serial No: 892187

HVS - 24hr TSP µg/m^3	15.66	22.08	42.33	110.54	158.23	213.93
Dust Meter - 24hr CPM	10.2	14.3	26.7	68.2	100.2	136.5



K factor = 1.5781

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report no. : 940891CA201915(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.	: 892189
Specification Limit	: NA
Next Calibration Date	: 13-Aug-2021

Laboratory Information

Description	: TSP high volume air sampler
Serial no.	: 4350
Date of Calibration	: 14-Aug-2020 Ambient Temperature : 33 °C
Calibration Location	: 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)
0.0632	1507	25.12
0.0687	1541	25.68
0.0543	1458	24.30

Remarks:

1. The equipment being used in this calibration is traceable to recognized National Standards.
2. The interpolation equation : Concentration (mg/m^3) = K x [UUT reading (CPM)], where K = 0.002479
3. Correlation coefficient (r) : 0.9995

Checked by : _____ Date : 16-9-2020 Certified by : _____ Date : 21-9-2020

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

Leung Kwok Tai (Assistant Manager)

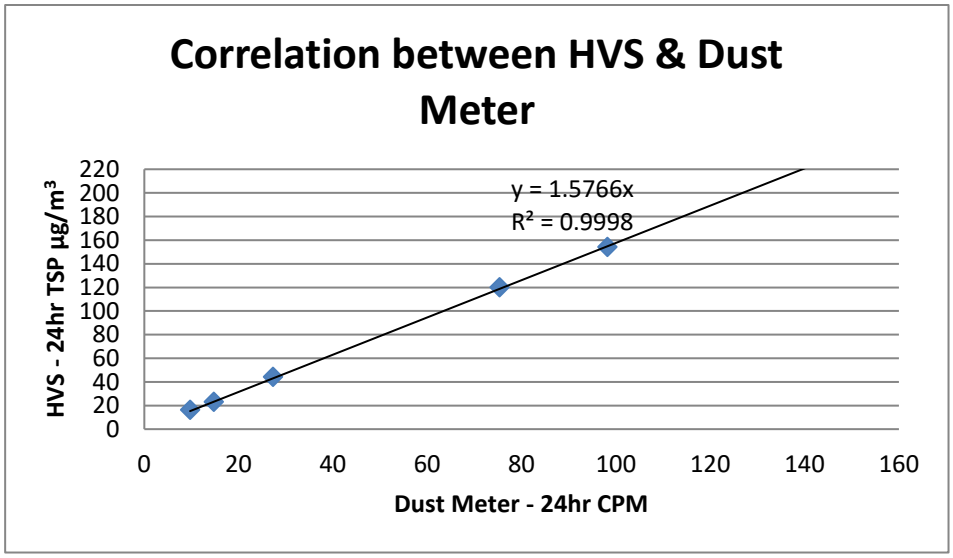
** End of Report **

Correlation between HVS & Dust Meter

Model: Sibata LD-5R

Serial No: 892189

HVS - 24hr TSP µg/m^3	16.45	23.11	44.23	120.03	154.34	220.37
Dust Meter - 24hr CPM	9.7	14.7	27.3	75.3	98.2	140.2



K factor = 1.5766

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report no. : 940891CA202730(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.	: 761105
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	3647	60.78
0.0469	3027	50.45
0.1172	3861	64.35

Remarks:

1. The equipment being used in this calibration is traceable to recognized National Standards.
2. The interpolation equation : Concentration (mg/m^3) = K x [UUT reading (CPM)], where K = 0.001456
3. Correlation coefficient (r) : 0.9928

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

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

Leung Kwok Tai (Assistant Manager)

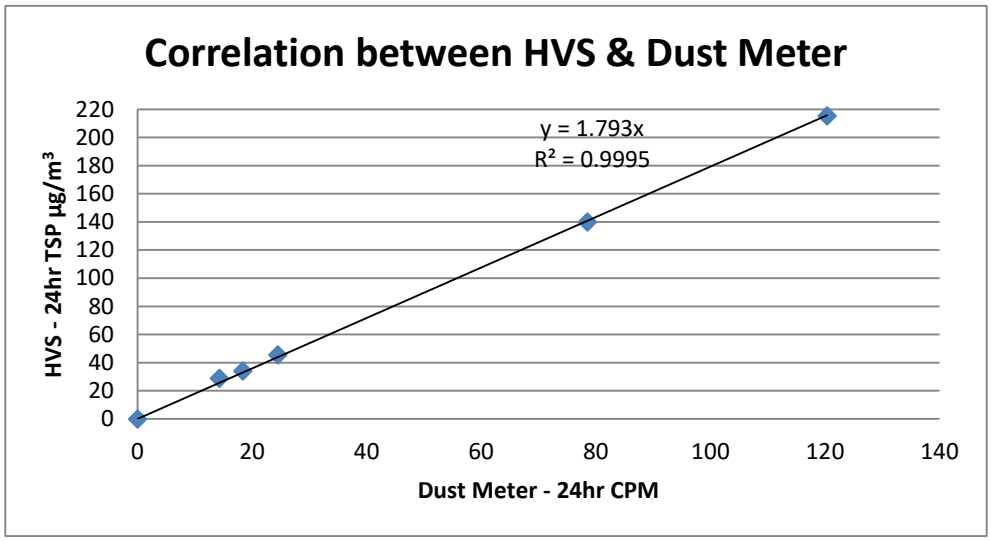
** End of Report **

Correlation between HVS & Dust Meter

Model: Sibata LD-5R

Serial No: 761105

HVS - 24hr TSP µg/m^3	28.99	34.06	45.57	139.89	215.48
Dust Meter - 24hr CPM	14.3	18.4	24.5	78.51	120.36



K factor = 1.793

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report no.: 203258CA202751

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
Method Used : By direct comparison
Ambient Temperature : 20±2 °C
Relative Humidity : <80% R.H.

Calibration Results :

Parameters		Mean Value (dB)	Specification Limit(dB)
A-weigthing 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 :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. The mean value is the average of four measurements.
3. For calibration: Reference SPL are 94, 104 & 114dB, range setting is 20-140dB & time weighting is fast.
4. The UUT does comply with EN 61672-1: 2003 Class 1 sound level meter for the above measurement.
5. 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 tranportation, overloading, mis-handling or the capability of any other laboratory to repeat the measurement.

Checked by : William Date : 28-12-2020 Certified by : K.T. Leung Date : 28-12-2020

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

Leung Kwok Tai (Assistant Manager)

** End of Report **

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report no.: 203258CA202083

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. :	1488272	03392	003921

Equipment ID : N/A
Next Calibration Date : 04-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 : 05-Oct-2020
Calibration Location : Calibration Laboratory of FTS
Method Used : By direct comparison
Ambient Temperature : 20±2 °C
Relative Humidity : <80% R.H.

Calibration Results :

Parameters		Mean Value (dB)	Specification Limit(dB)
A-weigthing frequency response	4000Hz	0.7	2.6 to -0.6
	2000Hz	1.1	2.8 to -0.4
	1000Hz	0.8	1.1 to -1.1
	500Hz	-1.9	-1.8 to -4.6
	250Hz	-7.2	-7.2 to -10.0
	125Hz	-15.0	-14.6 to -17.6
	63Hz	-26.3	-24.7 to -27.7
	31.5Hz	-41.4	-37.4 to -41.4
Differential level linearity	94dB-104dB	0.1	± 0.6
	104dB-114dB	0.0	± 0.6

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. For calibration: Reference SPL are 94, 104 & 114dB, range setting is 20-140dB & time weighting is fast.
4. The UUT does comply with EN 61672-1: 2003 Class 1 sound level meter for the above measurement.
5 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 tranportation, overloading, mis-handling or the capability of any other laboratory to repeat the measurement.

Checked by : William Date : 7-10-2020 Certified by : K.T.Leung Date : 8-10-2020

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

Leung Kwok Tai (Assistant Manager)

** End of Report **

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report no.: 203258CA201298(2)

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. :	1488314	03437	003046

Equipment ID : N/A

Next Calibration Date : 13-Jul-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 : 14-Jul-2020

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

Method Used : By direct comparison

Calibration Results :

Parameters		Mean Value (dB)	Specification Limit(dB)
A-weigthing frequency response	4000Hz	0.9	2.6 to -0.6
	2000Hz	1.1	2.8 to -0.4
	1000Hz	0.0	1.1 to -1.1
	500Hz	-3.3	-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	-39.4	-37.4 to -41.4
Differential level linearity	94dB-104dB	0.0	± 0.6
	104dB-114dB	0.0	± 0.6

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. For calibration: Reference SPL are 94, 104 & 114dB, range setting is 20-140dB & time weighting is fast
4. The UUT complies with EN 61672-1: 2003 Class 1 sound level meter for the above measurement.
5 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 tranportation, overloading, mis-handling or the capability of any other laboratory to repeat the measurement.

Checked by : William Date : 21-7-2020 Certified by : K.T. Leung Date : 21-7-2020

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

Leung Kwok Tai (Assistant Manager)

** End of Report **

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report no.: 203258CA201368(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.	:	1677126
Equipment ID	:	N/A
Next Calibration Date	:	12-Aug-2021
Specification Limit	:	EN 60942: 2003 Class 1

Laboratory Information

Details of Calibration Equipment

Description	:	Reference Sound level meter
Equipment ID.	:	R-119-1

Date of Calibration : 13-Aug-2020

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

Method Used : By direct comparison

Calibration Results :

Parameters (Setting of UUT)	Mean Value (error of measurement)	Specification Limit(dB)
94dB	0.2 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 equipment does comply 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 : William Date : 18-8-2020 Certified by : K T Leung Date : 20-8-2020

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

Leung Kwok Tai (Assistant Manager)

** End of Report **

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report no.: 203258CA202146(2)

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.	:	2383707
Equipment ID	:	N/A
Next Calibration Date	:	14-Oct-2021
Specification Limit	:	EN 60942: 2003 Class 1

Laboratory Information

Details of Calibration Equipment

Description	:	Reference Sound level meter
Equipment ID.	:	R-119-1
Date of Calibration	:	15-Oct-2020
Calibration Location	:	Calibration Laboratory of FTS
Method Used	:	By direct comparison

Ambient Temperature : 20±2 °C

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 : William Date : 19-10-2020 Certified by : K.T.Leung Date : 19-10-2020

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

Leung Kwok Tai (Assistant Manager)

** End of Report **

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report no.: 203258CA201298(1)

CALIBRATION CERTIFICATE OF SOUND CALIBRATOR

Client Supplied Information

Client : Fugro Technical Services Ltd.

Project : Calibration Services

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	:	13-Jul-2021
Specification Limit	:	EN 60942: 2003 Type 1

Laboratory Information

Description	:	Reference Sound level meter
Equipment ID.	:	R-119-1
Date of Calibration :	14-Jul-2020	Ambient Temperature : 20±2 °C
Calibration Location :	Calibration Laboratory of FTS	
Method Used	:	By direct comparison

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 equipment does comply with the specification limit.
4. 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 tranportation, overloading, mis-handling or the capability of any other laboratory to repeat the measurement.

Checked by : William Date : 21-7-2020 Certified by : K.T. Leung Date : 21-7-2020

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

Leung Kwok Tai (Assistant Manager)

** End of Report **

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report no.: 183057CA200894(2)

CALIBRATION CERTIFICATE OF SOUND CALIBRATOR

Client Supplied Information

Client : Fugro Technical Services Ltd.

Project : Calibration Services

Details of Unit Under Test, UUT

Description	:	Sound Calibrator
Manufacturer	:	Casella (Model CEL-120/1)
Serial No.	:	4358289
Equipment ID	:	N/A
Next Calibration Date	:	14-Jun-2021
Specification Limit	:	EN 60942: 2003 Type 1

Laboratory Information

Description	:	Reference Sound level meter
Equipment ID.	:	R-119-1
Date of Calibration :	15-Jun-2020	Ambient Temperature : 22 °C
Calibration Location :	Calibration Laboratory of FTS	
Method Used	:	By direct comparison

Calibration Results :

Parameters (Setting of UUT)	Mean Value (error of measurement)	Specification Limit(dB)
94dB	-0.3 dB	±0.4dB
114dB	-0.3 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 equipment does comply with the specification limit.
4. 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 tranportation, overloading, mis-handling or the capability of any other laboratory to repeat the measurement.

Checked by : William Date : 20-6-2020 Certified by : P L Leung Date : 20-6-2020

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

Leung Kwok Tai (Assistant Manager)

** End of Report **

FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

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

Appendix E

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

Project: Contract No.: NE/2017/05 - Road Widening and Retrofitting Noise Barriers on Tai Po Road (Sha Tin Section)

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Feb-21		1	2	3	4	5	6
				AMS5 Tin Liu AMS8 Lek Yuen Estate AMS11A Sheung Wo Che AMS12 Fung Wo Estate			
				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		
	7	8	9	10	11	12	13
			AMS5 Tin Liu AMS8 Lek Yuen Estate AMS11A Sheung Wo Che AMS12 Fung Wo Estate		AMS5 Tin Liu AMS8 Lek Yuen Estate AMS11A Sheung Wo Che AMS12 Fung Wo Estate		
			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			
	14	15	16	17	18	19	20
				AMS5 Tin Liu AMS8 Lek Yuen Estate AMS11A Sheung Wo Che AMS12 Fung Wo Estate			
				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		
	21	22	23	24	25	26	27
			AMS5 Tin Liu AMS8 Lek Yuen Estate AMS11A Sheung Wo Che AMS12 Fung Wo Estate				
			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			
	28						

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 Feb 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, 3, 4 & 5.
(2) Mini Pile Construction Works in Zone 1,2, 4 & 5.
(3) Noise Barrier Foundation Works in Zone 1, 2, 3, 4 & 5.
(4) Construction / Diversion of Underground Utilities in Zone1, 2, and 3.
(5) Sheet Pile Removal in Zone 2.
(6) Trial pits excavation in Zone 3, 4 & 5.
(7) Retaining Wall Construction Works and Demolition of Existing Parapet in Zone 3.
(8) Bored Pile Construction Works and Pre Drilling Works in Zone 3.
(9) Lagging wall and Retaining wall in Zone 3.
(10) Sheet Piling Works in Zone 3.
(11) Superstructure Works for N262 widening in Zone 3.
(12) Pre Drilling Works in Zone 3.
(13) Mini Pile Works / Pre Bore H Pile Works in Zone 3.
(14) NF40 Footbridge Pile Cap and Column Construction Works in Zone 4.
(15) NF66 Footbridge Column Construction Works in Zone 4.
(16) Soil Replacement Works on Slope in Zone 5.
(17) Lane Shifting Works in Zone 4 & 5.
(18) Temporary Road Construction Works in Zone 5.

Project: Contract No.: NE/2017/05 - Road Widening and Retrofitting Noise Barriers on Tai Po Road (Sha Tin Section)

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Mar-21		1	2	3	4	5	6
		AMS2 Villa Le Parc AMS5 Tin Liu AMS7A Sheung Wo Che AMS14 Ha Wo Che					AMS2 Villa Le Parc AMS5 Tin Liu AMS7A Sheung Wo Che AMS14 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				
	7	8	9	10	11	12	13
						AMS2 Villa Le Parc AMS5 Tin Liu AMS7A Sheung Wo Che AMS14 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,
	14	15	16	17	18	19	20
					AMS2 Villa Le Parc AMS5 Tin Liu AMS7A Sheung Wo Che AMS14 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	
	21	22	23	24	25	26	27
				AMS2 Villa Le Parc AMS5 Tin Liu AMS7A Sheung Wo Che AMS14 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		
	28	29	30	31			
			AMS2 Villa Le Parc AMS5 Tin Liu AMS7A Sheung Wo Che AMS14 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 Mar 2021 are 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, 3, 4 & 5.
(2) Construction / Diversion of Underground Utilities in Zone1, 2, 3 and 4.
(3) Noise Barrier Foundation Works in Zone 1, 2, 3, 4 & 5.
(4) Mini Pile Construction Works in Zone 1, 3, 4 & 5.
(5) Trial pits excavation in Zone 3, 4 & 5.
(6) Retaining Wall Construction Works, Construction of Cycle Track Subway and Demolition of Existing Parapet in Zone 3.
(7) Lagging Wall Construction Works and Pre Drilling Works in Zone 3.
(8) Superstructure Works for N262 widenin in Zone 3.
(9) Lane Shifting Works in Zone 3, 4 & 5.
(10) Pre Bored Pile Construction Works and Pre Drilling Works in Zone 3.
(11) Demolition of Central Median, and Temporary Median Module Installation Works in Zone 4.
(12) NF40 Footbridge Pile Cap and Column Construction Works in Zone 4.
(13) NF66 Footbridge Column Construction Works in Zone 4.
(14) Soil Replacement Works on Slope in Zone 5.
(15) Temporary Road Construction Works in Zone 4 & 5.

聖公會主風小學 2020-2021 年度上學期校曆表

週次	月份	星期 日	一	二	三	四	五	六	行事要項	假期日數
1	2020			1★	2	3	4	5	**1/9** 上學期開學日	
2	九	6	7	8	9	10	11	12		
3	月	13	14	15	16	17	18	19		
4		20	21	22	23	24	25	26		
5		27	28	29	30					
						1	2	3	**1/10** 國慶日　**2/10** 中秋節翌日	**2**
6	十	4	5	6	7	8	9	10		
7	月	11	12	13	14	15	16	17		
8		18	19	20	21	22	23	24		
9		25	26	***27***	***28***	***29***	***30***	31	**26/10** 重陽節翌日　**27/10－30/10** 進展性評估	**1**
10		1	2	3	4	5	6	7		
11	十	8	9	10	11	12	13	14★	**14/11** 上學期家長日、**J.6** 家長會	
12	一	15	16	17	18	19	20	21		
13	月	22	23	24	25	26	27	28		
14		29	30							
				1★	2	3	4	5	**1/12** 第十四屆陸運會　**2/12** 陸運會翌日假期	**1**
15	十	6	7	8	9★	***10***	***11***	12	**9/12** 教師專業發展日 **10/12－15/12** 上學期學期試 **(J.6** 呈分試**)**	
16	二	13	***14***	***15***	16	17	18	19		
17	月	20	21	22	23	24	25	26	**22/12/2020－2/1/2021** 聖誕及新年假期	**5**
18		27	28	29	30	31				**5**
	2021						1	2		**2**
19	一	3	4	5	6	7	8	9		
20	月	10	11	12	13	14	15	16★	**16/1** 四十五周年校慶開放日暨文娛匯演	
21		17	18	19	20	21	22	23	**18/1** 校慶開放日後假期	**1**
22		24	25	26	27	28	29	30		
		31								
	二		1★	2	3★	4★	5★	6	**1/2** 下學期開始 **3/2－5/2** 教育營**(J.6)**　**5/2** 旅行日**(J.1-J.5)**	
	月	7	8	9	10	11	12	13	**8/2－17/2** 農曆新年假期	**6**
		14	15	16	17	18	19	20		**4**

附註：□代表假期　★代表特別事宜

本年度關注事項

1 完善校本課程規劃，促進學與教效能。
2 透過多元化策略，培養學生自律精神。
3 深化生命教育，培育學生正向人生觀。

2020–2021 年度校曆表

	周次	日	一	二	三	四	五	六	假期/事項
二零二零年九月	一			1	2	3	4	5	上學期開始(1/9)
	二	**6**	7	8	9	10	11	12	
	三	**13**	14	15	16	17	18	19	
	四	**20**	21	22	23	24	25	26	
	五	**27**	28	29	30				
十月						1	2	3	國慶日(1/10)　中秋節翌日(2/10)
	六	**4**	5	6	7	8	9	10	
	七	**11**	12	13	14	15	16	17	零功課日(13/10)
	八	**18**	19	20	21	22	23	24	
	九	**25**	26	27	28	29	30	31	重陽節補假(26/10)
十一月	十	**1**	2	3	4	5	6	7	
	十一	**8**	9	10	11	12	13	14	
	十二	**15**	16	17	⑱	⑲	⑳	21	一至六年級考試(18-20，23，24/11)
	十三	**22**	㉓	㉔	25	26	27	28	
	十四	**29**	30						
十二月				1	2	3	4	5	
	十五	**6**	7	8	9	10	11	12	
	十六	**13**	14	15	16	17	18	19	全方位學習日(18/12)
	十七	**20**	㉑	22	23	24	25	26	聖誕崇拜(21/12)　聖誕及新年假期(22/12-3/1)
	十八	**27**	28	29	30	31			
二零二一年一月							1	2	
	十九	**3**	4	5	6	7	8	9	教師專業發展日(4/1)　P.6 家長日(9/1)
	二十	**10**	11	12	13	14	15	16	P.1-5 家長日(16/1)
	二十一	**17**	18	19	20	21	22	23	零功課日(20/1)
	二十二	**24**	25	26	27	28	29	30	學校籌款日(24/1)　學校假期(25/1)

☒學校假期　／教師專業發展日，學生不用上課　○半天上課

星期六不用上課

	周次	日	一	二	三	四	五	六	假期/事項
二月	二十三	31	1	2	3	4	5	6	跨學科活動日(4/2) 陸運會(5/2)
	二十四	7	8	9	10	11	12	13	農曆新年假期(8/2-17/2)
	二十五	14	15	16	17	18	19	20	下學期開始(18/2)
	二十六	21	22	23	24	25	26	27	
	二十七	28							
三月			1	2	③	④	⑤	6	六年級報分試(3-5,8,9/3)
	二十八	7	⑧	⑨	10	11	12	13	一至五年級主科考試(8-9/3)
	二十九	14	15	16	17	18	19	20	
	三十	21	22	23	24	25	26	27	學校旅行(25/3)學校假期(26/3)
	三十一	28	29	30	31				福音周及復活節崇拜(29-30/3)
四月						1	2	3	復活節及清明節假期(31/3-6//4)
	三十二	4	5	6	7	8	9	10	六年級教育營(7/4-9/4) 一至五年級專題研習周(7-12/4)
	三十三	11	⑫	13	14	15	16	17	家長日(17/4)
	三十四	18	19	20	21	22	23	24	
	三十五	25	26	27	28	㉙	30		綵排日(29/4) 綜藝晚會(30/4)
五月								1	勞動節(1/5)
	三十六	2	3	4	5	6	7	8	零功課日(7/5)
	三十七	9	10	11	12	13	14	15	
	三十八	16	17	18	19	20	21	22	佛誕(19/5)
	三十九	23	24	25	26	27	28	29	教師專業發展日(28/5)
	四十	30	31						
六月				1	②	③	④	5	一至六年級考試(2-4,7,8/6)
	四十一	6	⑦	⑧	⑨	⑩	⑪	12	全港性系統評估(10-11/6)
	四十二	13	14	⑮	⑯	17	18	19	端午節(14/6)
	四十三	20	21	22	23	24	25	26	
	四十四	27	㉘	㉙	30				畢業禮(30/6)
七月						1	2	3	香港特區成立紀念日(1/7) 學校假期(2/7)
	四十五	4	⑤	⑥	⑦	⑧	⑨	10	
	四十六	11	12	13	14	15	16	17	教師專業發展(12/7) 暑假(13/7-31/8)
	四十七	18	19	20	21	22	23	24	
	四十八	25	26	27	28	29	30	31	
八月	四十九	1	2	3	4	5	6	7	
	五十	8	9	10	11	12	13	14	
	五十一	15	16	17	18	19	20	21	
	五十二	22	23	24	25	26	27	28	
	五十三	29	30	31					

培英中學2020至2021年度校曆表

週次		日	一	二	三	四	五	六	假期及注意事項
	八月	(16)	(17)	(18)	(19)	(20)	(21)	(22)	
		(23)	(24)	(25)	(26)	(27)	(28)	(29)	
1	九月	(30)	(31)	Sept 1	2	3	4	5	(1/9)開學禮 (2/9)正式上課
2		6	7	8	9	10	11	12	(9/9)各班拍攝學生相片
3		13	14	15	16	17	18	19	(14/9)中一至中四學生開始繳交周記
4		20	21	22	23	24	25	26	(21-25/9)國慶活動暨中國周
5	十月	27	28	29	30	Oct *(1)*	*(2)*	3	(28-30/9)體育推廣 **(1/10)國慶日假期** **(2/10)中秋節翌日假期**
6		4	5	6	7	8	9	10	
7		11	12	13	14	15	16	17	(12-16/10)科學周 (16/10)學生領袖就職典禮
8		18	19	20	21	22	23	24	
9		25	*(26)*	(27)	28[T]	29[T]	30[T]	31	**(26/10)重陽節翌日假期** (27/10)教師專業發展日(1) (28/10-3/11)中一至中六級統一測驗
10	十一月	Nov 1	2[T]	3[T]	4	5	6	7	
11		8	9	10	11	12	13	14	(9-13/11)數學周
12		15[△]	16	17	18	19	20[△]	21	(15/11)南區中學巡禮 (20/11)全方位學習日 (21/11下午)家長教師會第二十三屆會員大會
13		22	23	24	25	26	27	28	(25-26/11)中一、二級護苗課程 (27/11)師生聯誼日
14	十二月	29	30	Dec 1	2	3[△]	*(4)*	5	(30/11-1/12)中一、二級護苗跟進課程 (3/12)第六十二屆陸運會 **(4/12)陸運會翌日假期**
15		6	7	8	9	10	11	12	(7-11/12)科技周 (8/12)拍攝畢業照及班相 (12/12)中西南區小學數學比賽
16		13	14	15	16	17	18	19	(17-21/12)中六級校外模擬考試 (14-18/12)福音周 (18/12)佈道會 (18/12晚上)家長教師會聖誕聯歡會
17		20	21	22	*(23)*	*(24)*	*(25)*	*(26)*	(22/12)聖誕崇拜及慶祝會 **(23/12-2/1)聖誕及新年假期共11天**
18	一月	*(27)*	*(28)*	*(29)*	*(30)*	*(31)*	Jan *(1)*	*(2)*	(23,24,28,29,30/12)中六級補課
19		3	4	5	6[E]	7[E]	8[E]	9	(6-15/1)中一至中五級上學期期考共8天 (6-19/1)中六級畢業試
20		10	11[E]	12[E]	13[E]	14[E]	15[E]	16	
21		17	18[E]	19[E]	20	21	22	23	(18-20/1)中一至中五級試後回饋日 (20/1下午)中五級學習概覽講座 (20/1-5/3)中六級試後上課日
22		24	25	26	27	28	29	30	(22-29/1)中一至中五級上學期溫習及補考
23	二月	31	FEB 1	2	3	4	5	6	(1/2)下學期開始 (1-5/2)英語周 (3/2)中六級進行APASO問卷
24		7	*(8)*	*(9)*	*(10)*	*(11)*	*(12)*	*(13)*	**(8/2-20/2)農曆新年假期共13天**
25		*(14)*	*(15)*	*(16)*	*(17)*	*(18)*	*(19)*	*(20)*	
26		21	22	23	24	25	(26)	27	(26/2)教師專業發展日(2) (22/2)中一至中四級學生開始繳交周記 (24/2)中六級進行學生持份者問卷及教學評鑑

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

培英中學2020至2021年度校曆表

		日	一	二	三	四	五	六	假期及注意事項
27	三	28	Mar 1	2	3	4	5	6	(5/3)中六級習禮及感恩惜別會　(6/3)家長日暨中三升中四選科講座 (8/3)中六級開始溫習應付公開試
28		7	8	9	10	11	12	13	(8-12/3)中華文化周　(12/3)頒獎禮
29		14	15	16	17	18	19	20	(19-21/3)趁墟做老闆
30		21	22[T]	23[T]	24[T]	25[T]	26[T]	27	(22-26/3)中一至中五級統一測驗 (23/3-18/5)香港中學文憑考試
31	月	28	29	30	31	Apr *(1)*	*(2)*	*(3)*	(31/3)復活節崇拜會 **(1-10/4)清明節及復活節假期共10天**
32	四	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*	
33		11	12	13	14	15	16	17	(12/4)教師專業發展日(3) (13-16/4)藝術周
34		18	19	20	21	22	23[△]	24	(23/4)校祖日感恩崇拜暨慶祝活動 (24/4)區會模範生頒獎禮
35	月	25	26	27	28	29[△]	*(30)*	May *(1)*	(27/4或28/4)中三全港性系統評估口試　(30/4)TSA口試後備日 (29/4)全方位學習日　**(30/4)全方位學習日翌日假期**　**(1/5)勞動節假期**
36	五	2	3	4	5	6	7	8	(3-7/5)個人社會及人文領域周
37		**9**	10	11	12	13	14	15	
38	月	16	17	18[△]	*(19)*	20	21[△]	22	(18/5)水運同樂日　**(19/5)佛誕假期** (21/5下午)畢業典禮　(21/5晚上)歡送畢業生暨校友會迎新晚會
39		23	24	25	26	27	28	29	(28/5)畢業禮後備日
40	六	30	31	Jun 1	2	3	4[E]	5	(4-15/6)中三級下學期考試共7天
41		6	7[E]	8[E]	9[E]	10[E]	11[E]	12	(4-18/6)中五級下學期考試共10天 (7-17/6)中一、二、四級下學期考試共8天
42		13	*(14)*	15[E]	16[E]	17[E]	18[E]	19	**(14/6)端午節假期**　(16-17/6) 中三級全港性系統評估(中英數) (18-22/6)中一至中四級試後回饋日
43		20	21	22	23	24	25	26	(21/6)中三級全港性系統評估(後備日) (21/6-2/7)中五級試後上課周　(21/6下午)中五級學習概覽寫作工作坊 (23-25/6)中一至中五級溫習及補考
44	月	27	28	29	30	Jul *(1)*	2	3	**(1/7)香港特別行政區成立紀念日假期** (28/6-9/7)暑期英語營
45	七	4	5	6	7	8	9	10	(7/7)中六級中學文憑考試放榜輔導講座
46		11	12	13	14[△]	15	*(16)*	*(17)*	(14/7)香港中學文憑考試放榜 (15/7)結業禮　(15/7)接見家長及學生 **(16/7-31/8)暑假共47天**
47	月	*(18)*	*(19)*	*(20)*	*(21)*	*(22)*	*(23)*	*(24)*	
48		*(25)*	*(26)*	*(27)*	*(28)*	*(29)*	*(30)*	*(31)*	
49	八	Aug *(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	
50		*(8)*	*(9)*	*(10)*	*(11)*	*(12)*	*(13)*	*(14)*	(9/8)學生註冊及領取書籍校服　(9-20/8)升中導向課程 (9-20/8)中六級香港中學文憑考試備試課程
51	月	*(15)*	*(16)*	*(17)*	*(18)*	*(19)*	*(20)*	*(21)*	
52		*(22)*	*(23)*	*(24)*	*(25)*	*(26)*	*(27)*	*(28)*	
53	九月	*(29)*	*(30)*	*(31)*	Sept 1	2	3	4	(1/9)下學年開學禮 (2/9)正式上課

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

FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

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

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 (μg/m³)								
Date	**Start Time**	**1st hr**	**2nd hr**	**3rd hr**	**Average**	**Action Level**	**Limit Level**	**Weather**
3-Feb-21	14:00	51	50	50	50	340	500	Sunny
9-Feb-21	11:45	60	64	66	63			Overcast
11-Feb-21	14:20	70	73	66	70			Sunny
17-Feb-21	09:30	66	61	64	64			Sunny
23-Feb-21	07:30	61	64	60	62			Sunny

Average	62
Max	73
Min	50

AMS8 - Lek Yuen Estate

1-hour TSP (μg/m³)								
Date	**Start Time**	**1st hr**	**2nd hr**	**3rd hr**	**Average**	**Action Level**	**Limit Level**	**Weather**
3-Feb-21	12:45	55	45	45	48	336	500	Sunny
9-Feb-21	09:55	61	64	64	63			Overcast
11-Feb-21	12:00	94	97	90	94			Sunny
17-Feb-21	08:45	59	62	68	63			Sunny
23-Feb-21	11:45	62	68	68	66			Sunny

Average	67
Max	97
Min	45

AMS 11A - Sheung Wo Che

1-hour TSP (μg/m³)								
Date	**Start Time**	**1st hr**	**2nd hr**	**3rd hr**	**Average**	**Action Level**	**Limit Level**	**Weather**
3-Feb-21	10:40	77	67	73	72	335	500	Sunny
9-Feb-21	10:00	52	65	73	63			Overcast
11-Feb-21	16:41	78	80	83	80			Sunny
17-Feb-21	11:00	80	84	82	82			Sunny
23-Feb-21	10:00	84	86	82	84			Sunny

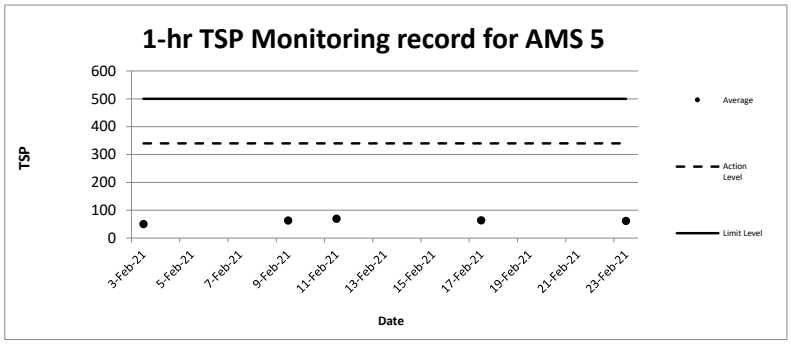
Average	76
Max	86
Min	52

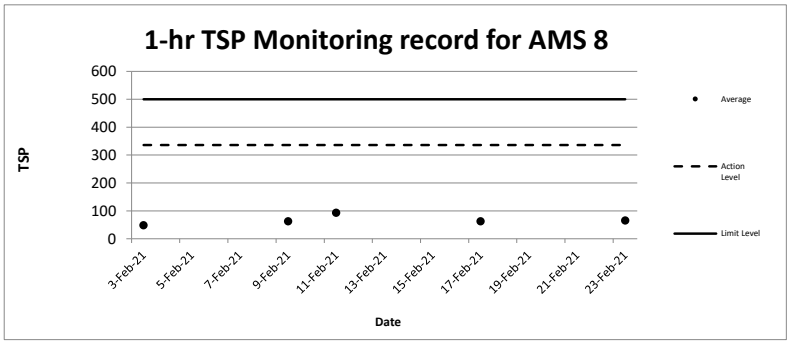
AMS 12 - Fung Wo Estate

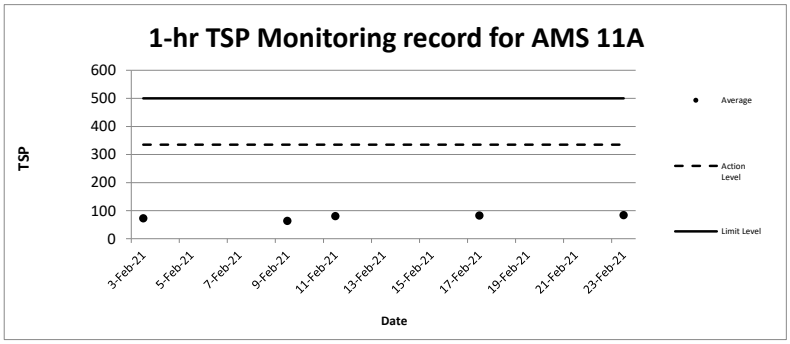
1-hour TSP (μg/m³)								
Date	**Start Time**	**1st hr**	**2nd hr**	**3rd hr**	**Average**	**Action Level**	**Limit Level**	**Weather**
3-Feb-21	07:30	60	63	52	58	296	500	Sunny
9-Feb-21	12:10	63	63	60	62			Overcast
11-Feb-21	16:26	70	68	67	68			Sunny
17-Feb-21	10:20	67	70	69	69			Sunny
23-Feb-21	12:15	63	66	67	65			Sunny

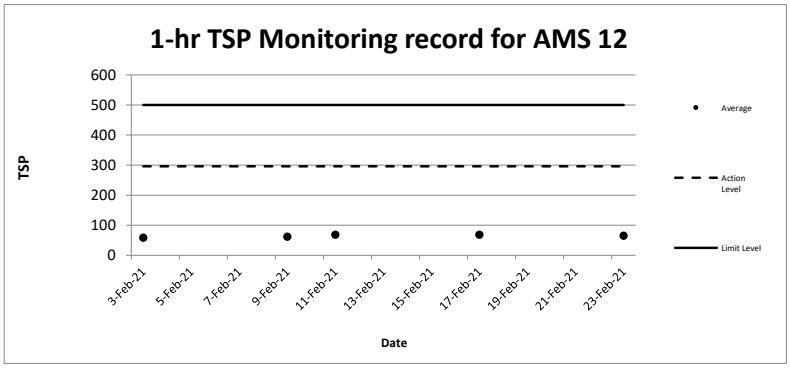
Average	65
Max	70
Min	52

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 5
TSP
600
500
400
300
200
100
0
3-Feb-21
5-Feb-21
7-Feb-21
9-Feb-21
11-Feb-21
13-Feb-21
15-Feb-21
17-Feb-21
19-Feb-21
21-Feb-21
23-Feb-21
Date
Average
Action Level
Limit Level


1-hr TSP Monitoring record for AMS 8
TSP
600
500
400
300
200
100
0
3-Feb-21
5-Feb-21
7-Feb-21
9-Feb-21
11-Feb-21
13-Feb-21
15-Feb-21
17-Feb-21
19-Feb-21
21-Feb-21
23-Feb-21
Date
Average
Action Level
Limit Level


1-hr TSP Monitoring record for AMS 11A
TSP
600
500
400
300
200
100
0
3-Feb-21
5-Feb-21
7-Feb-21
9-Feb-21
11-Feb-21
13-Feb-21
15-Feb-21
17-Feb-21
19-Feb-21
21-Feb-21
23-Feb-21
Date
Average
Action Level
Limit Level


1-hr TSP Monitoring record for AMS 12
TSP
600
500
400
300
200
100
0
3-Feb-21
5-Feb-21
7-Feb-21
9-Feb-21
11-Feb-21
13-Feb-21
15-Feb-21
17-Feb-21
19-Feb-21
21-Feb-21
23-Feb-21
Date
Average
Action Level
Limit Level

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)
3/2/2021 08:00	57
3/2/2021 09:00	45
3/2/2021 10:00	36
3/2/2021 11:00	38
3/2/2021 12:00	44
3/2/2021 13:00	41
3/2/2021 14:00	51
3/2/2021 15:00	50
3/2/2021 16:00	50
3/2/2021 17:00	47
3/2/2021 18:00	41
3/2/2021 19:00	44
3/2/2021 20:00	39
3/2/2021 21:00	41
3/2/2021 22:00	41
3/2/2021 23:00	50
4/2/2021 00:00	44
4/2/2021 01:00	39
4/2/2021 02:00	41
4/2/2021 03:00	41
4/2/2021 04:00	47
4/2/2021 05:00	47
4/2/2021 06:00	42
4/2/2021 07:00	48
Average	44
Action Level	156
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
9/2/2021 07:45	48
9/2/2021 08:45	51
9/2/2021 09:45	55
9/2/2021 10:45	55
9/2/2021 11:45	60
9/2/2021 12:45	64
9/2/2021 13:45	66
9/2/2021 14:45	57
9/2/2021 15:45	48
9/2/2021 16:45	48
9/2/2021 17:45	52
9/2/2021 18:45	52
9/2/2021 19:45	35
9/2/2021 20:45	42
9/2/2021 21:45	38
9/2/2021 22:45	41
9/2/2021 23:45	64
10/2/2021 00:45	51
10/2/2021 01:45	50
10/2/2021 02:45	60
10/2/2021 03:45	52
10/2/2021 04:45	51
10/2/2021 05:45	54
10/2/2021 06:45	58
Average	52
Action Level	156
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
11/2/2021 08:20	35
11/2/2021 09:20	38
11/2/2021 10:20	43
11/2/2021 11:20	43
11/2/2021 12:20	44
11/2/2021 13:20	46
11/2/2021 14:20	51
11/2/2021 15:20	54
11/2/2021 16:20	55
11/2/2021 17:20	49
11/2/2021 18:20	47
11/2/2021 19:20	51
11/2/2021 20:20	60
11/2/2021 21:20	65
11/2/2021 22:20	63
11/2/2021 23:20	70
12/2/2021 00:20	73
12/2/2021 01:20	66
12/2/2021 02:20	52
12/2/2021 03:20	57
12/2/2021 04:20	54
12/2/2021 05:20	52
12/2/2021 06:20	47
12/2/2021 07:20	46
Average	52
Action Level	156
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
17/2/2021 07:30	54
17/2/2021 08:30	35
17/2/2021 09:30	66
17/2/2021 10:30	61
17/2/2021 11:30	55
17/2/2021 12:30	32
17/2/2021 13:30	61
17/2/2021 14:30	55
17/2/2021 15:30	39
17/2/2021 16:30	54
17/2/2021 17:30	47
17/2/2021 18:30	64
17/2/2021 19:30	60
17/2/2021 20:30	64
17/2/2021 21:30	60
17/2/2021 22:30	52
17/2/2021 23:30	47
18/2/2021 00:30	38
18/2/2021 01:30	58
18/2/2021 02:30	51
18/2/2021 03:30	47
18/2/2021 04:30	61
18/2/2021 05:30	55
18/2/2021 06:30	48
Average	53
Action Level	156
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
23/2/2021 07:30	61
23/2/2021 08:30	36
23/2/2021 09:30	60
23/2/2021 10:30	38
23/2/2021 11:30	51
23/2/2021 12:30	44
23/2/2021 13:30	51
23/2/2021 14:30	48
23/2/2021 15:30	64
23/2/2021 16:30	45
23/2/2021 17:30	50
23/2/2021 18:30	39
23/2/2021 19:30	35
23/2/2021 20:30	61
23/2/2021 21:30	54
23/2/2021 22:30	47
23/2/2021 23:30	33
24/2/2021 00:30	33
24/2/2021 01:30	38
24/2/2021 02:30	42
24/2/2021 03:30	57
24/2/2021 04:30	35
24/2/2021 05:30	50
24/2/2021 06:30	63
Average	47
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)

AMS 8 - Lek Yuen Estate

Date and Time	TSP Concentration (μg/m³)
3/2/2021 07:45	47
3/2/2021 08:45	44
3/2/2021 09:45	44
3/2/2021 10:45	41
3/2/2021 11:45	38
3/2/2021 12:45	55
3/2/2021 13:45	45
3/2/2021 14:45	45
3/2/2021 15:45	38
3/2/2021 16:45	39
3/2/2021 17:45	38
3/2/2021 18:45	42
3/2/2021 19:45	39
3/2/2021 20:45	44
3/2/2021 21:45	45
3/2/2021 22:45	45
3/2/2021 23:45	44
4/2/2021 00:45	50
4/2/2021 01:45	45
4/2/2021 02:45	42
4/2/2021 03:45	53
4/2/2021 04:45	42
4/2/2021 05:45	41
4/2/2021 06:45	41
Average	44
Action Level	161
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
9/2/2021 07:55	44
9/2/2021 08:55	42
9/2/2021 09:55	61
9/2/2021 10:55	64
9/2/2021 11:55	39
9/2/2021 12:55	47
9/2/2021 13:55	38
9/2/2021 14:55	47
9/2/2021 15:55	38
9/2/2021 16:55	44
9/2/2021 17:55	56
9/2/2021 18:55	38
9/2/2021 19:55	42
9/2/2021 20:55	64
9/2/2021 21:55	41
9/2/2021 22:55	47
9/2/2021 23:55	64
10/2/2021 00:55	44
10/2/2021 01:55	48
10/2/2021 02:55	47
10/2/2021 03:55	55
10/2/2021 04:55	36
10/2/2021 05:55	39
10/2/2021 06:55	59
Average	48
Action Level	161
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
11/2/2021 09:00	39
11/2/2021 10:00	41
11/2/2021 11:00	49
11/2/2021 12:00	52
11/2/2021 13:00	54
11/2/2021 14:00	58
11/2/2021 15:00	60
11/2/2021 16:00	64
11/2/2021 17:00	67
11/2/2021 18:00	71
11/2/2021 19:00	75
11/2/2021 20:00	71
11/2/2021 21:00	86
11/2/2021 22:00	94
11/2/2021 23:00	97
12/2/2021 00:00	90
12/2/2021 01:00	86
12/2/2021 02:00	82
12/2/2021 03:00	79
12/2/2021 04:00	75
12/2/2021 05:00	71
12/2/2021 06:00	67
12/2/2021 07:00	69
12/2/2021 08:00	64
Average	69
Action Level	161
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
17/2/2021 07:45	58
17/2/2021 08:45	59
17/2/2021 09:45	45
17/2/2021 10:45	58
17/2/2021 11:45	44
17/2/2021 12:45	56
17/2/2021 13:45	44
17/2/2021 14:45	35
17/2/2021 15:45	42
17/2/2021 16:45	58
17/2/2021 17:45	65
17/2/2021 18:45	47
17/2/2021 19:45	62
17/2/2021 20:45	68
17/2/2021 21:45	41
17/2/2021 22:45	58
17/2/2021 23:45	48
18/2/2021 00:45	33
18/2/2021 01:45	38
18/2/2021 02:45	59
18/2/2021 03:45	61
18/2/2021 04:45	58
18/2/2021 05:45	58
18/2/2021 06:45	38
Average	51
Action Level	161
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
23/2/2021 07:45	39
23/2/2021 08:45	48
23/2/2021 09:45	38
23/2/2021 10:45	41
23/2/2021 11:45	62
23/2/2021 12:45	42
23/2/2021 13:45	68
23/2/2021 14:45	59
23/2/2021 15:45	47
23/2/2021 16:45	47
23/2/2021 17:45	55
23/2/2021 18:45	36
23/2/2021 19:45	45
23/2/2021 20:45	53
23/2/2021 21:45	41
23/2/2021 22:45	68
23/2/2021 23:45	48
24/2/2021 00:45	56
24/2/2021 01:45	42
24/2/2021 02:45	36
24/2/2021 03:45	65
24/2/2021 04:45	45
24/2/2021 05:45	64
24/2/2021 06:45	53
Average	50
Action Level	161
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 11A - Sheung Wo Che

Date and Time	TSP Concentration (μg/m³)
3/2/2021 07:40	49
3/2/2021 08:40	50
3/2/2021 09:40	58
3/2/2021 10:40	77
3/2/2021 11:40	67
3/2/2021 12:40	73
3/2/2021 13:40	73
3/2/2021 14:40	50
3/2/2021 15:40	75
3/2/2021 16:40	77
3/2/2021 17:40	52
3/2/2021 18:40	45
3/2/2021 19:40	45
3/2/2021 20:40	69
3/2/2021 21:40	50
3/2/2021 22:40	49
3/2/2021 23:40	54
4/2/2021 00:40	58
4/2/2021 01:40	56
4/2/2021 02:40	62
4/2/2021 03:40	62
4/2/2021 04:40	56
4/2/2021 05:40	77
4/2/2021 06:40	45
Average	59
Action Level	165
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
9/2/2021 08:00	52
9/2/2021 09:00	56
9/2/2021 10:00	52
9/2/2021 11:00	65
9/2/2021 12:00	73
9/2/2021 13:00	62
9/2/2021 14:00	58
9/2/2021 15:00	45
9/2/2021 16:00	62
9/2/2021 17:00	49
9/2/2021 18:00	64
9/2/2021 19:00	50
9/2/2021 20:00	52
9/2/2021 21:00	60
9/2/2021 22:00	75
9/2/2021 23:00	47
10/2/2021 00:00	54
10/2/2021 01:00	47
10/2/2021 02:00	58
10/2/2021 03:00	47
10/2/2021 04:00	56
10/2/2021 05:00	65
10/2/2021 06:00	67
10/2/2021 07:00	56
Average	57
Action Level	165
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
11/2/2021 09:41	52
11/2/2021 10:41	55
11/2/2021 11:41	60
11/2/2021 12:41	64
11/2/2021 13:41	67
11/2/2021 14:41	72
11/2/2021 15:41	73
11/2/2021 16:41	64
11/2/2021 17:41	61
11/2/2021 18:41	72
11/2/2021 19:41	78
11/2/2021 20:41	80
11/2/2021 21:41	83
11/2/2021 22:41	77
11/2/2021 23:41	77
12/2/2021 00:41	73
12/2/2021 01:41	72
12/2/2021 02:41	64
12/2/2021 03:41	66
12/2/2021 04:41	70
12/2/2021 05:41	73
12/2/2021 06:41	64
12/2/2021 07:41	63
12/2/2021 08:41	61
Average	68
Action Level	165
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
17/2/2021 08:00	75
17/2/2021 09:00	77
17/2/2021 10:00	65
17/2/2021 11:00	80
17/2/2021 12:00	64
17/2/2021 13:00	58
17/2/2021 14:00	54
17/2/2021 15:00	62
17/2/2021 16:00	78
17/2/2021 17:00	58
17/2/2021 18:00	86
17/2/2021 19:00	56
17/2/2021 20:00	67
17/2/2021 21:00	80
17/2/2021 22:00	52
17/2/2021 23:00	84
18/2/2021 00:00	82
18/2/2021 01:00	62
18/2/2021 02:00	73
18/2/2021 03:00	78
18/2/2021 04:00	50
18/2/2021 05:00	60
18/2/2021 06:00	60
18/2/2021 07:00	41
Average	67
Action Level	165
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
23/2/2021 08:00	49
23/2/2021 09:00	64
23/2/2021 10:00	41
23/2/2021 11:00	52
23/2/2021 12:00	82
23/2/2021 13:00	77
23/2/2021 14:00	41
23/2/2021 15:00	52
23/2/2021 16:00	47
23/2/2021 17:00	65
23/2/2021 18:00	77
23/2/2021 19:00	84
23/2/2021 20:00	86
23/2/2021 21:00	47
23/2/2021 22:00	71
23/2/2021 23:00	71
24/2/2021 00:00	50
24/2/2021 01:00	49
24/2/2021 02:00	67
24/2/2021 03:00	78
24/2/2021 04:00	50
24/2/2021 05:00	71
24/2/2021 06:00	71
24/2/2021 07:00	78
Average	63
Action Level	165
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 12 - Fung Wo Estate

Date and Time	TSP Concentration (μg/m³)
3/2/2021 07:30	60
3/2/2021 08:30	63
3/2/2021 09:30	52
3/2/2021 10:30	43
3/2/2021 11:30	37
3/2/2021 12:30	44
3/2/2021 13:30	57
3/2/2021 14:30	37
3/2/2021 15:30	60
3/2/2021 16:30	54
3/2/2021 17:30	52
3/2/2021 18:30	37
3/2/2021 19:30	54
3/2/2021 20:30	55
3/2/2021 21:30	58
3/2/2021 22:30	54
3/2/2021 23:30	57
4/2/2021 00:30	37
4/2/2021 01:30	55
4/2/2021 02:30	47
4/2/2021 03:30	55
4/2/2021 04:30	52
4/2/2021 05:30	43
4/2/2021 06:30	61
Average	51
Action Level	168
Limit Level	260

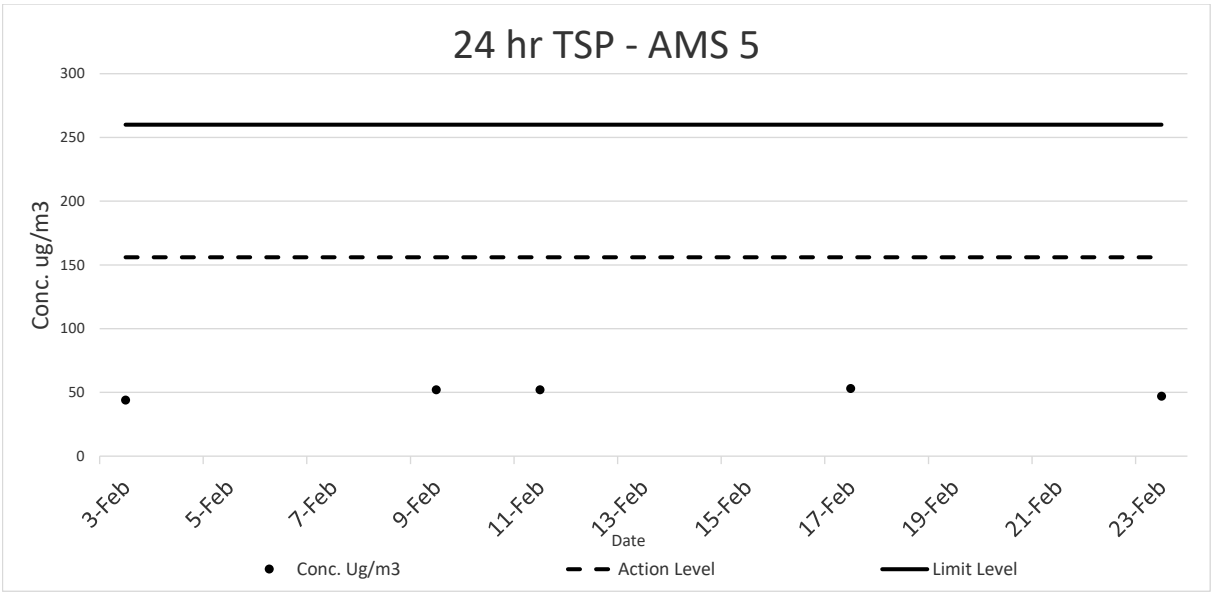
Date and Time	TSP Concentration (μg/m³)
9/2/2021 08:10	57
9/2/2021 09:10	41
9/2/2021 10:10	37
9/2/2021 11:10	37
9/2/2021 12:10	50
9/2/2021 13:10	46
9/2/2021 14:10	60
9/2/2021 15:10	41
9/2/2021 16:10	43
9/2/2021 17:10	43
9/2/2021 18:10	57
9/2/2021 19:10	41
9/2/2021 20:10	46
9/2/2021 21:10	38
9/2/2021 22:10	54
9/2/2021 23:10	55
10/2/2021 00:10	37
10/2/2021 01:10	50
10/2/2021 02:10	37
10/2/2021 03:10	50
10/2/2021 04:10	41
10/2/2021 05:10	63
10/2/2021 06:10	44
10/2/2021 07:10	63
Average	47
Action Level	168
Limit Level	260

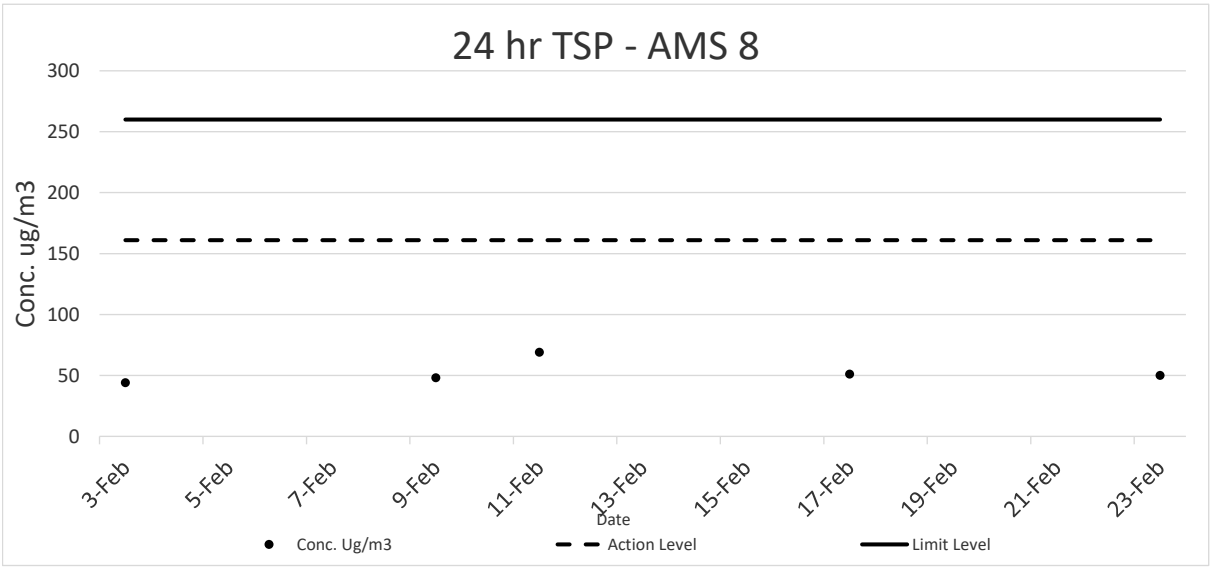
Date and Time	TSP Concentration (μg/m³)
11/2/2021 09:26	34
11/2/2021 10:26	36
11/2/2021 11:26	42
11/2/2021 12:26	55
11/2/2021 13:26	49
11/2/2021 14:26	41
11/2/2021 15:26	44
11/2/2021 16:26	48
11/2/2021 17:26	53
11/2/2021 18:26	49
11/2/2021 19:26	63
11/2/2021 20:26	63
11/2/2021 21:26	61
11/2/2021 22:26	49
11/2/2021 23:26	53
12/2/2021 00:26	53
12/2/2021 01:26	63
12/2/2021 02:26	65
12/2/2021 03:26	68
12/2/2021 04:26	61
12/2/2021 05:26	61
12/2/2021 06:26	70
12/2/2021 07:26	68
12/2/2021 08:26	67
Average	55
Action Level	168
Limit Level	260

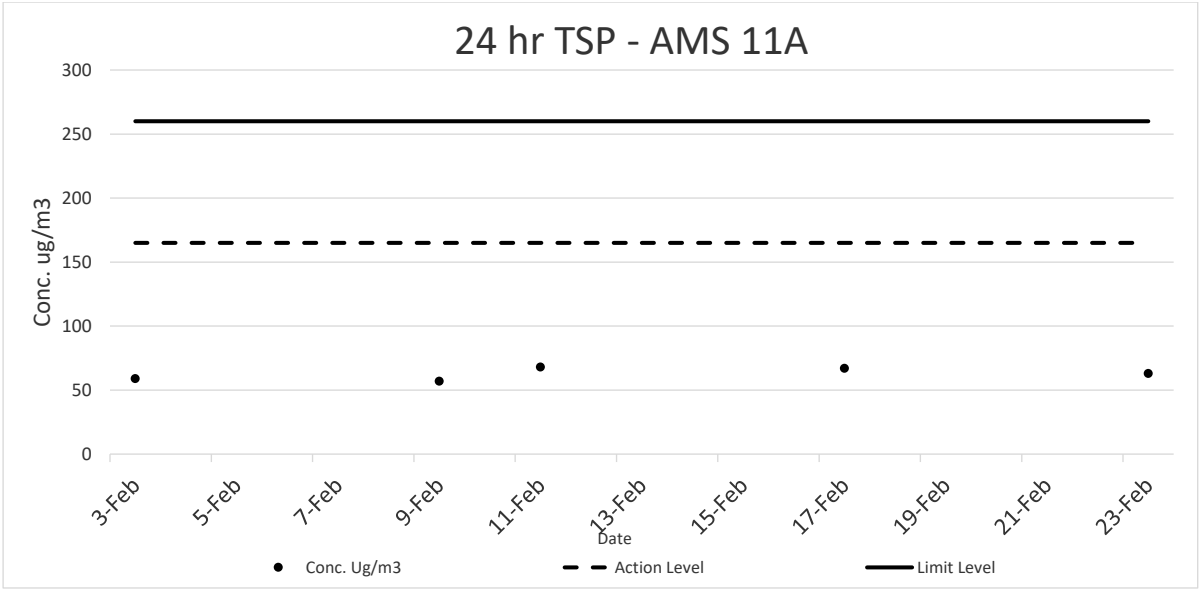
Date and Time	TSP Concentration (μg/m³)
17/2/2021 08:20	43
17/2/2021 09:20	58
17/2/2021 10:20	44
17/2/2021 11:20	37
17/2/2021 12:20	35
17/2/2021 13:20	50
17/2/2021 14:20	54
17/2/2021 15:20	57
17/2/2021 16:20	50
17/2/2021 17:20	57
17/2/2021 18:20	43
17/2/2021 19:20	44
17/2/2021 20:20	34
17/2/2021 21:20	39
17/2/2021 22:20	46
17/2/2021 23:20	67
18/2/2021 00:20	70
18/2/2021 01:20	69
18/2/2021 02:20	40
18/2/2021 03:20	38
18/2/2021 04:20	46
18/2/2021 05:20	50
18/2/2021 06:20	70
18/2/2021 07:20	40
Average	49
Action Level	168
Limit Level	260

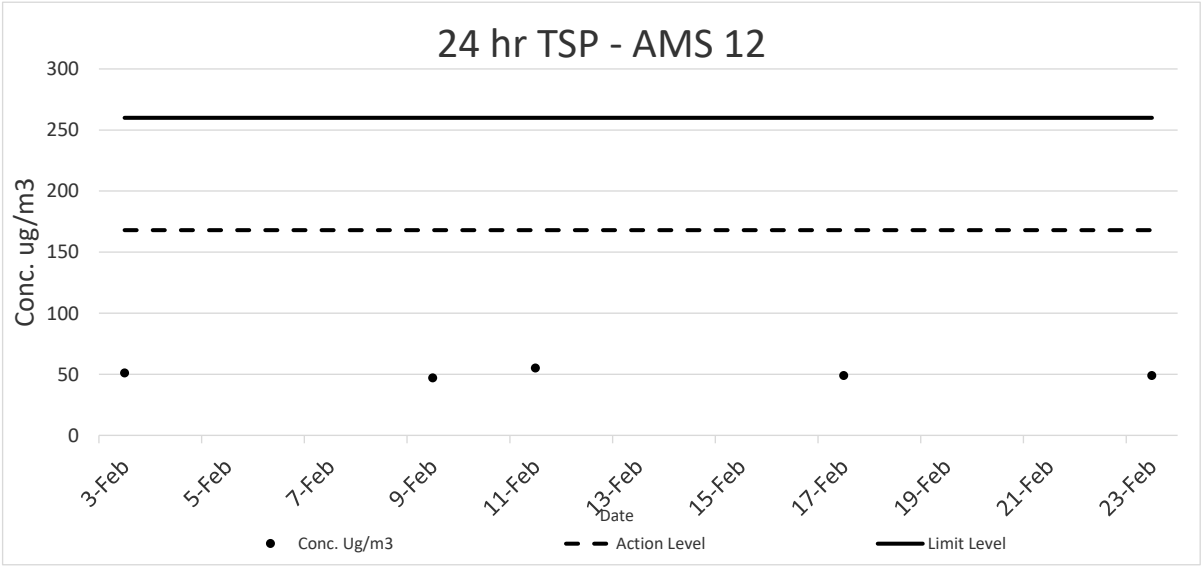
Date and Time	TSP Concentration (μg/m³)
23/2/2021 08:15	35
23/2/2021 09:15	54
23/2/2021 10:15	37
23/2/2021 11:15	57
23/2/2021 12:15	63
23/2/2021 13:15	37
23/2/2021 14:15	35
23/2/2021 15:15	49
23/2/2021 16:15	66
23/2/2021 17:15	52
23/2/2021 18:15	37
23/2/2021 19:15	66
23/2/2021 20:15	49
23/2/2021 21:15	67
23/2/2021 22:15	40
23/2/2021 23:15	57
24/2/2021 00:15	64
24/2/2021 01:15	69
24/2/2021 02:15	40
24/2/2021 03:15	41
24/2/2021 04:15	37
24/2/2021 05:15	60
24/2/2021 06:15	38
24/2/2021 07:15	40
Average	49
Action Level	168
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 5
Conc. ug/m3
300
250
200
150
100
50
0
3-Feb
5-Feb
7-Feb
9-Feb
11-Feb
13-Feb
15-Feb
17-Feb
19-Feb
21-Feb
23-Feb
Date
Conc. Ug/m3
Action Level
Limit Level


24 hr TSP - AMS 8
Conc. ug/m3
300
250
200
150
100
50
0
3-Feb
5-Feb
7-Feb
9-Feb
11-Feb
13-Feb
15-Feb
17-Feb
19-Feb
21-Feb
23-Feb
Date
Conc. Ug/m3
Action Level
Limit Level


24 hr TSP - AMS 11A
300
250
200
150
100
50
0
Conc. ug/m3
3-Feb
5-Feb
7-Feb
9-Feb
11-Feb
13-Feb
15-Feb
17-Feb
19-Feb
21-Feb
23-Feb
Date
Conc. Ug/m3
Action Level
Limit Level


24 hr TSP - AMS 12
300
250
200
150
100
50
0
Conc. ug/m3
3-Feb
5-Feb
7-Feb
9-Feb
11-Feb
13-Feb
15-Feb
17-Feb
19-Feb
21-Feb
23-Feb
Date
Conc. Ug/m3
Action Level
Limit Level

FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

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

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 Sect

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						
3-Feb-21	10:15	62.8	61.0	63.5	75	62.8	Sunny	0.5
9-Feb-21	08:22	62.4	61.5	63.5		62.4	Overcast	0.6
17-Feb-21	08:30	60.8	59.0	63.0		60.8	Sunny	0.4
23-Feb-21	08:53	63.6	61.5	65.5		63.6	Fine	0.6

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						
3-Feb-21	13:02	51.6	50.5	52.5	75	51.6	Sunny	0.2
9-Feb-21	11:28	53.1	52.0	55.0		53.1	Overcast	0.7
17-Feb-21	09:05	52.0	51.0	53.0		52.0	Sunny	0.2
23-Feb-21	08:16	57.6	53.0	58.3		57.6	Fine	0.7

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						
3-Feb-21	09:33	63.9	61.5	65.5	75	63.9	Sunny	0.8
9-Feb-21	08:58	66.6	63.0	68.5		66.6	Overcast	0.3
17-Feb-21	13:05	62.7	60.5	64.0		62.7	Sunny	0.5
23-Feb-21	09:28	67.8	64.0	70.5		67.8	Fine	0.8

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						
3-Feb-21	10:57	62.5	61.0	64.0	75	62.5	Sunny	0.7
9-Feb-21	10:45	62.7	60.5	63.5		62.7	Overcast	0.4
17-Feb-21	11:12	63.2	61.0	65.5		63.2	Sunny	0.9
23-Feb-21	16:52	64.4	61.0	66.0		64.4	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						
3-Feb-21	09:00	66.3	63.0	68.0	75	66.3	Sunny	0.7
9-Feb-21	09:30	67.8	65.0	69.0		67.8	Overcast	0.8
17-Feb-21	13:38	64.9	60.5	67.0		64.9	Sunny	0.7
23-Feb-21	10:05	69.8	66.0	72.5		69.8	Fine	1.1

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						
3-Feb-21	08:16	73.1	71.5	74.5	75	73.1	Sunny	0.9
9-Feb-21	10:04	70.3	68.0	71.5		70.3	Overcast	0.2
17-Feb-21	14:20	71.3	70.0	72.5		71.3	Sunny	0.5
23-Feb-21	10:38	71.6	67.5	73.5		71.6	Fine	0.9

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						
3-Feb-21	11:32	63.6	60.5	64.5	75	63.6	Sunny	0.7
9-Feb-21	12:40	65.1	58.5	67.0		65.1	Overcast	0.6
17-Feb-21	10:40	60.6	59.0	62.0		60.6	Sunny	0.7
23-Feb-21	16:18	66.2	62.5	68.0		66.2	Fine	0.9

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						
4-Feb-21	08:30	68.5	65.0	70.0	75	68.5	Sunny	0.4
10-Feb-21	08:29	66.0	64.5	67.5		66.0	Overcast	0.5
18-Feb-21	09:07	64.2	61.5	66.0		64.2	Fine	0.4
24-Feb-21	09:00	67.0	64.5	69.5		67.0	Sunny	0.3

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						
4-Feb-21	09:41	69.4	65.0	71.0	75	69.4	Sunny	0.5
10-Feb-21	09:50	62.3	59.0	66.0		62.3	Overcast	0.5
18-Feb-21	12:03	62.7	58.5	64.5		62.7	Fine	0.4
24-Feb-21	10:15	63.3	59.5	66.0		63.3	Sunny	0.8

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						
4-Feb-21	10:18	69.5	65.0	72.0	70	69.5	Sunny	0.6
10-Feb-21	10:31	63.8	59.5	67.0		63.8	Overcast	0.3
18-Feb-21	09:12	62.2	60.5	64.0		62.2	Fine	1.1
24-Feb-21	10:56	64.9	59.5	67.5		64.9	Sunny	0.2

*Note: The examination schedule 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						
4-Feb-21	09:48	54.5	60.0	57.0	75	54.5	Sunny	0.5
10-Feb-21	10:06	56.2	51.5	59.0		56.2	Overcast	0.5
18-Feb-21	10:41	57.3	54.5	61.0		57.3	Fine	0.4
24-Feb-21	14:59	55.3	52.0	59.5		55.3	Sunny	0.5

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						
4-Feb-21	10:58	67.0	60.0	69.0	70	67.0	Sunny	0.7
10-Feb-21	11:06	65.7	60.5	66.0		65.7	Overcast	0.8
18-Feb-21	09:49	64.1	61.5	66.0		64.1	Fine	1.6
24-Feb-21	11:30	62.3	57.5	64.5		62.3	Sunny	0.3

Calculated CNL = Measured Noise Level during operation – Baseline (dB(A)).

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						
4-Feb-21	11:35	70.0	63.0	72.0	75	70.0	Sunny	0.6
10-Feb-21	11:44	60.9	58.0	64.5		60.9	Overcast	0.6
18-Feb-21	08:30	61.6	59.0	64.0		61.6	Fine	0.7
24-Feb-21	13:05	62.0	58.5	64.5		62.0	Sunny	0.7

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						
4-Feb-21	10:21	58.0	54.5	59.5	75	58.0	Sunny	0.4
10-Feb-21	10:39	57.4	54.0	59.5		57.4	Overcast	0.6
18-Feb-21	11:22	60.4	56.0	63.5		60.4	Fine	0.4
24-Feb-21	14:28	59.2	55.5	61.5		59.2	Sunny	0.6

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						
3-Feb-21	13:12	66.1	60.0	69.0	75	66.1	Sunny	0.4
9-Feb-21	11:28	61.7	53.5	64.5		61.7	Overcast	0.7
17-Feb-21	09:58	60.8	58.0	63.0		60.8	Sunny	0.3
23-Feb-21	15:41	62.6	60.5	64.0		62.6	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						
3-Feb-21	13:50	58.8	55.5	60.5	75	58.8	Sunny	0.6
9-Feb-21	12:03	62.4	58.0	64.5		62.4	Overcast	0.9
17-Feb-21	09:20	61.0	57.5	63.5		61.0	Sunny	0.4
23-Feb-21	15:04	62.1	59.5	63.5		62.1	Fine	0.8

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						
4-Feb-21	14:00	66.0	62.0	70.0	70	66.0	Sunny	0.6
10-Feb-21	13:07	66.7	64.0	68.5		66.7	Overcast	0.7
18-Feb-21	10:29	60.6	58.0	62.0		60.6	Fine	0.6
24-Feb-21	15:39	66.8	64.5	70.0		66.8	Sunny	0.4

*Note: The examination schedule 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						
3-Feb-21	13:50	56.8	52.5	59.5	75	56.8	Sunny	0.7
9-Feb-21	13:43	59.6	53.5	62.0		59.6	Overcast	0.6
17-Feb-21	10:00	56.0	52.5	60.1		56.0	Sunny	0.6
23-Feb-21	14:30	61.1	56.5	62.5		61.1	Fine	0.6

Calculated CNL = Measured Noise Level during operation – Baseline (dB(A)).

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						
4-Feb-21	11:24	61.8	59.5	63.5	75	61.8	Sunny	0
10-Feb-21	13:08	63.1	61.0	64.5		63.1	Overcast	0.8
18-Feb-21	11:07	65.7	62.5	67.0		65.7	Fine	1.3
24-Feb-21	16:15	59.3	56.5	61.0		59.3	Sunny	0.5

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						
4-Feb-21	13:11	58.2	56.0	60.0	75	58.2	Sunny	0.6
10-Feb-21	13:45	60.0	57.0	62.0		60.0	Overcast	0.7
18-Feb-21	11:41	66.8	63.5	68.5		66.8	Fine	0.9
24-Feb-21	16:45	62.1	59.5	64.0		62.1	Sunny	0.2

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						
3-Feb-21	11:28	63.6	59.0	65.5	75	63.6	Sunny	0.5
9-Feb-21	10:36	58.9	57.0	61.0		58.9	Overcast	0.8
17-Feb-21	10:39	61.7	58.0	64.5		61.7	Sunny	0.6
23-Feb-21	11:14	66.2	62.0	67.5		66.2	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						
4-Feb-21	09:03	68.4	65.5	70.0	75	68.4	Sunny	0.4
10-Feb-21	09:06	67.5	64.5	69.0		67.5	Overcast	0.4
18-Feb-21	09:34	62.3	60.0	64.5		62.3	Fine	0.4
24-Feb-21	09:37	66.5	64.5	68.5		66.5	Sunny	0.5

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						
4-Feb-21	09:14	65.2	57.0	67.5	75	65.2	Sunny	0.5
10-Feb-21	09:33	60.5	54.0	61.5		60.5	Overcast	0.5
18-Feb-21	10:07	66.5	67.0	69.0		66.5	Fine	0.5
24-Feb-21	13:50	60.2	56.0	61.0		60.2	Sunny	0.6

NMS 26 Wo Che Estate

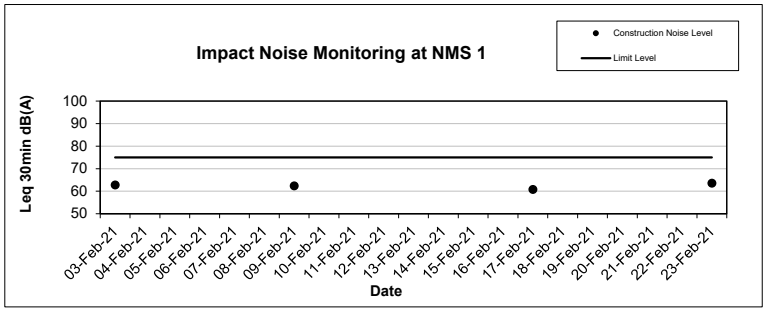
Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L_{eq}	L_{90}	L_{10}				
		Unit: dB(A) 30 Mins						
4-Feb-21	13:52	68.4	65.5	71.0	75	68.4	Sunny	0.5
10-Feb-21	14:27	67.3	65.5	71.0		67.3	Overcast	0.6
18-Feb-21	12:48	67.5	65.0	70.5		67.5	Fine	0.6
24-Feb-21	17:25	67.6	64.5	69.0		67.6	Sunny	0.7

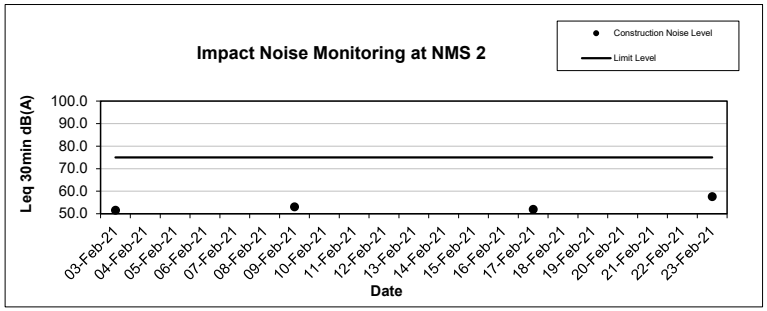
NMS 27 Jockey Club Ti-I College

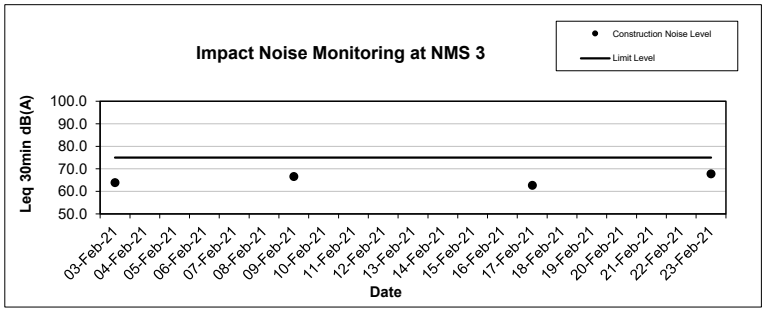
Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L_{eq}	L_{90}	L_{10}				
		Unit: dB(A) 30 Mins						
3-Feb-21	14:41	69.8	62.0	71.0	70	69.8	Sunny	0.8
9-Feb-21	13:31	68.6	62.5	70.0		68.6	Overcast	0.5
17-Feb-21	11:25	69.5	67.0	72.0		69.5	Sunny	0.6
23-Feb-21	13:38	64.3	62.0	67.0		64.3	Fine	0.6

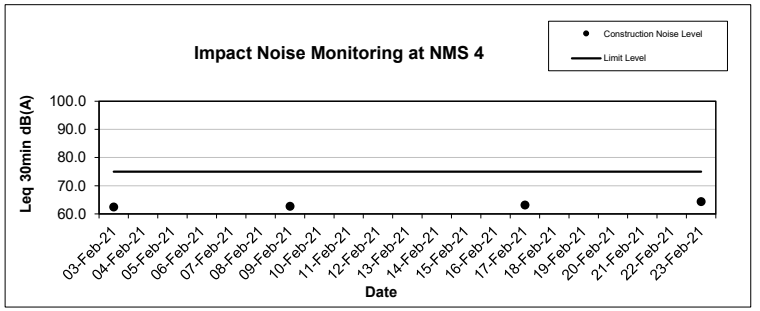
*Note: The examination schedule was provide in Appendix E.

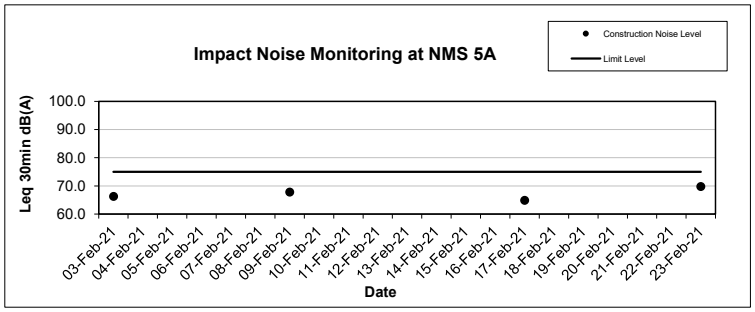
Calculated CNL = Measured Noise Level during operation – Baseline (dB(A)).

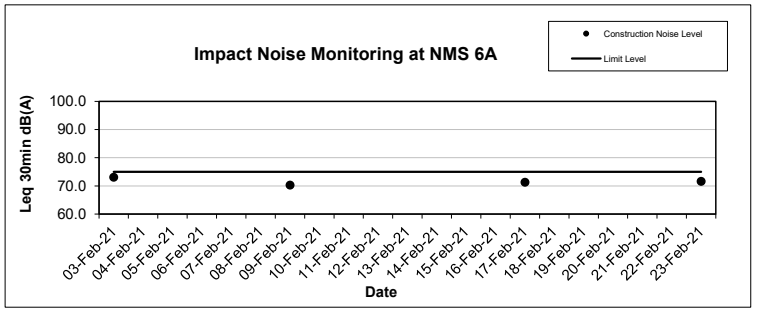

Impact Noise Monitoring at NMS 1
Construction Noise Level
Limit Level
Leq 30min dB(A)
100
90
80
70
60
50
03-Feb-21
04-Feb-21
05-Feb-21
06-Feb-21
07-Feb-21
08-Feb-21
09-Feb-21
10-Feb-21
11-Feb-21
12-Feb-21
13-Feb-21
14-Feb-21
15-Feb-21
16-Feb-21
17-Feb-21
18-Feb-21
19-Feb-21
20-Feb-21
21-Feb-21
22-Feb-21
23-Feb-21
Date

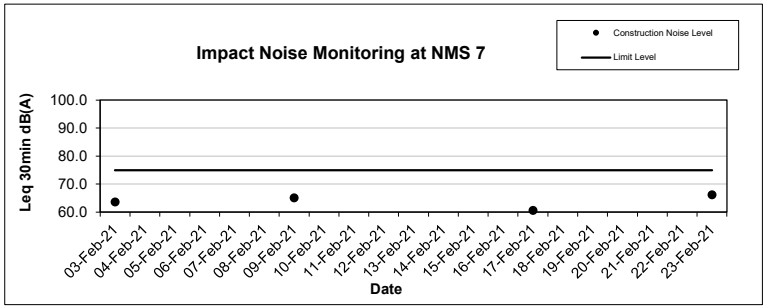

Impact Noise Monitoring at NMS 2
Construction Noise Level
Limit Level
Leq 30min dB(A)
100.0
90.0
80.0
70.0
60.0
50.0
03-Feb-21
04-Feb-21
05-Feb-21
06-Feb-21
07-Feb-21
08-Feb-21
09-Feb-21
10-Feb-21
11-Feb-21
12-Feb-21
13-Feb-21
14-Feb-21
15-Feb-21
16-Feb-21
17-Feb-21
18-Feb-21
19-Feb-21
20-Feb-21
21-Feb-21
22-Feb-21
23-Feb-21
Date

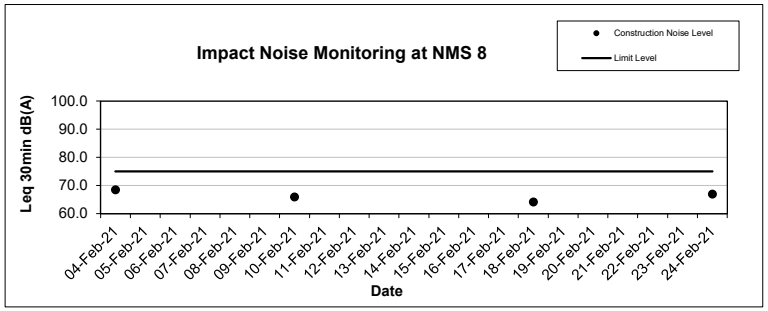

Impact Noise Monitoring at NMS 3
Construction Noise Level
Limit Level
Leq 30min dB(A)
100.0
90.0
80.0
70.0
60.0
50.0
03-Feb-21
04-Feb-21
05-Feb-21
06-Feb-21
07-Feb-21
08-Feb-21
09-Feb-21
10-Feb-21
11-Feb-21
12-Feb-21
13-Feb-21
14-Feb-21
15-Feb-21
16-Feb-21
17-Feb-21
18-Feb-21
19-Feb-21
20-Feb-21
21-Feb-21
22-Feb-21
23-Feb-21
Date

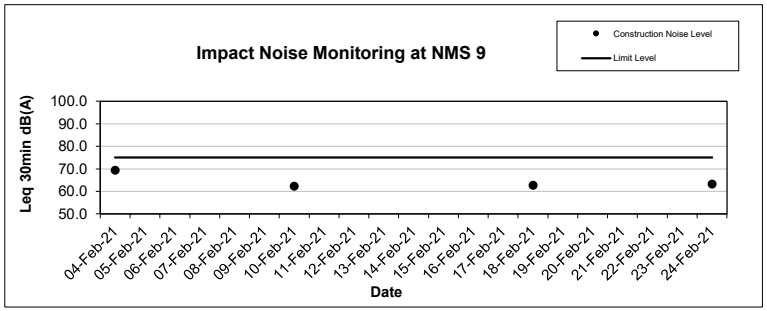

Impact Noise Monitoring at NMS 4
Construction Noise Level
Limit Level
Leq 30min dB(A)
100.0
90.0
80.0
70.0
60.0
03-Feb-21
04-Feb-21
05-Feb-21
06-Feb-21
07-Feb-21
08-Feb-21
09-Feb-21
10-Feb-21
11-Feb-21
12-Feb-21
13-Feb-21
14-Feb-21
15-Feb-21
16-Feb-21
17-Feb-21
18-Feb-21
19-Feb-21
20-Feb-21
21-Feb-21
22-Feb-21
23-Feb-21
Date

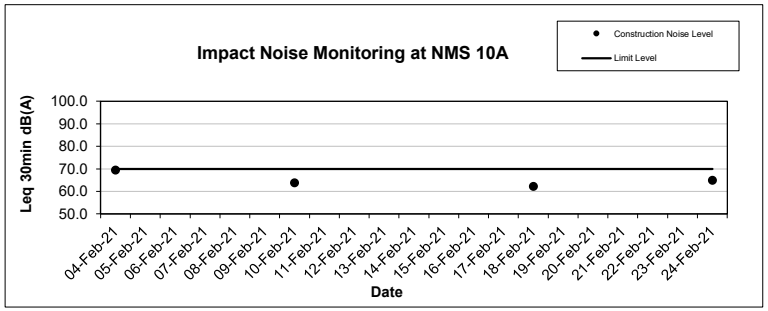

Impact Noise Monitoring at NMS 5A
Construction Noise Level
Limit Level
Leq 30min dB(A)
100.0
90.0
80.0
70.0
60.0
03-Feb-21
04-Feb-21
05-Feb-21
06-Feb-21
07-Feb-21
08-Feb-21
09-Feb-21
10-Feb-21
11-Feb-21
12-Feb-21
13-Feb-21
14-Feb-21
15-Feb-21
16-Feb-21
17-Feb-21
18-Feb-21
19-Feb-21
20-Feb-21
21-Feb-21
22-Feb-21
23-Feb-21
Date

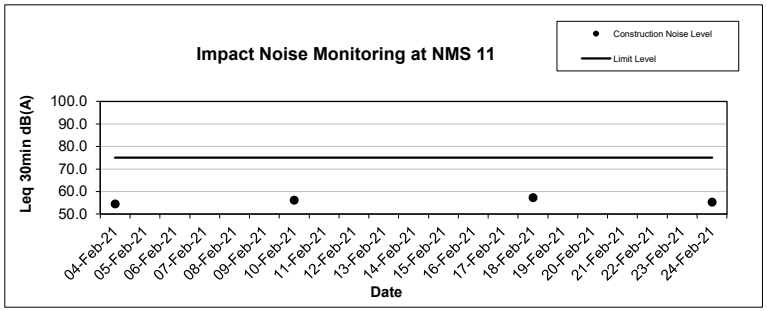

Impact Noise Monitoring at NMS 6A
Construction Noise Level
Limit Level
Leq 30min dB(A)
100.0
90.0
80.0
70.0
60.0
03-Feb-21
04-Feb-21
05-Feb-21
06-Feb-21
07-Feb-21
08-Feb-21
09-Feb-21
10-Feb-21
11-Feb-21
12-Feb-21
13-Feb-21
14-Feb-21
15-Feb-21
16-Feb-21
17-Feb-21
18-Feb-21
19-Feb-21
20-Feb-21
21-Feb-21
22-Feb-21
23-Feb-21
Date

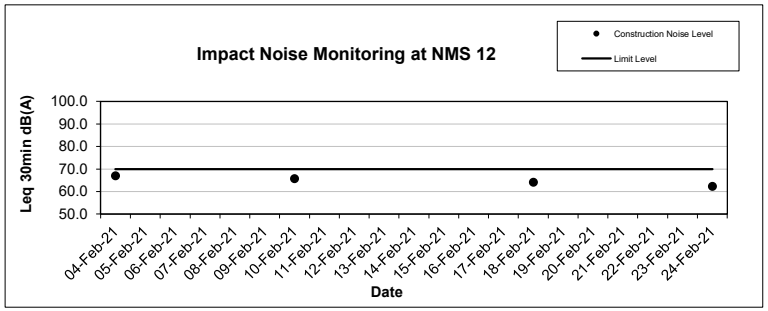

Impact Noise Monitoring at NMS 7
Construction Noise Level
Limit Level
Leq 30min dB(A)
100.0
90.0
80.0
70.0
60.0
03-Feb-21
04-Feb-21
05-Feb-21
06-Feb-21
07-Feb-21
08-Feb-21
09-Feb-21
10-Feb-21
11-Feb-21
12-Feb-21
13-Feb-21
14-Feb-21
15-Feb-21
16-Feb-21
17-Feb-21
18-Feb-21
19-Feb-21
20-Feb-21
21-Feb-21
22-Feb-21
23-Feb-21
Date

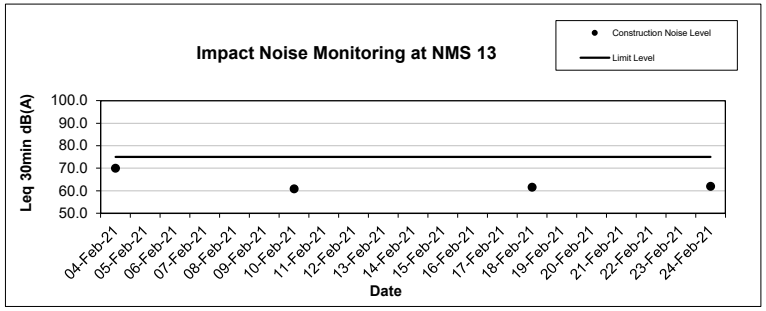

Impact Noise Monitoring at NMS 8
Construction Noise Level
Limit Level
Leq 30min dB(A)
100.0
90.0
80.0
70.0
60.0
04-Feb-21
05-Feb-21
06-Feb-21
07-Feb-21
08-Feb-21
09-Feb-21
10-Feb-21
11-Feb-21
12-Feb-21
13-Feb-21
14-Feb-21
15-Feb-21
16-Feb-21
17-Feb-21
18-Feb-21
19-Feb-21
20-Feb-21
21-Feb-21
22-Feb-21
23-Feb-21
24-Feb-21
Date

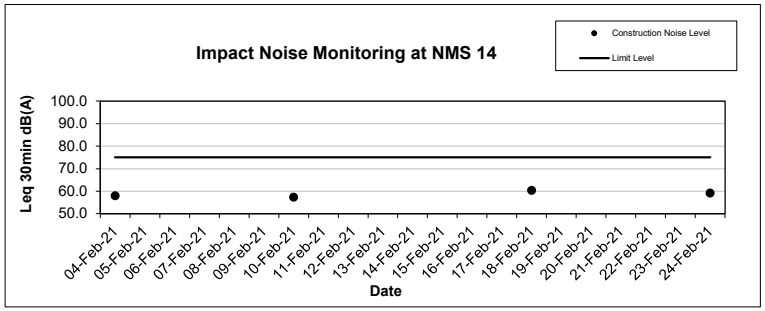

Impact Noise Monitoring at NMS 9
Construction Noise Level
Limit Level
Leq 30min dB(A)
100.0
90.0
80.0
70.0
60.0
50.0
04-Feb-21
05-Feb-21
06-Feb-21
07-Feb-21
08-Feb-21
09-Feb-21
10-Feb-21
11-Feb-21
12-Feb-21
13-Feb-21
14-Feb-21
15-Feb-21
16-Feb-21
17-Feb-21
18-Feb-21
19-Feb-21
20-Feb-21
21-Feb-21
22-Feb-21
23-Feb-21
24-Feb-21
Date

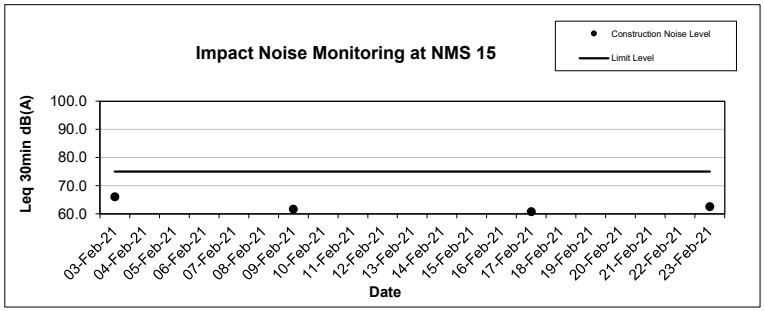

Impact Noise Monitoring at NMS 10A
Construction Noise Level
Limit Level
Leq 30min dB(A)
100.0
90.0
80.0
70.0
60.0
50.0
04-Feb-21
05-Feb-21
06-Feb-21
07-Feb-21
08-Feb-21
09-Feb-21
10-Feb-21
11-Feb-21
12-Feb-21
13-Feb-21
14-Feb-21
15-Feb-21
16-Feb-21
17-Feb-21
18-Feb-21
19-Feb-21
20-Feb-21
21-Feb-21
22-Feb-21
23-Feb-21
24-Feb-21
Date

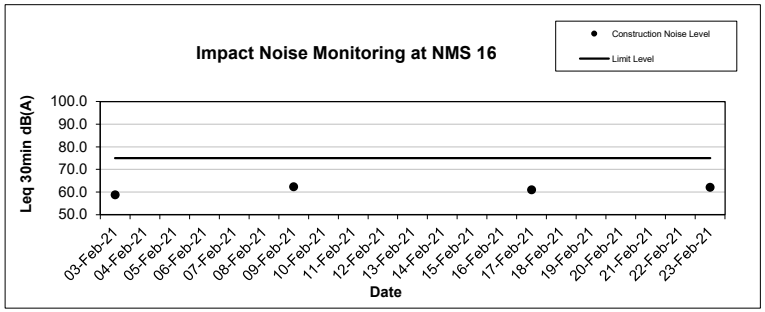

Impact Noise Monitoring at NMS 11
Construction Noise Level
Limit Level
Leq 30min dB(A)
100.0
90.0
80.0
70.0
60.0
50.0
04-Feb-21
05-Feb-21
06-Feb-21
07-Feb-21
08-Feb-21
09-Feb-21
10-Feb-21
11-Feb-21
12-Feb-21
13-Feb-21
14-Feb-21
15-Feb-21
16-Feb-21
17-Feb-21
18-Feb-21
19-Feb-21
20-Feb-21
21-Feb-21
22-Feb-21
23-Feb-21
24-Feb-21
Date

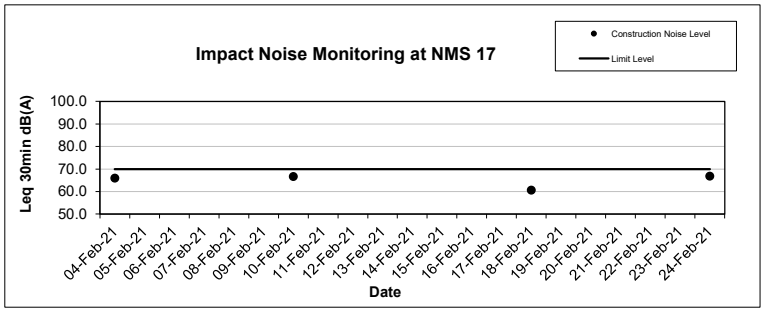

Impact Noise Monitoring at NMS 12
Construction Noise Level
Limit Level
Leq 30min dB(A)
100.0
90.0
80.0
70.0
60.0
50.0
04-Feb-21
05-Feb-21
06-Feb-21
07-Feb-21
08-Feb-21
09-Feb-21
10-Feb-21
11-Feb-21
12-Feb-21
13-Feb-21
14-Feb-21
15-Feb-21
16-Feb-21
17-Feb-21
18-Feb-21
19-Feb-21
20-Feb-21
21-Feb-21
22-Feb-21
23-Feb-21
24-Feb-21
Date

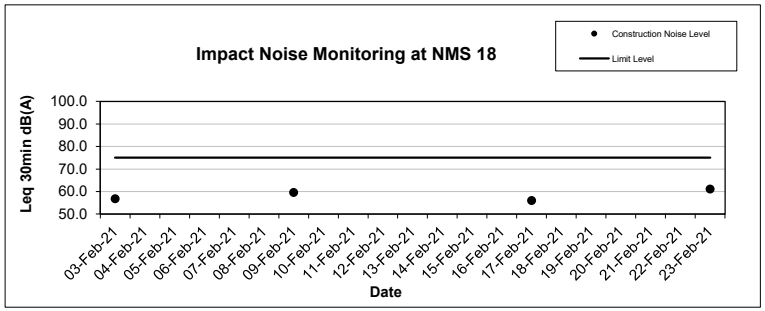

Impact Noise Monitoring at NMS 13
Construction Noise Level
Limit Level
Leq 30min dB(A)
100.0
90.0
80.0
70.0
60.0
50.0
04-Feb-21
05-Feb-21
06-Feb-21
07-Feb-21
08-Feb-21
09-Feb-21
10-Feb-21
11-Feb-21
12-Feb-21
13-Feb-21
14-Feb-21
15-Feb-21
16-Feb-21
17-Feb-21
18-Feb-21
19-Feb-21
20-Feb-21
21-Feb-21
22-Feb-21
23-Feb-21
24-Feb-21
Date

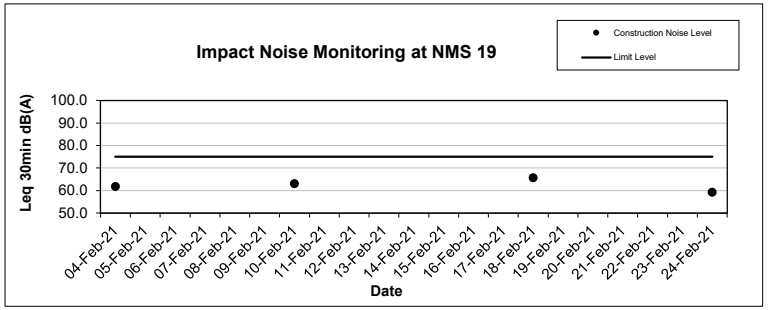

Impact Noise Monitoring at NMS 14
Construction Noise Level
Limit Level
Leq 30min dB(A)
100.0
90.0
80.0
70.0
60.0
50.0
04-Feb-21
05-Feb-21
06-Feb-21
07-Feb-21
08-Feb-21
09-Feb-21
10-Feb-21
11-Feb-21
12-Feb-21
13-Feb-21
14-Feb-21
15-Feb-21
16-Feb-21
17-Feb-21
18-Feb-21
19-Feb-21
20-Feb-21
21-Feb-21
22-Feb-21
23-Feb-21
24-Feb-21
Date

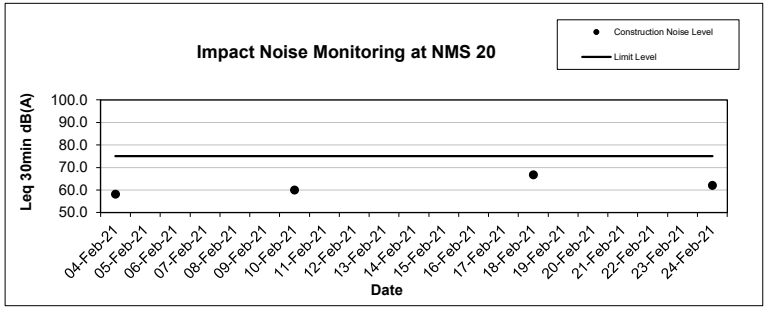

Impact Noise Monitoring at NMS 15
Construction Noise Level
Limit Level
Leq 30min dB(A)
100.0
90.0
80.0
70.0
60.0
03-Feb-21
04-Feb-21
05-Feb-21
06-Feb-21
07-Feb-21
08-Feb-21
09-Feb-21
10-Feb-21
11-Feb-21
12-Feb-21
13-Feb-21
14-Feb-21
15-Feb-21
16-Feb-21
17-Feb-21
18-Feb-21
19-Feb-21
20-Feb-21
21-Feb-21
22-Feb-21
23-Feb-21
Date

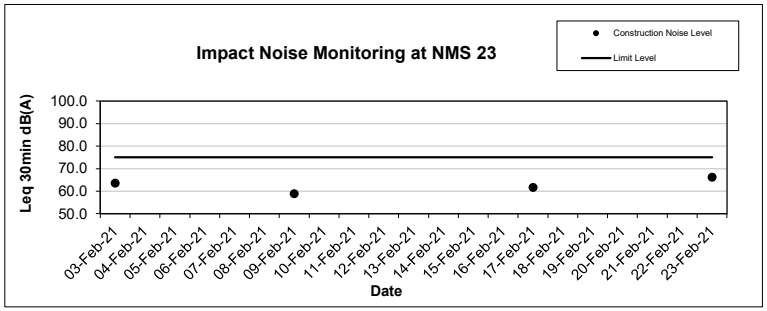

Impact Noise Monitoring at NMS 16
Construction Noise Level
Limit Level
Leq 30min dB(A)
100.0
90.0
80.0
70.0
60.0
50.0
03-Feb-21
04-Feb-21
05-Feb-21
06-Feb-21
07-Feb-21
08-Feb-21
09-Feb-21
10-Feb-21
11-Feb-21
12-Feb-21
13-Feb-21
14-Feb-21
15-Feb-21
16-Feb-21
17-Feb-21
18-Feb-21
19-Feb-21
20-Feb-21
21-Feb-21
22-Feb-21
23-Feb-21
Date

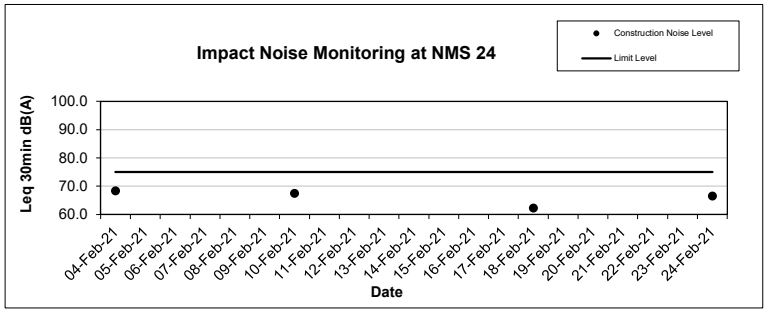

Impact Noise Monitoring at NMS 17
Construction Noise Level
Limit Level
Leq 30min dB(A)
100.0
90.0
80.0
70.0
60.0
50.0
04-Feb-21
05-Feb-21
06-Feb-21
07-Feb-21
08-Feb-21
09-Feb-21
10-Feb-21
11-Feb-21
12-Feb-21
13-Feb-21
14-Feb-21
15-Feb-21
16-Feb-21
17-Feb-21
18-Feb-21
19-Feb-21
20-Feb-21
21-Feb-21
22-Feb-21
23-Feb-21
24-Feb-21
Date

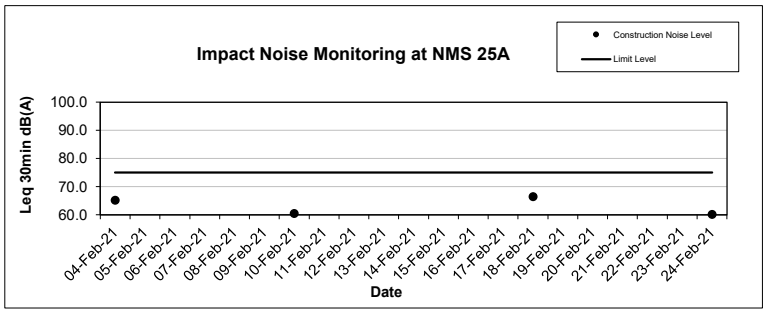

Impact Noise Monitoring at NMS 18
Construction Noise Level
Limit Level
Leq 30min dB(A)
100.0
90.0
80.0
70.0
60.0
50.0
03-Feb-21
04-Feb-21
05-Feb-21
06-Feb-21
07-Feb-21
08-Feb-21
09-Feb-21
10-Feb-21
11-Feb-21
12-Feb-21
13-Feb-21
14-Feb-21
15-Feb-21
16-Feb-21
17-Feb-21
18-Feb-21
19-Feb-21
20-Feb-21
21-Feb-21
22-Feb-21
23-Feb-21
Date

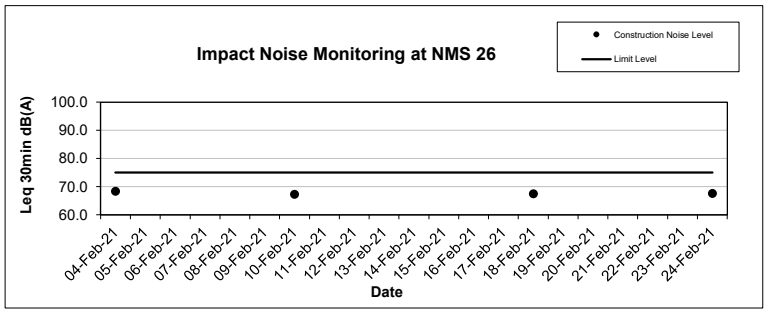

Impact Noise Monitoring at NMS 19
Construction Noise Level
Limit Level
Leq 30min dB(A)
100.0
90.0
80.0
70.0
60.0
50.0
04-Feb-21
05-Feb-21
06-Feb-21
07-Feb-21
08-Feb-21
09-Feb-21
10-Feb-21
11-Feb-21
12-Feb-21
13-Feb-21
14-Feb-21
15-Feb-21
16-Feb-21
17-Feb-21
18-Feb-21
19-Feb-21
20-Feb-21
21-Feb-21
22-Feb-21
23-Feb-21
24-Feb-21
Date

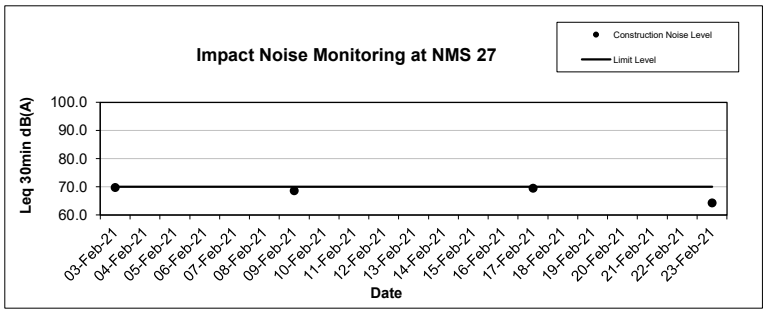

Impact Noise Monitoring at NMS 20
Construction Noise Level
Limit Level
Leq 30min dB(A)
100.0
90.0
80.0
70.0
60.0
50.0
04-Feb-21
05-Feb-21
06-Feb-21
07-Feb-21
08-Feb-21
09-Feb-21
10-Feb-21
11-Feb-21
12-Feb-21
13-Feb-21
14-Feb-21
15-Feb-21
16-Feb-21
17-Feb-21
18-Feb-21
19-Feb-21
20-Feb-21
21-Feb-21
22-Feb-21
23-Feb-21
24-Feb-21
Date


Impact Noise Monitoring at NMS 23
Construction Noise Level
Limit Level
Leq 30min dB(A)
100.0
90.0
80.0
70.0
60.0
50.0
03-Feb-21
04-Feb-21
05-Feb-21
06-Feb-21
07-Feb-21
08-Feb-21
09-Feb-21
10-Feb-21
11-Feb-21
12-Feb-21
13-Feb-21
14-Feb-21
15-Feb-21
16-Feb-21
17-Feb-21
18-Feb-21
19-Feb-21
20-Feb-21
21-Feb-21
22-Feb-21
23-Feb-21
Date


Impact Noise Monitoring at NMS 24
Construction Noise Level
Limit Level
Leq 30min dB(A)
100.0
90.0
80.0
70.0
60.0
04-Feb-21
05-Feb-21
06-Feb-21
07-Feb-21
08-Feb-21
09-Feb-21
10-Feb-21
11-Feb-21
12-Feb-21
13-Feb-21
14-Feb-21
15-Feb-21
16-Feb-21
17-Feb-21
18-Feb-21
19-Feb-21
20-Feb-21
21-Feb-21
22-Feb-21
23-Feb-21
24-Feb-21
Date


Impact Noise Monitoring at NMS 25A
Construction Noise Level
Limit Level
Leq 30min dB(A)
100.0
90.0
80.0
70.0
60.0
04-Feb-21
05-Feb-21
06-Feb-21
07-Feb-21
08-Feb-21
09-Feb-21
10-Feb-21
11-Feb-21
12-Feb-21
13-Feb-21
14-Feb-21
15-Feb-21
16-Feb-21
17-Feb-21
18-Feb-21
19-Feb-21
20-Feb-21
21-Feb-21
22-Feb-21
23-Feb-21
24-Feb-21
Date


Impact Noise Monitoring at NMS 26
Construction Noise Level
Limit Level
Leq 30min dB(A)
100.0
90.0
80.0
70.0
60.0
04-Feb-21
05-Feb-21
06-Feb-21
07-Feb-21
08-Feb-21
09-Feb-21
10-Feb-21
11-Feb-21
12-Feb-21
13-Feb-21
14-Feb-21
15-Feb-21
16-Feb-21
17-Feb-21
18-Feb-21
19-Feb-21
20-Feb-21
21-Feb-21
22-Feb-21
23-Feb-21
24-Feb-21
Date


Impact Noise Monitoring at NMS 27
Construction Noise Level
Limit Level
Leq 30min dB(A)
100.0
90.0
80.0
70.0
60.0
03-Feb-21
04-Feb-21
05-Feb-21
06-Feb-21
07-Feb-21
08-Feb-21
09-Feb-21
10-Feb-21
11-Feb-21
12-Feb-21
13-Feb-21
14-Feb-21
15-Feb-21
16-Feb-21
17-Feb-21
18-Feb-21
19-Feb-21
20-Feb-21
21-Feb-21
22-Feb-21
23-Feb-21
Date

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)
4-Feb-21	23:02	60.0	61.4	52.8 - 66.3	55	Measured Noise Level<Baseline	Fine	0.6
10-Feb-21	23:00	59.3			55	Measured Noise Level<Baseline	Fine	0.8
18-Feb-21	23:00	58.1			55	Measured Noise Level<Baseline	Fine	1.3
25-Feb-21	23:00	58.6			55	Measured Noise Level<Baseline	Fine	1.4

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)
5-Feb-21	02:41	51.6	49.7	40.1 - 58.2	55	Measured Noise Level<Limit Level	Fine	0.7
11-Feb-21	02:35	53.1			55	Measured Noise Level<Limit Level	Fine	0.8
19-Feb-21	02:30	52.7			55	Measured Noise Level<Limit Level	Fine	1.3
26-Feb-21	02:38	52.0			55	Measured Noise Level<Limit Level	Fine	1.6

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)
4-Feb-21	23:00	62.4	70.9	60.2 - 78.9	55	Measured Noise Level<Baseline	Fine	0.6
10-Feb-21	23:06	62.7			55	Measured Noise Level<Baseline	Fine	0.8
18-Feb-21	23:00	61.4			55	Measured Noise Level<Baseline	Fine	1.1
25-Feb-21	23:00	63.3			55	Measured Noise Level<Baseline	Fine	1.5

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)
5-Feb-21	03:06	57.9	62.6	53.1 - 68.1	55	Measured Noise Level<Baseline	Fine	0.6
11-Feb-21	03:02	58.7			55	Measured Noise Level<Baseline	Fine	0.8
19-Feb-21	02:51	58.0			55	Measured Noise Level<Baseline	Fine	1.1
26-Feb-21	02:50	57.3			55	Measured Noise Level<Baseline	Fine	1.4

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)
4-Feb-21	23:28	61.8	67.9	62.0 - 75.2	55	Measured Noise Level<Baseline	Fine	0.6
10-Feb-21	23:32	62.4			55	Measured Noise Level<Baseline	Fine	0.8
18-Feb-21	23:30	60.5			55	Measured Noise Level<Baseline	Fine	1.1
25-Feb-21	23:26	59.4			55	Measured Noise Level<Baseline	Fine	1.6

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)
4-Feb-21	23:27	69.1	71.5	65.0 - 85.9	55	Measured Noise Level<Baseline	Fine	0.6
10-Feb-21	23:32	71.1			55	Measured Noise Level<Baseline	Fine	0.8
18-Feb-21	23:42	69.9			55	Measured Noise Level<Baseline	Fine	1.3
25-Feb-21	23:25	67.7			55	Measured Noise Level<Baseline	Fine	1.5

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)
5-Feb-21	03:02	57.5	59.0	51.4 - 65.5	55	Measured Noise Level<Baseline	Fine	0.6
11-Feb-20	03:00	59.1		51.4 - 65.5	55	42.7*	Fine	0.8
19-Feb-21	02:50	58.5		51.4 - 65.5	55	Measured Noise Level<Baseline	Fine	1.1
26-Feb-21	02:42	58.0		51.4 - 65.5	55	Measured Noise Level<Baseline	Fine	1.6

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)
4-Feb-21	23:48	64.2	64.4	55.6 - 72.8	55	Measured Noise Level<Baseline	Fine	0.6
10-Feb-21	23:47	59.2		55.6 - 72.8	55	Measured Noise Level<Baseline	Fine	0.8
18-Feb-21	23:42	59.2		55.6 - 72.8	55	Measured Noise Level<Baseline	Fine	1.3
25-Feb-21	23:49	58.2		55.6 - 72.8	55	Measured Noise Level<Baseline	Fine	1.5

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)
5-Feb-21	00:23	54.2	53.5	39.5 - 63.1	55	Measured Noise Level<Limit Level	Fine	0.6
11-Feb-21	00:26	56.1		39.5 - 63.1	55	52.6*	Fine	0.8
19-Feb-21	00:22	56.2		39.5 - 63.1	55	52.9*	Fine	1.1
26-Feb-21	00:22	55.8		39.5 - 63.1	55	51.9*	Fine	1.6

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)
5-Feb-21	02:16	55.2	53.2	46.1 - 62.8	55	50.9*	Fine	0.6
11-Feb-21	02:22	55.1		46.1 - 62.8	55	50.6*	Fine	0.6
19-Feb-21	02:20	54.8		46.1 - 62.8	55	Measured Noise Level<Limit Level	Fine	0.6
26-Feb-21	02:23	55.7		46.1 - 62.8	55	52.1*	Fine	0.3

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

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)
5-Feb-21	00:13	58.8	57.3	45.4 - 72.5	55	53.5*	Fine	0.6
11-Feb-21	00:18	58.9		45.4 - 72.5	55	53.8*	Fine	0.8
19-Feb-21	00:14	57.2		45.4 - 72.5	55	Measured Noise Level<Baseline	Fine	1.1
26-Feb-21	00:13	58.0		45.4 - 72.5	55	49.7*	Fine	1.6

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)
5-Feb-21	01:50	56.2	54.1	46.1 - 62.8	55	52.0*	Fine	0.6
11-Feb-21	01:56	55.4		46.1 - 62.8	55	49.5*	Fine	0.8
19-Feb-21	01:54	55.5		46.1 - 62.8	55	49.9*	Fine	1.1
26-Feb-21	01:49	57.3		46.1 - 62.8	55	54.5*	Fine	1.6

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)
5-Feb-21	01:32	57.3	58.8	48.4 - 69.7	55	Measured Noise Level<Baseline	Fine	0.6
11-Feb-21	01:30	58.7		48.4 - 69.7	55	Measured Noise Level<Baseline	Fine	0.8
19-Feb-21	01:23	57.4		48.4 - 69.7	55	Measured Noise Level<Baseline	Fine	1.3
26-Feb-21	01:20	57.2		48.4 - 69.7	55	Measured Noise Level<Baseline	Fine	1.0

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)
5-Feb-21	01:23	59.3	60.1	51.4 - 69.5	55	Measured Noise Level<Baseline	Fine	0.6
11-Feb-21	01:22	58.7		51.4 - 69.5	55	Measured Noise Level<Baseline	Fine	0.8
19-Feb-21	01:20	58.1		51.4 - 69.5	55	Measured Noise Level<Baseline	Fine	1.1
26-Feb-21	01:24	59.5		51.4 - 69.5	55	Measured Noise Level<Baseline	Fine	1.6

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)
5-Feb-21	01:06	59.6	63.2	56.0 - 72.1	55	Measured Noise Level<Baseline	Fine	0.6
11-Feb-21	01:12	60.2		56.0 - 72.1	55	Measured Noise Level<Baseline	Fine	0.8
19-Feb-21	01:13	59.3		56.0 - 72.1	55	Measured Noise Level<Baseline	Fine	1.3
26-Feb-21	01:05	59.0		56.0 - 72.1	55	Measured Noise Level<Baseline	Fine	1.6

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)
5-Feb-21	00:32	59.3	61.7	53.8 - 72.8	55	Measured Noise Level<Baseline	Fine	0.6
13-Nov-20	00:36	59.1		53.8 - 72.8	55	Measured Noise Level<Baseline	Fine	0.0
19-Feb-21	00:30	59.9		53.8 - 72.8	55	Measured Noise Level<Baseline	Fine	1.3
26-Feb-21	00:22	59.2		53.8 - 72.8	55	Measured Noise Level<Baseline	Fine	1.6

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)
5-Feb-21	01:03	57.1	57.7	48.6 - 71.7	55	Measured Noise Level<Baseline	Fine	0.6
11-Feb-21	01:09	57.6		48.6 - 71.7	55	Measured Noise Level<Baseline	Fine	0.0
19-Feb-21	01:04	57.6		48.6 - 71.7	55	Measured Noise Level<Baseline	Fine	1.3
26-Feb-21	01:00	57.5		48.6 - 71.7	55	Measured Noise Level<Baseline	Fine	1.6

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)
5-Feb-21	02:16	59.5	59.9	47.8 - 69.8	55	Measured Noise Level<Baseline	Fine	0.6
11-Feb-21	02:18	60.3		47.8 - 69.8	55	49.7*	Fine	0.8
19-Feb-21	02:14	59.6		47.8 - 69.8	55	Measured Noise Level<Baseline	Fine	1.3
26-Feb-21	02:16	59.4		47.8 - 69.8	55	Measured Noise Level<Baseline	Fine	1.5

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)
4-Feb-21	23:35	57.7	58.0	50.2 - 66.7	55	Measured Noise Level<Baseline	Fine	0.6
10-Feb-21	23:30	59.6		50.2 - 66.7	55	54.5*	Fine	0.8
18-Feb-21	23:33	58.9		50.2 - 66.7	55	51.6*	Fine	1.3
25-Feb-21	23:30	58.9		50.2 - 66.7	55	51.6*	Fine	1.3

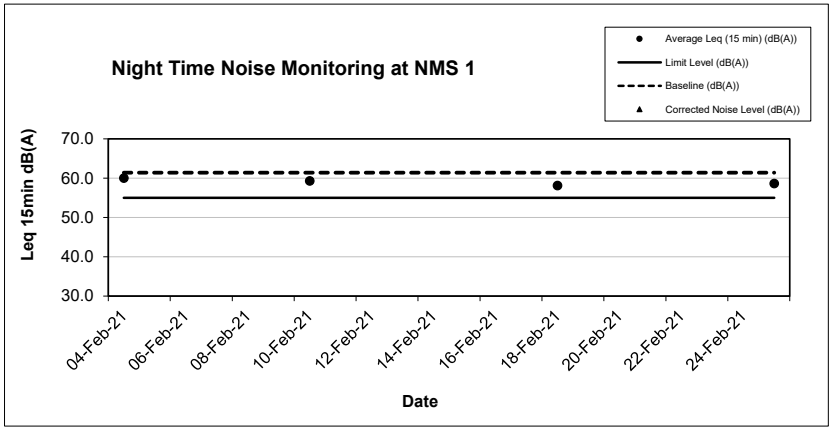
Note: *Corrected Noise Level in Leq (15min) dB(A) was/were lower than Limit level: 55 dB(A).

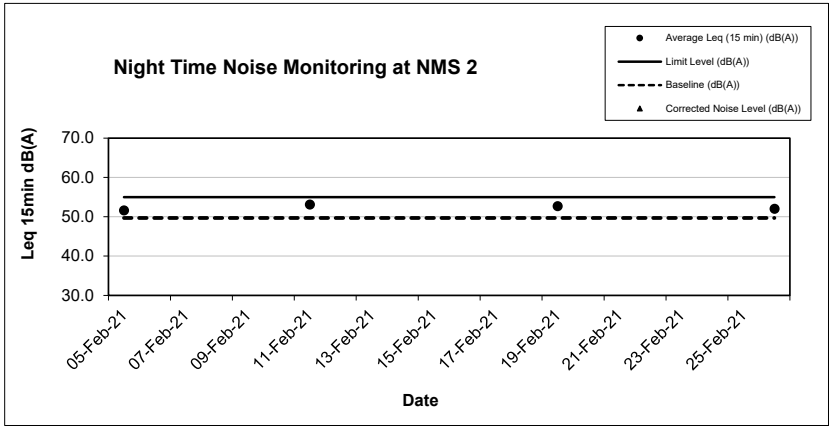
NMS 25A Sheung Wo Che

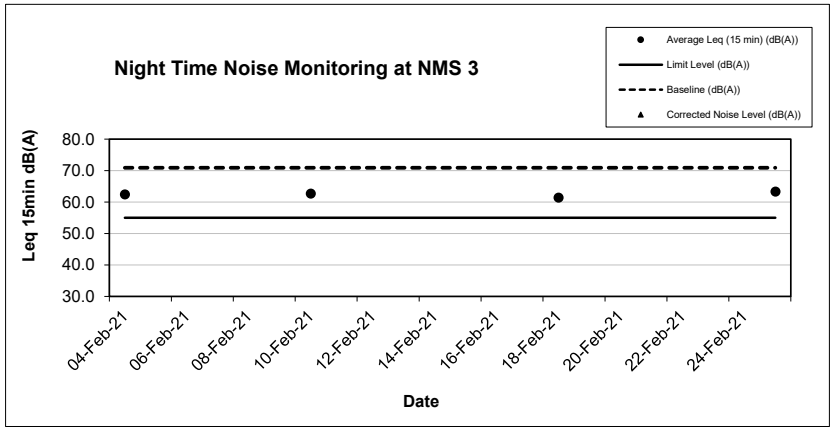
Date	Start Time	Average Leq (15 min) (dB(A))	Baseline (dB(A))	Baseline Range (dB(A))	Limit Level (dB(A))	Corrected Noise Level (dB(A))	Weather	Wind Speed (m/s)
5-Feb-21	02:40	58.3	59.7	50.3 - 68.4	55	Measured Noise Level<Baseline	Fine	0.6
11-Feb-21	02:49	58.7		50.3 - 68.4	55	Measured Noise Level<Baseline	Fine	0.8
19-Feb-21	02:52	57.4		50.3 - 68.4	55	Measured Noise Level<Baseline	Fine	1.3
26-Feb-21	02:43	57.6		50.3 - 68.4	55	Measured Noise Level<Baseline	Fine	0.4

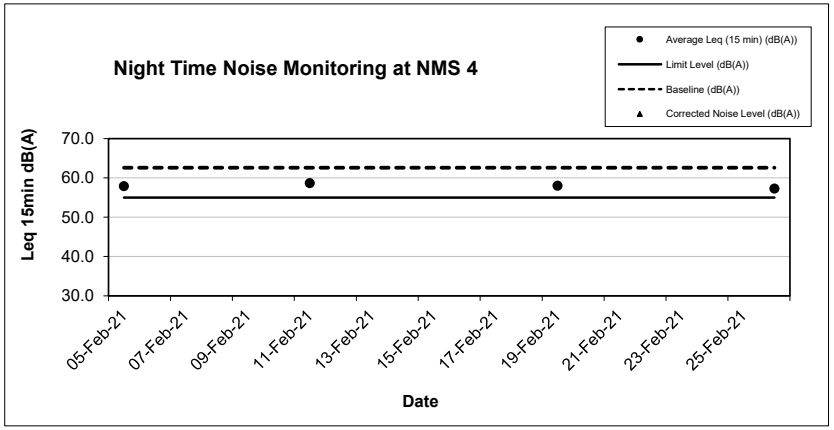
NMS 26 Wo Che Estate

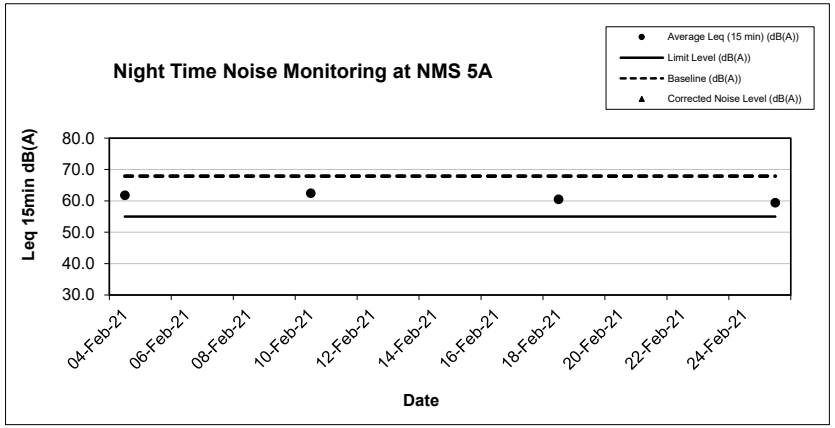
Date	Start Time	Average Leq (15 min) (dB(A))	Baseline (dB(A))	Baseline Range (dB(A))	Limit Level (dB(A))	Corrected Noise Level (dB(A))	Weather	Wind Speed (m/s)
5-Feb-21	00:47	60.2	61.2	45.7 - 70.1	55	Measured Noise Level<Baseline	Fine	0.6
11-Feb-21	00:53	61.0		45.7 - 70.1	55	Measured Noise Level<Baseline	Fine	0.8
19-Feb-21	00:51	59.3		45.7 - 70.1	55	Measured Noise Level<Baseline	Fine	1.3
26-Feb-21	00:47	57.1		45.7 - 70.1	55	Measured Noise Level<Baseline	Fine	1.6

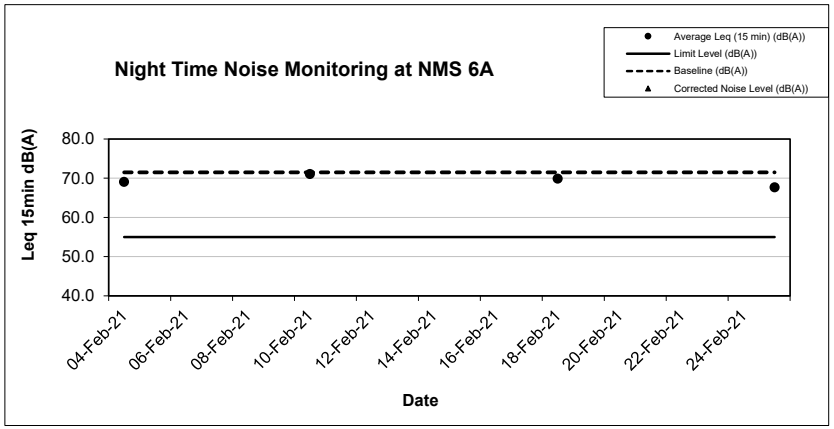

Night Time Noise Monitoring at NMS 1
Average Leq (15 min) (dB(A))
Limit Level (dB(A))
Baseline (dB(A))
Corrected Noise Level (dB(A))
Leq 15min dB(A)
70.0
60.0
50.0
40.0
30.0
04-Feb-21
06-Feb-21
08-Feb-21
10-Feb-21
12-Feb-21
14-Feb-21
16-Feb-21
18-Feb-21
20-Feb-21
22-Feb-21
24-Feb-21
Date

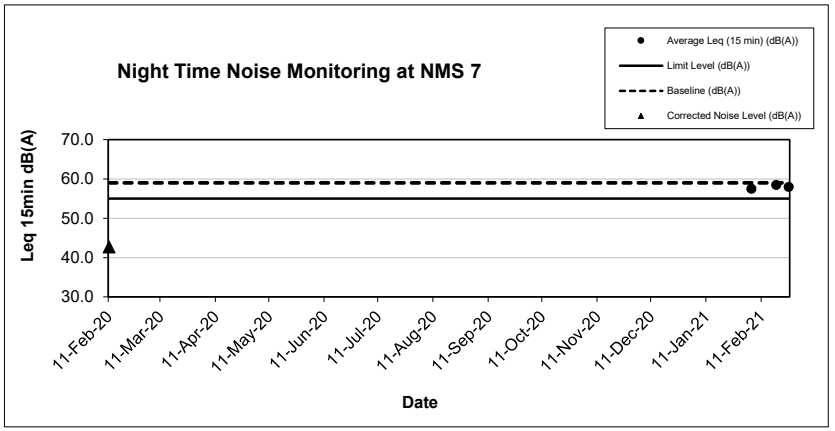

Night Time Noise Monitoring at NMS 2
Average Leq (15 min) (dB(A))
Limit Level (dB(A))
Baseline (dB(A))
Corrected Noise Level (dB(A))
Leq 15min dB(A)
70.0
60.0
50.0
40.0
30.0
05-Feb-21
07-Feb-21
09-Feb-21
11-Feb-21
13-Feb-21
15-Feb-21
17-Feb-21
19-Feb-21
21-Feb-21
23-Feb-21
25-Feb-21
Date

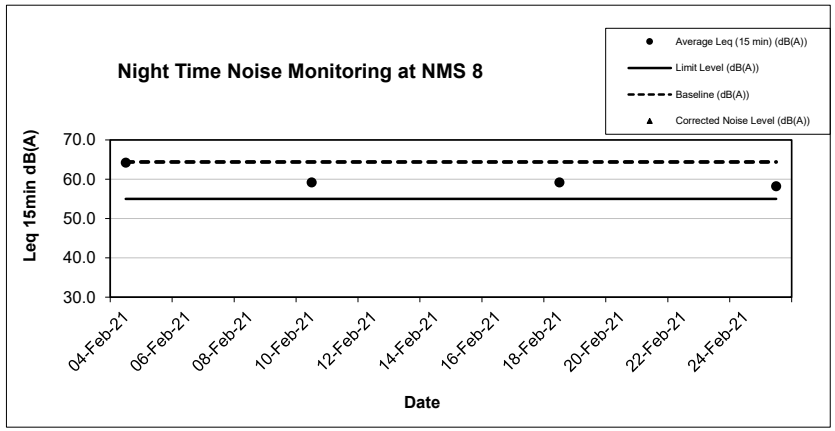

Night Time Noise Monitoring at NMS 3
Average Leq (15 min) (dB(A))
Limit Level (dB(A))
Baseline (dB(A))
Corrected Noise Level (dB(A))
Leq 15min dB(A)
80.0
70.0
60.0
50.0
40.0
30.0
04-Feb-21
06-Feb-21
08-Feb-21
10-Feb-21
12-Feb-21
14-Feb-21
16-Feb-21
18-Feb-21
20-Feb-21
22-Feb-21
24-Feb-21
Date

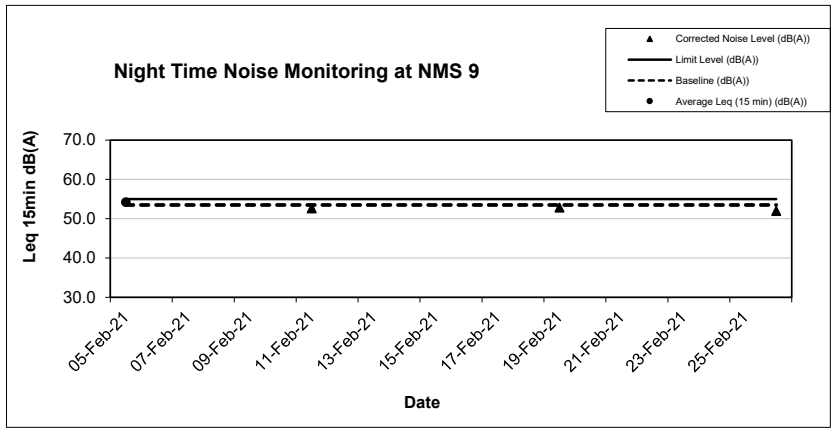

Night Time Noise Monitoring at NMS 4
Average Leq (15 min) (dB(A))
Limit Level (dB(A))
Baseline (dB(A))
Corrected Noise Level (dB(A))
Leq 15min dB(A)
70.0
60.0
50.0
40.0
30.0
05-Feb-21
07-Feb-21
09-Feb-21
11-Feb-21
13-Feb-21
15-Feb-21
17-Feb-21
19-Feb-21
21-Feb-21
23-Feb-21
25-Feb-21
Date

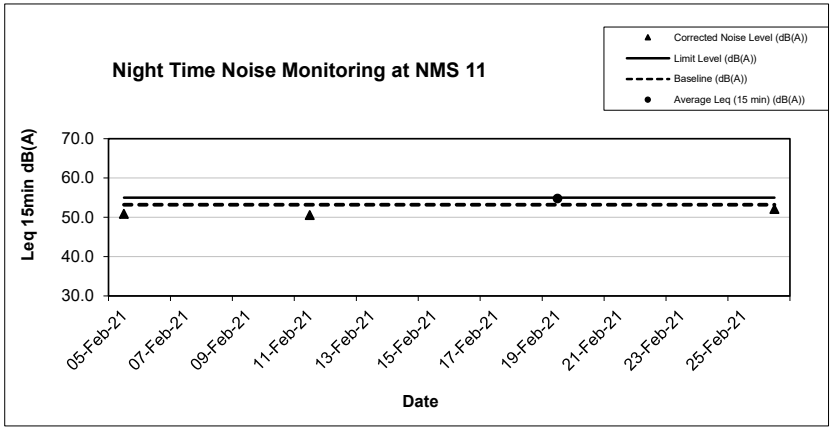

Night Time Noise Monitoring at NMS 5A
Average Leq (15 min) (dB(A))
Limit Level (dB(A))
Baseline (dB(A))
Corrected Noise Level (dB(A))
Leq 15min dB(A)
80.0
70.0
60.0
50.0
40.0
30.0
04-Feb-21
06-Feb-21
08-Feb-21
10-Feb-21
12-Feb-21
14-Feb-21
16-Feb-21
18-Feb-21
20-Feb-21
22-Feb-21
24-Feb-21
Date

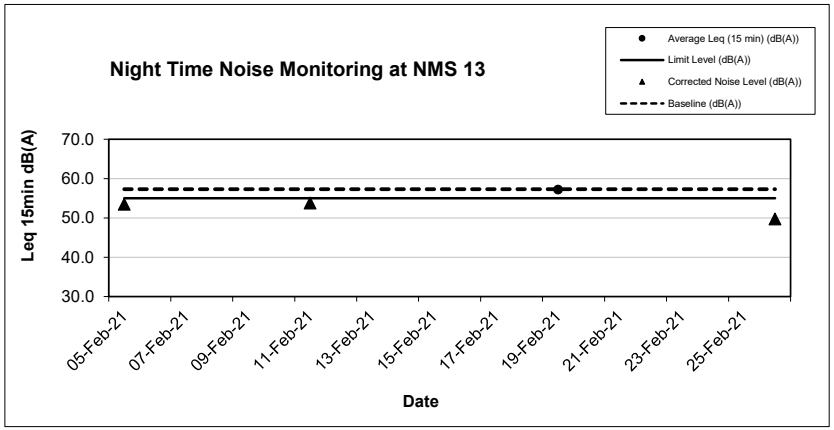

Night Time Noise Monitoring at NMS 6A
Average Leq (15 min) (dB(A))
Limit Level (dB(A))
Baseline (dB(A))
Corrected Noise Level (dB(A))
Leq 15min dB(A)
80.0
70.0
60.0
50.0
40.0
04-Feb-21
06-Feb-21
08-Feb-21
10-Feb-21
12-Feb-21
14-Feb-21
16-Feb-21
18-Feb-21
20-Feb-21
22-Feb-21
24-Feb-21
Date

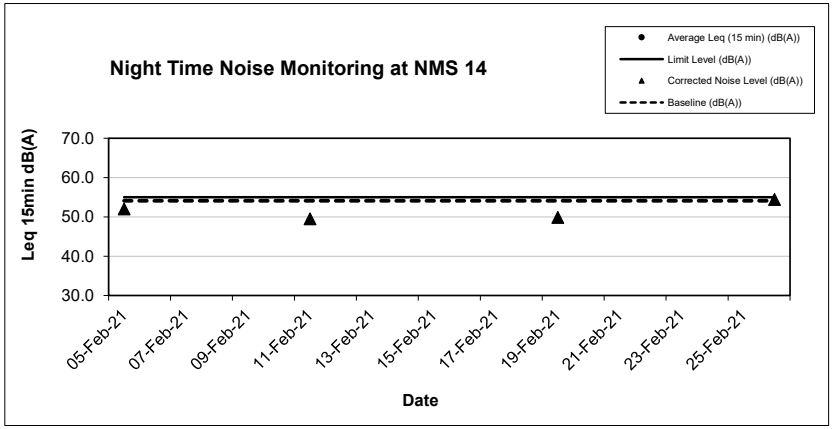

Night Time Noise Monitoring at NMS 7
Average Leq (15 min) (dB(A))
Limit Level (dB(A))
Baseline (dB(A))
Corrected Noise Level (dB(A))
Leq 15min dB(A)
70.0
60.0
50.0
40.0
30.0
11-Feb-20
11-Mar-20
11-Apr-20
11-May-20
11-Jun-20
11-Jul-20
11-Aug-20
11-Sep-20
11-Oct-20
11-Nov-20
11-Dec-20
11-Jan-21
11-Feb-21
Date

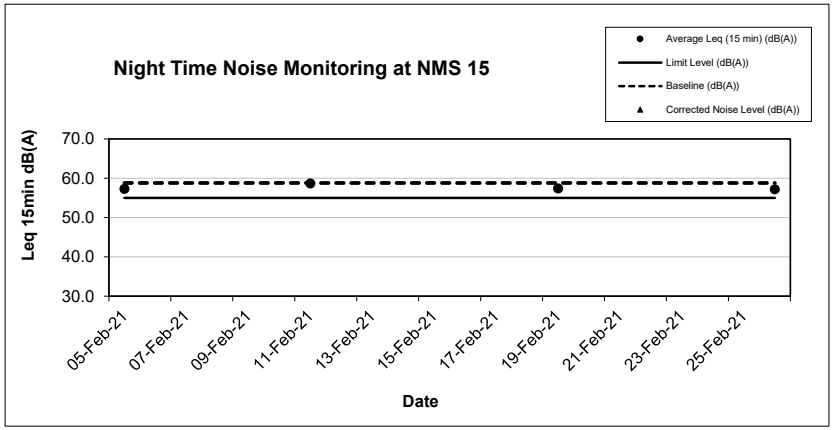

Night Time Noise Monitoring at NMS 8
Average Leq (15 min) (dB(A))
Limit Level (dB(A))
Baseline (dB(A))
Corrected Noise Level (dB(A))
Leq 15min dB(A)
70.0
60.0
50.0
40.0
30.0
04-Feb-21
06-Feb-21
08-Feb-21
10-Feb-21
12-Feb-21
14-Feb-21
16-Feb-21
18-Feb-21
20-Feb-21
22-Feb-21
24-Feb-21
Date

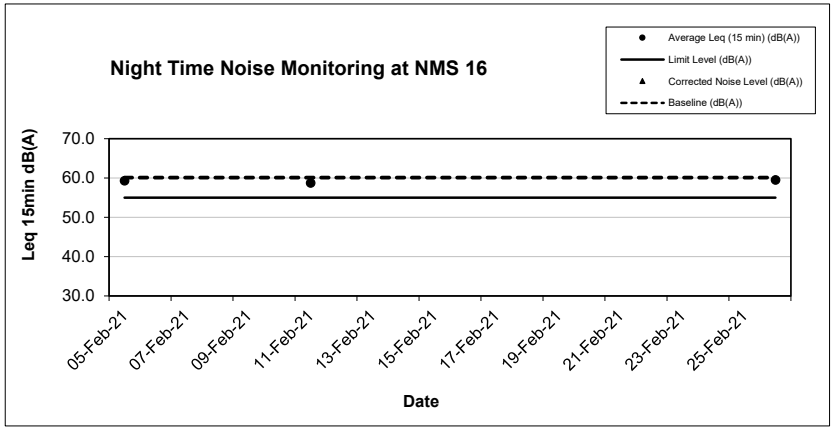

Night Time Noise Monitoring at NMS 9
Corrected Noise Level (dB(A))
Limit Level (dB(A))
Baseline (dB(A))
Average Leq (15 min) (dB(A))
Leq 15min dB(A)
70.0
60.0
50.0
40.0
30.0
05-Feb-21
07-Feb-21
09-Feb-21
11-Feb-21
13-Feb-21
15-Feb-21
17-Feb-21
19-Feb-21
21-Feb-21
23-Feb-21
25-Feb-21
Date

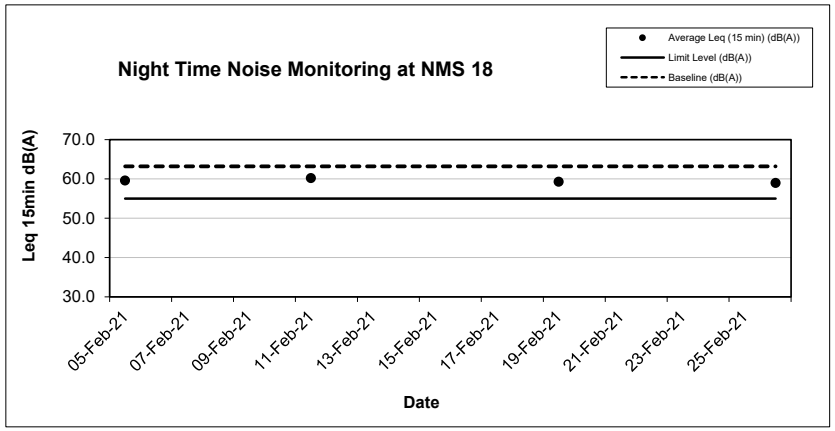

Night Time Noise Monitoring at NMS 11
Corrected Noise Level (dB(A))
Limit Level (dB(A))
Baseline (dB(A))
Average Leq (15 min) (dB(A))
Leq 15min dB(A)
70.0
60.0
50.0
40.0
30.0
05-Feb-21
07-Feb-21
09-Feb-21
11-Feb-21
13-Feb-21
15-Feb-21
17-Feb-21
19-Feb-21
21-Feb-21
23-Feb-21
25-Feb-21
Date

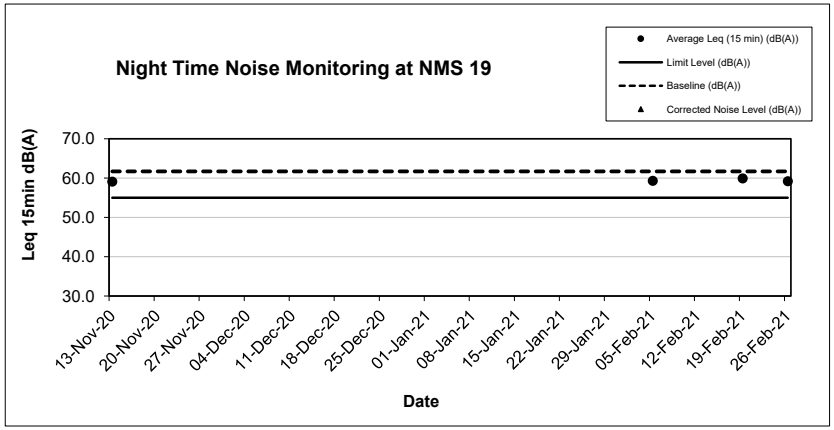

Night Time Noise Monitoring at NMS 13
Average Leq (15 min) (dB(A))
Limit Level (dB(A))
Corrected Noise Level (dB(A))
Baseline (dB(A))
Leq 15min dB(A)
70.0
60.0
50.0
40.0
30.0
05-Feb-21
07-Feb-21
09-Feb-21
11-Feb-21
13-Feb-21
15-Feb-21
17-Feb-21
19-Feb-21
21-Feb-21
23-Feb-21
25-Feb-21
Date

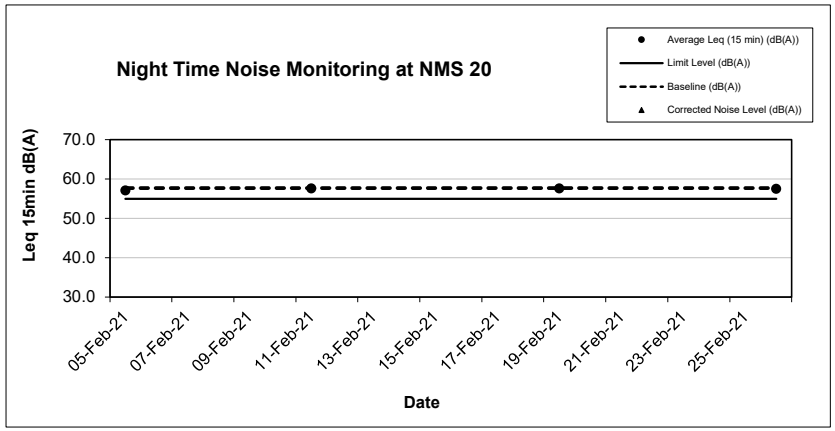

Night Time Noise Monitoring at NMS 14
Average Leq (15 min) (dB(A))
Limit Level (dB(A))
Corrected Noise Level (dB(A))
Baseline (dB(A))
Leq 15min dB(A)
70.0
60.0
50.0
40.0
30.0
05-Feb-21
07-Feb-21
09-Feb-21
11-Feb-21
13-Feb-21
15-Feb-21
17-Feb-21
19-Feb-21
21-Feb-21
23-Feb-21
25-Feb-21
Date

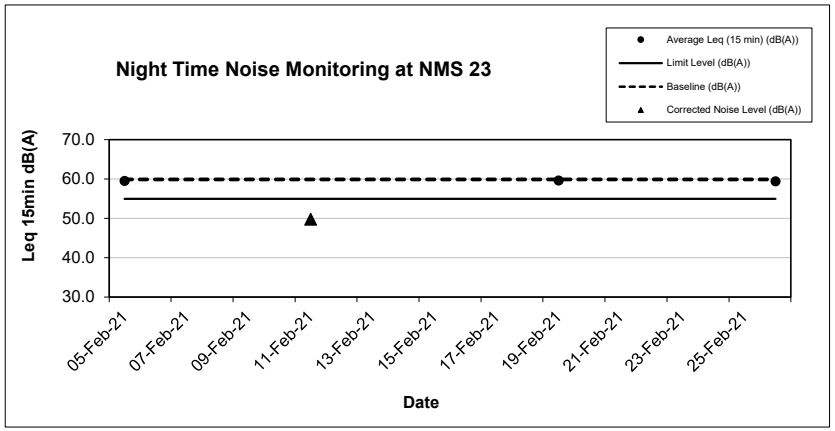

Night Time Noise Monitoring at NMS 15
Average Leq (15 min) (dB(A))
Limit Level (dB(A))
Baseline (dB(A))
Corrected Noise Level (dB(A))
Leq 15min dB(A)
70.0
60.0
50.0
40.0
30.0
05-Feb-21
07-Feb-21
09-Feb-21
11-Feb-21
13-Feb-21
15-Feb-21
17-Feb-21
19-Feb-21
21-Feb-21
23-Feb-21
25-Feb-21
Date

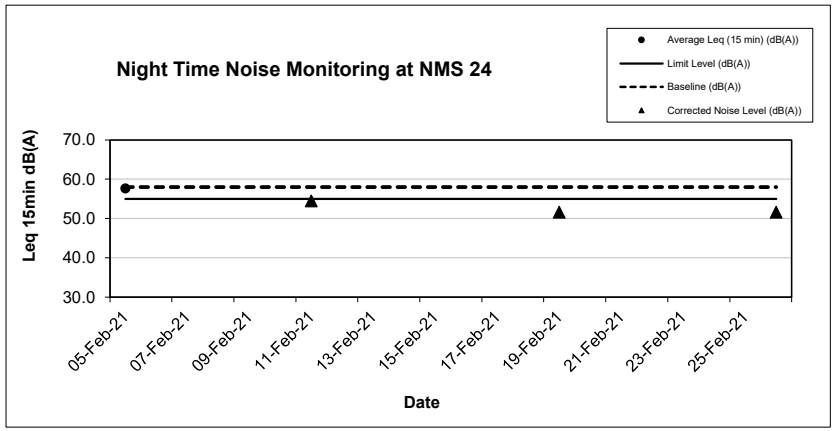

Night Time Noise Monitoring at NMS 16
Average Leq (15 min) (dB(A))
Limit Level (dB(A))
Corrected Noise Level (dB(A))
Baseline (dB(A))
Leq 15min dB(A)
70.0
60.0
50.0
40.0
30.0
05-Feb-21
07-Feb-21
09-Feb-21
11-Feb-21
13-Feb-21
15-Feb-21
17-Feb-21
19-Feb-21
21-Feb-21
23-Feb-21
25-Feb-21
Date

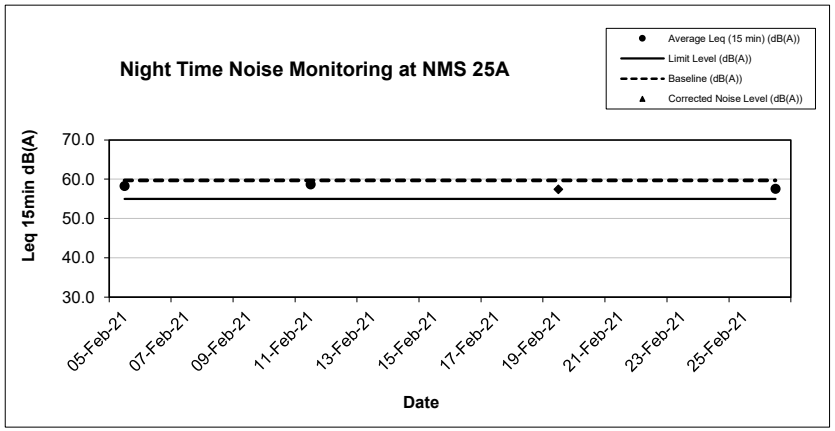

Night Time Noise Monitoring at NMS 18
Average Leq (15 min) (dB(A))
Limit Level (dB(A))
Baseline (dB(A))
Leq 15min dB(A)
70.0
60.0
50.0
40.0
30.0
05-Feb-21
07-Feb-21
09-Feb-21
11-Feb-21
13-Feb-21
15-Feb-21
17-Feb-21
19-Feb-21
21-Feb-21
23-Feb-21
25-Feb-21
Date

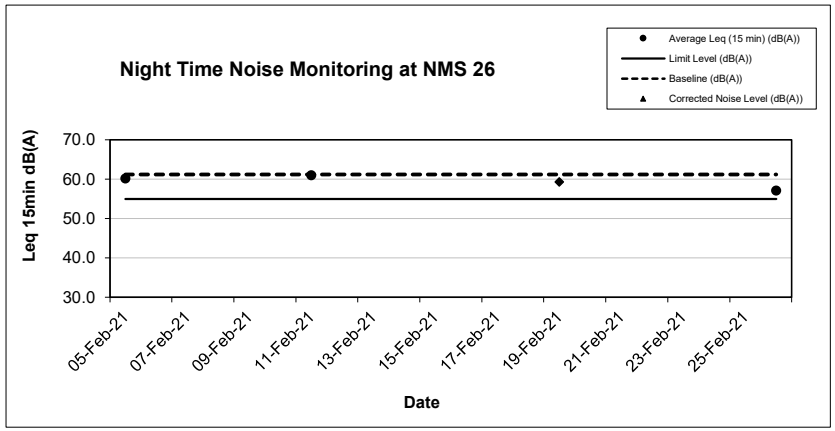

Night Time Noise Monitoring at NMS 19
Average Leq (15 min) (dB(A))
Limit Level (dB(A))
Baseline (dB(A))
Corrected Noise Level (dB(A))
Leq 15min dB(A)
70.0
60.0
50.0
40.0
30.0
13-Nov-20
20-Nov-20
27-Nov-20
04-Dec-20
11-Dec-20
18-Dec-20
25-Dec-20
01-Jan-21
08-Jan-21
15-Jan-21
22-Jan-21
29-Jan-21
05-Feb-21
12-Feb-21
19-Feb-21
26-Feb-21
Date


Night Time Noise Monitoring at NMS 20
Average Leq (15 min) (dB(A))
Limit Level (dB(A))
Baseline (dB(A))
Corrected Noise Level (dB(A))
Leq 15min dB(A)
70.0
60.0
50.0
40.0
30.0
05-Feb-21
07-Feb-21
09-Feb-21
11-Feb-21
13-Feb-21
15-Feb-21
17-Feb-21
19-Feb-21
21-Feb-21
23-Feb-21
25-Feb-21
Date


Night Time Noise Monitoring at NMS 23
Average Leq (15 min) (dB(A))
Limit Level (dB(A))
Baseline (dB(A))
Corrected Noise Level (dB(A))
Leq 15min dB(A)
70.0
60.0
50.0
40.0
30.0
05-Feb-21
07-Feb-21
09-Feb-21
11-Feb-21
13-Feb-21
15-Feb-21
17-Feb-21
19-Feb-21
21-Feb-21
23-Feb-21
25-Feb-21
Date


Night Time Noise Monitoring at NMS 24
Average Leq (15 min) (dB(A))
Limit Level (dB(A))
Baseline (dB(A))
Corrected Noise Level (dB(A))
Leq 15min dB(A)
70.0
60.0
50.0
40.0
30.0
05-Feb-21
07-Feb-21
09-Feb-21
11-Feb-21
13-Feb-21
15-Feb-21
17-Feb-21
19-Feb-21
21-Feb-21
23-Feb-21
25-Feb-21
Date


Night Time Noise Monitoring at NMS 25A
Average Leq (15 min) (dB(A))
Limit Level (dB(A))
Baseline (dB(A))
Corrected Noise Level (dB(A))
Leq 15min dB(A)
70.0
60.0
50.0
40.0
30.0
05-Feb-21
07-Feb-21
09-Feb-21
11-Feb-21
13-Feb-21
15-Feb-21
17-Feb-21
19-Feb-21
21-Feb-21
23-Feb-21
25-Feb-21
Date


Night Time Noise Monitoring at NMS 26
Average Leq (15 min) (dB(A))
Limit Level (dB(A))
Baseline (dB(A))
Corrected Noise Level (dB(A))
Leq 15min dB(A)
70.0
60.0
50.0
40.0
30.0
05-Feb-21
07-Feb-21
09-Feb-21
11-Feb-21
13-Feb-21
15-Feb-21
17-Feb-21
19-Feb-21
21-Feb-21
23-Feb-21
25-Feb-21
Date

FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

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

Appendix H

Events and Action Plan

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

Event and Action Plan for Construction Dust Monitoring

EVENT	ACTION			
	ET Leader	IEC	SO	Contractor
Action Level				
1. Exceedance for one sample	1. Identify the source. 2. Inform the IEC and the SO. 3. Repeat measurement to confirm findings. 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by the ET Leader. 2. Check Contractor's working method.	1. Notify Contractor.	1. Rectify any unacceptable practice. 2. Amend working methods if appropriate.
2. Exceedance for two or more consecutive samples	1. Identify 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.	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.	1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Ensure remedial measures properly implemented.	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	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.	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.	1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Ensure remedial measures are properly implemented.	1. Take immediate action to avoid further exceedance. 2. Submit proposals for remedial actions to IEC within 3 working days of notification. 3. Implement the agreed proposals. 4. Amend proposal if appropriate.
2. Exceedance	1. Notify the IEC, the SO and the EPD and the	1. Discuss amongst the SO, ET	1. Confirm receipt of	1. Take immediate action to avoid

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

EVENT	ACTION			
	ET Leader	**IEC**	**SO**	**Contractor**
for two or more consecutive samples	Contractor. 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.	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. Supervisor implementation of remedial measures.	notification of failure in writing. 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.	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.

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

Event and Action Plan for Noise Impact

EVENT	ACTION			
	ET Leader	**IEC**	**SO**	**Contractor**
Action Level	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.	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.	1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Require the Contractor to propose remedial measures for the analysed noise problem. 4. Ensure remedial measures are properly implemented.	1. Submit noise mitigation proposals to IEC. 2. Implement noise mitigation proposals.
Limit Level	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.	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.	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.	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.

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

Event and Action Plan for Landscape and Visual Impact

Event	Action		
	ET	**SO**	**Contractor**
Non-conformity on one occasion	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	1. Notify Contractor; and 2. Ensure remedial measures are properly implemented.	1. Amend working methods; 2. Rectify damage and undertake any necessary replacement.
Repeated Non-conformity	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.	1. Notify Contractor; and 2. Ensure remedial measures are properly implemented.	1. Amend working methods; 2. Rectify damage and undertake any necessary replacement.

FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

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

Appendix I

Waste Flow Table

FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

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

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

FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

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

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

FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

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

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 m^3.
4) Updated data for previous month.

FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

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

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											
2021 Apr											
2021 May											
2021 Jun											
Sub-Total	7.073	0.000	0.000	0.000	7.073	0.032	0.001	0.058	2.497	0.000	0.066
2021 Jul											
2021 Aug											
2021 Sep											
2021 Oct											
2021 Nov											
2021 Dec											
Total	7.073	0.000	0.000	0.000	7.073	0.032	0.001	0.058	2.497	0.000	0.066

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.

FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

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

Appendix J

Environmental Mitigation Implementation Schedule (EMIS)

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

EIA Review Ref	Location	Environmental Protection Measures/	Implementation Agent	Implementation Status in Construction Phase
		Noise Measures		
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 constriction 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	Implemented
		• 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	Not Applicable
		• Other type of quiet PME are allowed to use for their needs based on the actual construction conditions and programmes	Contractor	Not Applicable
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	Implemented
		• 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

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
Air Quality Measures				
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	Partially 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	Partially Implemented

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

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	Implemented
		• Suitable chemical wetting agent such as dust suppression chemical shall be used on completed cuts and fills to reduce wind erosion.	Contractor	Not Observed
		• 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	Not Applicable
		• 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	Not Applicable
		• 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	Not Applicable
		• 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

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

EIA Review Ref	Location	Environmental Protection Measures/	Implementation Agent	Implementation Status in Construction Phase
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	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	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	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	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	Partially 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	Implemented
		• The efficiency of the interceptor channels, traps and sedimentation chambers should be maintained	Contractor	Partially Implemented

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.		
		• 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	Implemented
		• 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
		• 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
		• 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	Not Applicable
		• 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
		• 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	Not Applicable
		• 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

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

EIA Review Ref	Location	Environmental Protection Measures/	Implementation Agent	Implementation Status in Construction Phase
		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. AII 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	Implemented
		• Discharges from the site shall be required to meet the terms and conditions of a valid WPCO Water Pollution Control Ordinance (WPCO).	Contractor	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	Implemented
		(ii) The functioning of interception channels at the boundary of the works areas	Contractor	Implemented
		(iii) The covering of stockpiles of fill and construction materials and the routing of any run off through the sediment traps.	Contractor	Partially 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	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	Not Applicable
		(vi) The operation of the plant maintenance areas to control small spillages and the correct management of the fuel storage bunded area.	Contractor	Not Applicable
		(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	Not Applicable
		(viii)The operation of the roof rain water collection and drainage system.	Contractor	Not Applicable
Landscape and Visual Mitigation Measures				
Table 6.5	**Construction Phase**			
	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

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

EIA Review Ref	Location	Environmental Protection Measures/	Implementation Agent	Implementation Status in Construction Phase
		• 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	Not Applicable
		• 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

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

EIA Review Ref	Location	Environmental Protection Measures/	Implementation Agent	Implementation Status in Construction Phase
	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
7.6.5 to 7.6.6		• 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	Partially Implemented
		• Environmental Management Plan (EMP) and trip-ticket system shall be implemented for monitoring management of waste.	Contractor	Implemented
		• 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
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.	• 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

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

EIA Review Ref	Location	Environmental Protection Measures/	Implementation Agent	Implementation Status in Construction Phase
		enclosed containers.		
7.6.10		• 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
7.6.11 to 7.6.14		• 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
		• 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
		• 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
		• Paving bricks arising from existing pavement should be recycled on site as much as possible.	Contractor	Not Applicable
		• Existing marginal roadside barriers comprise pre-cast units should be reused in the following widening works as much as possible,	Contractor	Not Applicable
		• 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
		• Any stockpile should be sited away from existing watercourses and suitably covered to prevent wind erosion and impacts on air and water quality.	Contractor	Implemented
7.6.15 to 7.6.17		• 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:		
		• be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed;	Contractor	Implemented

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

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	Implemented
		The storage area for chemical wastes should:		
		• be clearly labelled and used solely for the storage of chemical waste;	Contractor	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	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	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	Not Observed
		• 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 requirements.	Contractor	Partially Implemented

FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

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

EIA Review Ref	Location	Environmental Protection Measures/	Implementation Agent	Implementation Status in Construction Phase
		• 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	*General Condition*			
N.A	During construction within the Project Boundary.	• 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	Implemented

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

FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

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

Appendix K

Weather and Meteorological Conditions during Reporting Month

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

Date	Mean Pressure (hPa)	Air Temperature			Mean Relative Humidity (%)	Total Rainfall (mm)
		Maximum (deg. C)	Mean (deg. C)	Minimum (deg. C)		
February 2021						
1	1019.4	25.1	20.3	17.2	76	-
2	1019.7	27.6	20.9	17.7	76	-
3	1022	21.7	18.4	16.7	69	-
4	1021.7	23.8	19.4	16.8	68	-
5	1019.8	23.9	19.9	17.3	72	-
6	1017.4	25.7	20.7	17.5	73	-
7	1017.6	24.1	20.3	18.1	74	-
8	1018.9	22.7	19.9	18.2	79	-
9	1017.5	19.7	18.5	17.3	76	Trace
10	1013.5	17.4	16.5	15.8	89	32.2
11	1014.7	19.9	17.4	15.3	78	-
12	1016.3	22.3	18.4	15.5	69	-
13	1017.3	23.8	19.2	16.5	76	-
14	1016.1	22.8	19.9	17.4	75	-
15	1015	26.2	21.1	17.8	70	-
16	1016.1	24.2	20.3	18.2	71	-
17	1019.6	24.6	20.4	18.3	70	-
18	1024.5	22.9	18.5	16.7	65	-
19	1023.4	22.9	18.5	15.8	66	-
20	1019.9	23.9	19.6	16.7	73	-
21	1017.5	24.9	20.4	17.3	74	-
22	1015.8	26	21.4	18.4	78	-
23	1015	26.4	21.7	18.8	74	-
24	1014.3	22.9	20.3	18.9	79	Trace
25	1011.2	22.7	20.2	18.8	85	1.8
26	1009.8	25.1	22.3	20.4	86	14.7
27	1014	20.8	18.8	18.1	89	13.4
28	1015.7	22.8	19.9	18.1	83	Trace

Source: Hong Kong Observatory

FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

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

Appendix L

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

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

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 14th February 2019 to 07:00 15th 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

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Investigation summary & Conclusion	Date of Reply
						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

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Investigation summary & Conclusion	Date of Reply
						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 <=10kg (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

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Investigation summary & Conclusion	Date of Reply
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

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Investigation summary & Conclusion	Date of Reply
						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 5th 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

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Investigation summary & Conclusion	Date of Reply
						to nearby NSRs. 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. 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.	
COM-2020-0089	24/03/2020	Project hotline	CCZJV	Noise	24/03/2020	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 PMEs 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.	07/04/2020

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Investigation summary & Conclusion	Date of Reply
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 27th & 28th 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 26th March 2020 to 04:00 27th March 2020, and between 23:00 2nd April 2020 to 04:00 3rd 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 6th Apr was received by project hotline. The major construction works between (10:00pm – 11:00pm) on 6th April 2020 was TTA implementation works and asphalt removal works for the road surface remedial work	28/04/2020

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Investigation summary & Conclusion	Date of Reply
						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 20th Apr 2020 at 10:57 a.m. and 21st Apr 2020 at 9:03 a.m., while the other one was through project email on 20th 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		

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Investigation summary & Conclusion	Date of Reply
						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.	
COM-2020-0099	21/04/2020	Project hotline	CCZJV	Noise	21/04/2020	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	05/05/2020

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Investigation summary & Conclusion	Date of Reply
						nuisance during night works was at zone 2 is opposite to Wai Wah Centre. The major construction works was road surface remedial work since 15th 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 23rd April 2020 to 04:00 24th 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 23rd 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

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Investigation summary & Conclusion	Date of Reply
						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	

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Investigation summary & Conclusion	Date of Reply
						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 28th 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 15th 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 27^28 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

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Investigation summary & Conclusion	Date of Reply
						26th 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 2nd and 28th 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 10th 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

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Investigation summary & Conclusion	Date of Reply
						or traffic lanes. ET conducted ad-hoc site inspection on 17th 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 20th 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 19th 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

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Investigation summary & Conclusion	Date of Reply
						"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.	
COM-2020-153	26/11/2020	EPD	CCZJV	Water	24/11/2020	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 complied with the discharge license standard should NOT be allowed to discharge. The waste	23/12/2020

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Investigation summary & Conclusion	Date of Reply
						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 27th November 2020, the complainant expressed concern of construction noise nuisances near Wo Che Estate at around 01:14 am on 27th November 2020. According to the Main Contractor, there were no construction works near Wo Che Estate (Zone 5) on 26^27 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 20th 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

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Investigation summary & Conclusion	Date of Reply
						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 3rd 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

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Investigation summary & Conclusion	Date of Reply
						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 3rd 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 3rd, 9th & 15th December 2020 respectively which was	29/12/2020

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Investigation summary & Conclusion	Date of Reply
						close 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 3rd, 9th & 15th 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 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 18th December 2020, the complainant expressed concern of construction noise nuisances near Wo Che Estate during night-time on 7^8 & 8^9 December 2020. According to the Main Contractor, the major construction works was removal of central median works since 7^8 & 8^9 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

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Investigation summary & Conclusion	Date of Reply
						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 7^8 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	

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Investigation summary & Conclusion	Date of Reply
						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 22nd 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 23rd 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.	5/3/2021

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Investigation summary & Conclusion	Date of Reply
						The Main Contractor 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 20th 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 25th	8/3/2021

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Investigation summary & Conclusion	Date of Reply
						February to 03:00 26th February 2021. 3.13 The 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.	

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.
Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com
Website : www.fugro.com

Cumulative Statistics on Complaints

Environmental Parameters	Cumulative No. Brought Forward	No. of Complaints This Month	Cumulative Project-to-Date
Air	2	1	3
Noise	22	1	23
Water	2	0	2
Waste	0	0	0
Total	**26**	**2**	**28**

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**

FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

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

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	4 Feb 2021	**Observation:** 1. Please increase the frequency of water spray to reduce the air impact. (Zone 1, R1)	1. (Zone 1) Water spraying has been provided.
	18 Feb 2021	**Observation:** 1. Please provide complete label of NRMM. (Zone 4, SB)	1. (Zone 4) NRMM label has been replaced.
	25 Feb 2021	**Observation:** 1. Please provide clear and complete label of NRMM. (Zone 5)	1. (Zone 5) NRMM label has been replaced.
Noise	No specific observation was identified in the reporting month.		
Water Quality	10 Feb 2021	**Reminders:** 1. The contractor is reminded to treat the waste water (e.g. by Wetsep) to ensure discharge quality standard before disposal (Zone 4 south bound). 2. The contractor is reminded to clear the water ponding at the cycle track area (Zone 4).	
	18 Feb 2021	**Observation:** 1. Sedimentation tank should be cleaned and desilted to maintain the efficiency. (Zone 4, SB)	1. (Zone 4) Sedimentation tank has been cleared
	25 Feb 2021	**Observation:** 1. Mitigation measure shall be provided for site boundary to prevent soil leakage. (Zone 4)	1. (Zone 4) Mitigation measure provided to prevent soil leakage.
Chemical and Waste Management	4 Feb 2021	**Observation:** 1. Please keep site area clean and tidy, housekeeping. (TKO, storage area)	1. (Work Area B) Debris has been removed.
	10 Feb 2021	**Observation:** 1. Provide mitigation facility (e.g. drip tray) for the chemicals to avoid spillage (Zone 3).	1. (Zone 3) Chemical drums have been removed.
	18 Feb 2021	**Observations:** 1. Waste storage tank should be cleared regularly to maintain good site hygiene. (Zone 3) 2. Please provide drip tray for chemical storage to prevent chemical leakage. (Zone 4, SB)	1. (Zone 3) Accumulated waste has been removed. 2. (Zone 4) Chemicals have been removed.
	25 Feb 2021	**Observations:** 1. Please provide drip tray for chemical storage to prevent chemical leakage. (Zone 4, SB) 2. Please remove the general waste or provide storage area/ tank for waste storage. (Zone 4, NF40) 3. Contained soil shall be treated as chemical waste. (Zone 4)	1. (Zone 4) Chemicals have been removed. 2. (Zone 4) Accumulated waste has been removed. 3. (Zone 4) Contaminated soil has been removed and stored properly.
Land Contamination	No deficiency was found during 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	No specific observation was identified in the reporting month.		