Our ref: ASCL-2018010

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

Attention: Miss FUNG Cannifer

30 April 2019

Dear Miss Fung,

NE/2017/05
Road Widening and Retrofitting Noise Barriers on Tai Po Road (Sha Tin Section)
Quarterly EM&A Report for Dec 2018 to Feb 2019

I refer to the email of ET regarding to the captioned Quarterly EM&A Report with report No. 0064/18/ED/0271B, we have no adverse comment on it and verify this quarterly 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)
ET Leader – Mr. WONG Tony (by email only: wl.wong@fugro)

FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
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Website : www.fugro.com

Date 30 April 2019
Our Ref. MCL/ED/0223/2019/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 Quarterly EM&A Report (0064/18/ED/0271B)

Pursuant to Updated EM&A Manual Section 8.7, we hereby submit three hardcopies and two e-copy of the quarterly EM&A Report (0064/18/ED/0271B) for your retention. This quarterly 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 or the undersigned at 3565-4441.

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

David Hung
Environmental Team Leader

c.c. CEDD Attn: Mr. Andrew Cheung / Ms. Cannifer Fung (by E-mail)
AECOM Attn: Mr. Albert Yu / Mr. Bobby Hung / Mr. Andrew Cheng / Ms. Kate Chen / Ms. Catherine Tam (by E-mail)
IEC Attn: Mr. Kevin Li / Mr. Tandy Tse (by E-mail)
CCZJV Attn: Mr. Chung Sing Chu / Ms. Kimberly Wong / Mr. Alvin Chan (by E-mail)

Encl.

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QUARTERLY EM&A REPORT

December 2018 – February 2019

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/0271B

Prepared by	**:**	Sang Y. S. Wu
Reviewed by	**:**	Cyrus C. Y. Lai
Certified by	**:**	

Tony W. L. Wong
Environmental Team Leader
Fugro Technical Services Limited

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EXECUTIVE SUMMARY

i. The Civil Engineering and Development Department HKSAR has appointed Fugro Technical Services Limited (FTS) to undertake the Environmental Team services for the Project and implement the EM&A works.

ii. This is the first Quarterly EM&A Report presents the environmental monitoring and audit works for the period between 29 November 2018 and 28 February 2019. As informed by the Contractor, major activities in the reporting period included:

December 2018	January 2019	February 2019
• Site clearance, utilities detection, trail pit by hand digging and implementation of temporary traffic arrangement at Zone 1 and Zone 2; • Site clearance, utilities detection and trail pit by hand digging at Zone 3, Zone 4 and Zone 5; and • General cleaning and tidying at storage area at Shui Chong Street.	• Utilities detection, trail pit and implementation of temporary traffic arrangement at Zone 1 and Zone 2; • Tree felling, utilities detection, trail pit and implementation of temporary traffic arrangement at Zone 3, Zone 4; • Utilities detection and trail pit at Zone 5; and • General cleaning and tidying and containers office setup at storage area at Shui Chong Street.	• Tree felling, utilities detection, trail pit and implementation of temporary traffic arrangement at Zone 1, Zone 3 and Zone 4; and • Utilities detection, trail pit and implementation of temporary traffic arrangement at Zone 2, Zone 5.

Breaches of the Action and Limit Levels

iii. No Action / Limit Level exceedance was recorded for 24-hr and 1-hr TSP and construction noise at the site area in the reporting month.

Complaint, Notification of Summons and Successful Prosecution

iv. Two complaint cases were received during the reporting period. A complaint received on 13/2/2019 referred from EPD regarding noise from tree-felling works by using chain saw near Lek Yuen Estate Kwai Wo House on 1 am. Another complaint received on 22/2/2019 from project hotline of NE/2017/05 regarding the noise generated from the tree felling works during the mid-nights. After ET's investigation, the complaint cases were considered project-related.

v. No notification of summons and successful prosecution were received in the reporting period.

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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 quarterly 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 first quarterly 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 29 November 2018 and 28 February 2019.

1.2 Project Organization

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

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

Table 1.1 Contact Information of Key Personnel

Party	Position	Name	Telephone
Project Proponent (CEDD)	Senior Engineer	Mr. Andrew Cheung	3152 3500
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. Alvin Chan	9800 9494
	Environmental Officer	Ms. Kimberly Wong	5542 1669
ET (FTS)	Environmental Team Leader	Mr. Tony Wong	3565 4443

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**. A summary of the major construction activities undertaken in the reporting period were:

December 2018	January 2019	February 2019
• Site clearance, utilities detection, trail pit by hand digging and implementation of temporary traffic arrangement at Zone 1 and Zone 2; • Site clearance, utilities detection and trail pit by hand digging at Zone 3, Zone 4 and Zone 5; and • General cleaning and tidying at storage area at Shui Chong Street.	• Utilities detection, trail pit and implementation of temporary traffic arrangement at Zone 1 and Zone 2; • Tree felling, utilities detection, trail pit and implementation of temporary traffic arrangement at Zone 3, Zone 4; • Utilities detection and trail pit at Zone 5; and • General cleaning and tidying and containers office setup at storage area at Shui Chong Street.	• Tree felling, utilities detection, trail pit and implementation of temporary traffic arrangement at Zone 1, Zone 3 and Zone 4; and • Utilities detection, trail pit and implementation of temporary traffic arrangement at Zone 2, Zone 5.

1.4 Status of Environmental Licences, 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	6/11/2018	Nil
Effluent Discharge License (Zone 1 – Zone 5)	WT00032446-2018	9/11/2018	30/11/2023
Construction Noise Permit for Road Closure works at restricted hours	GW-RN0783-18	29/12/2018	28/2/2019
	GW-RN0132-19	1/3/2019	30/4/2019

2. SUMMARY OF EM&A REQUIREMENTS AND MONITORING RESULTS

2.1 Monitoring Requirement

2.1.1 In accordance with the updated EM&A Manuals, 24-hour & 1-hour Total Suspended Particulates (TSP) level and Leq (30min) at the designated monitoring stations is required. Impact 24-hour and 1-hour TSP monitoring should be carried out at least once every 6 days. Leq (30min) monitoring is conducted for at least once a week during the construction phase between 0700 and 1900 on normal weekdays. The Action and Limit Levels of the air quality monitoring and noise monitoring are given in **Appendix C**.

2.2 Monitoring Locations

2.2.1 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 directions were east, north and north east in December 2018 and February 2019. The wind directions in January 2019 were north and north east. The most updated locations are summarized in **Table 2.1** and shown in **Figure 2a**.

Table 2.1 Location of Air Quality Monitoring

Reporting Period	Monitoring Station	Location	Land uses
December 2018	AMS 2	Villa Le Parc	Residential
	AMS 3A	Wai Wah Centre	Residential
	AMS 7A	Sheung Wo Che	Residential
	AMS 9	Shatin Tsung Tsin School	School
January 2019	AMS 1	Scenery Court	Residential
	AMS 4A	Wai Wah Centre	Residential
	AMS 12	Fung Wo Estate	Residential
	AMS 15	Ha Wo Che	Residential Village
February 2019	AMS 2	Villa Le Parc	Residential
	AMS 3A	Wai Wah Centre	Residential
	AMS 13	Fung Wo Estate	Residential
	AMS 14	Ha Wo Che	Residential Village

2.2.2 According to the updated EM&A Manual, 25 noise monitoring locations were included during the noise monitoring. The most updated locations are summarized in **Table 2.2** and shown in **Figure 2b**.

Table 2.2 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

2.3 Results and Observations

2.3.1 No Action and Limit Level exceedance for 24-hr & 1-hr TSP was recorded in the reporting period at all monitoring stations. The monitoring data of 24-hr and 1-hr TSP are summarized in **Table 2.3 and 2.4.** Graphical presentation of the monitoring data in the reporting period is presented in **Appendix D**.

Table 2.3 Summary of 24-hr TSP Monitoring Results

Monitoring Station	24-hr TSP (μg/m³) in Reporting Period			Average (μg/m³)	Action Level (μg/ m³)	Limit Level (μg/ m³)
	Dec 2018	Jan 2019	Feb 2019			
AMS 1	-	18 - 47	-	32	171	260
AMS 2	23 - 78	-	24 - 49	45	166	
AMS 3A	49 - 95	-	40 - 61	60	200	
AMS 4A	-	63 - 90	-	74	200	
AMS 7A	25 - 77	-	-	43	171	
AMS 9	23 - 44	-	-	31	159	
AMS 12	-	60 - 80	-	70	168	
AMS 13	-	-	42 - 62	51	174	
AMS 14	-	-	21 - 70	43	174	
AMS 15	-	11 - 35	-	25	172	

Table 2.4 Summary of 1-hr TSP Monitoring Results

Monitoring Station	1-hr TSP (μg/m³) in Reporting Period			Average (μg/m³)	Action Level (μg/ m³)	Limit Level (μg/ m³)
	Dec 2018	Jan 2019	Feb 2019			
AMS 1	-	29 - 78	-	56	350	500
AMS 2	11 – 130	-	16 - 48	62	324	
AMS 3A	39 – 132	-	42 - 82	92	350	
AMS 4A	-	45 - 128	-	80	348	
AMS 7A	17 – 106	-	-	61	344	
AMS 9	24 – 98	-	-	52	327	
AMS 12	-	27 - 98	-	68	296	
AMS 13	-	-	23 - 73	52	303	
AMS 14	-	-	26 - 96	60	350	
AMS 15	-	33 - 76	-	55	350	

2.3.2 No Action / Limit Level exceedance for day time construction noise was recorded in the reporting period at all monitoring stations. The results are summarized in **Table 2.5.** Graphical presentation of the monitoring data in the reporting period is presented in **Appendix D**.

Table 2.5 Summary of Day Time Noise Impact Monitoring Results

Monitoring Station	Leq (30min) Range ,dB(A) in Reporting Period			Leq (30min) Limit Level, dB(A)
	Dec 2018	Jan 2019	Feb 2019	
NMS1	61.5 – 69.7	63.1 – 72.3	66.3 – 68.4	75
NMS2	55.0 – 61.0	54.0 – 61.0	58.0 – 59.5	75
NMS3	64.7 – 68.0	63.0 – 67.4	64.0 – 70.2	75
NMS4	61.0 – 66.0	64.0 – 66.9	71.4 – 71.6	75
NMS5A	71.1 – 75.0	70.2 – 75.0	68.0 – 73.4	75
NMS6A	71.5 – 74.1	71.4 – 73.4	67.4 – 72.5	75
NMS7	63.8 – 74.1	64.1 – 73.0	73.2 – 74.2	75
NMS8	65.0 – 73.0	65.6 – 72.0	64.6 – 68.6	75
NMS9	61.7 – 63.3	62.5 – 70.6	62.3 – 68.2	75
NMS10A	58.8 – 65.7	63.8 – 66.8	63.8 – 66.4	70*
NMS11	60.2 – 71.1	63.4 – 69.5	57.9 – 68.4	75
NMS12	58.0 – 66.9	61.0 – 65.6	59.0 – 64.1	70*
NMS13	59.0 – 64.7	59.3 – 68.5	58.7 – 65.5	75
NMS14	63.1 – 70.9	60.4 – 71.4	60.1 – 66.7	75
NMS15	61.6 – 68.1	64.4 – 68.5	63.9 – 67.4	75
NMS16	61.2 – 66.7	64.9 – 68.0	62.4 – 67.4	75

NMS17	62.0 – 69.0	59.5 – 65.1	59.9 – 63.3	70*
NMS18	57.7 – 69.6	62.4 – 70.5	60.0 – 73.2	75
NMS19	63.7 – 72.1	67.7 – 71.2	65.8 – 67.7	75
NMS20	58.7 – 69.7	61.3 – 71.6	58.8 – 67.5	75
NMS23	63.9 – 71.0	61.9 – 65.6	62.5 – 68.6	75
NMS24	63.0 – 65.9	63.1 – 69.0	62.7 – 67.5	75
NMS25A	65.3 – 73.6	66.5 – 71.4	62.1 – 72.1	75
NMS26	68.2 – 74.4	68.4 – 72.5	68.0 – 74.6	75
NMS27	64.6 – 69.9	64.0 – 69.6	63.5 – 64.2	70*

Note: 1. Leq $_{(30min)}$ 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. Exam schedules of NMS 10A, NMS12, NMS 17 and NMS 27 are provided in the monthly report for reference.

2.3.3 According to the Monthly EM&A report, as the average construction noise level of each night time noise impact monitoring at the four monitoring stations was lower than the baseline level or the limit level, no project-related noise exceedance cases during the reporting period for Contractor's night tree-felling and removal works. The results are summarized in **Table 2.6** and **2.7.**

Table 2.6 Summary of Night Time Noise Impact Monitoring Results (1900 – 2300)

Monitoring Station	Leq $_{(5min)}$ Range ,dB(A) in Reporting Period		Baseline Level, dB(A)	Leq $_{(5min)}$ Limit Level, dB(A)
	Jan 2019	Feb 2019		
NMS 8	NA	60.1 – 69.4	67.5	70
NMS 9	58.2 – 62.8	59.0 – 66.0	57.8	70
NMS 24	59.0 – 61.8	60.3 – 67.7	61.8	70
NMS 25A	60.8 – 67.8	60.8 – 67.5	62.6	70

Note: Leq $_{(5min)}$ was measured at night-time (1900-2300) at NMS 8, 9, 24 & 25A.
NA – No night time noise impact monitoring at NMS 8 was conducted in January 2019 as the station was not in proximity of the tree felling area.

Table 2.7 Summary of Night Time Noise Impact Monitoring Results (2300 – 0700)

Monitoring Station	Leq $_{(5min)}$ Range ,dB(A) in Reporting Period		Baseline Level, dB(A)	Leq $_{(5min)}$ Limit Level, dB(A)
	Jan 2019	Feb 2019		
NMS 8	NA	56.0 – 63.7	64.4	55
NMS 9	50.0 – 61.8	51.8 – 60.8	53.5	55
NMS 24	53.5 – 61.0	52.1 – 60.9	58.0	55
NMS 25A	44.1 – 67.4	44.4 – 63.7	59.7	55

Note: 1. Leq $_{(5min)}$ was measured at night-time (2300-0700) at NMS 8, 9, 24 & 25A.
2. NA – No night time noise impact monitoring at NMS 8 was conducted in January 2019 as the station was not in proximity of the tree felling area.
3. When the Average Measured Noise Level is greater than Limit Level, Average Construction Noise Level (CNL) will be applied.
Calculated CNL = Measured Noise Level during operation – Baseline
4. According to the Monthly EM&A Report, for NMS 8, NMS 9, NMS 24 and NMS 25A, the average construction level (5min) was lower than the baseline level or the limit level in the reporting period.

2.3.4 No raining and wind with speed over 5 m/s was observed during noise monitoring according to the onsite observation.

2.3.5 During the reporting period, major dust sources including trial pits excavation was observed in the site. Other factors such as road traffic along Tai Po Road may affect the monitoring results. Major noise sources including road traffic along Tai Po Road was observed which may affect the monitoring results.

3. LANDSCAPE AND VISUAL

3.1 Results and Observations

3.1.1 Site audits were carried out to monitor and audit the implementation of landscape and visual mitigation measures.

3.1.2 No non-compliance was recorded in the weekly Site audits in the reporting period.

3.1.3 Observations and recommendations during site audits are summarized in **Table 5.1**.

4. WASTE MANAGEMENT

4.1 Results and Observations

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

4.1.2 The amount of wastes generated by the site activities in the reporting period is shown in **Appendix E**.

4.1.3 The Contractor is advised to properly maintain on site C&D materials and wastes collection, sorting and recording system and maximize reuse / recycle of C&D materials and wastes. The Contractor is reminded to properly maintain the site tidiness and dispose of the wastes accumulated on site regularly and properly.

4.1.4 The Contractor is reminded that chemical waste containers should be properly treated and stored temporarily in designated chemical waste storage area on site in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes.

5. SITE INSPECTION

5.1 Site Inspection

5.1.1 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 F**.

5.1.2 In the reporting quarter, 15 site inspections were carried out. 3 of them were the joint inspections with the IEC, ER, the Contractor and the ET. Ad-hoc inspection was held on 21 January 2019.

5.1.3 A senior environmental protection inspector from EPD visited Shio Chong Street storage area on 14 February 2019 to witness tree felling demonstration after a complaint was received on 2 February 2019. The second visit by EPD was conducted at 16th Feb night to check the mitigation measures regarding to the condition stipulated in the CNP.

5.1.4 All the follow-up actions requested by Contractor's ET and IEC during the site inspections were completed as reported by the Contractor. No outstanding issues were reported during the reporting period.

5.1.5 Details of observations recorded during the site inspections are presented in **Table 5.1**.

Table 5.1 Observations and Recommendations of Site Audit

Parameters	Date	Observations and Recommendations	Follow-up
Air Quality	No deficiency was found during the reporting quarter.		
Noise	No deficiency was found during the reporting quarter.		
Water Quality	2 7 February 2019	Reminder: 1. More sandbags shall be placed at the exit of Zone 5. 2. Sandbags shall be placed at drain exit under NF66. 3. Sandbags shall be placed near trial pit near Wo Che Estate.	NA
Chemical and Waste Management	30 November 2018	Reminder: Contractor was reminded to clear the waste materials frequently.	NA
	18 January 2019	Observation: 1. Waste accumulation was found at site storage area under Sha Tin Rural Committee Road adjacent to the site exit.	The item was rectified by the Contractor on 22 January 2019.
		Reminder: Contractor was reminded to clear the waste at U-channel frequently.	NA

Parameters	Date	Observations and Recommendations	Follow-up
	21 January 2019 (ad-hoc)	Observation: 1. Waste accumulation was found at site storage area under Sha Tin Rural Committee Road in Zone 3. 2. Waste accumulation was found at NS37A in Zone 5.	The items were rectified by the Contractor on 24 January 2019.
	30 January 2019	Reminder: Chemical waste shall be placed inside chemical waste tank. Also waste disposal record shall be kept for reference.	NA
	15 February 2019	Reminder: Contractor was reminded to clear the used batteries in the U-Channel inside the site storage area frequently.	NA
	27 February 2019	Reminder: Felled trees which stored in Zone 3 storage area shall be cleared.	NA
Land Contamination	No deficiency was found during the reporting quarter.		
Landscape and Visual Impact	15 February 2019	Reminder: Contractor was reminded to clarify whether trees that no sign on the tree body in Zone 1 were required to be felled.	NA
	22 February 2019	Reminder: Tree protection measure shall be provided under Zone 3 beside trial pit excavation.	NA
General	No deficiency was found during the reporting quarter.		

6. ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE

6.1 Environmental Exceedance

6.1.1 No Action and Limit Level exceedance for 24-hr & 1-hr TSP and noise was recorded in the reporting period at all monitoring stations. Number of exceedance in the reporting period was summarized in **Table 6.1** and **6.2**.

Table 6.1 Summary of Exceedance of Dust Monitoring in Reporting Period

Monitoring Station		Number of exceedance in the reporting period							
		24-hour TSP				1-hour TSP			
		Dec 2018	Jan 2019	Feb 2019	Total	Dec 2018	Jan 2019	Feb 2019	Total
AMS 1	AL	-	0	-	0	-	0	-	0
	LL	-	0	-	0	-	0	-	0
AMS 2	AL	0	-	0	0	0	-	0	0
	LL	0	-	0	0	0	-	0	0
AMS 3A	AL	0	-	0	0	0	-	0	0
	LL	0	-	0	0	0	-	0	0
AMS 4A	AL	-	0	-	0	-	0	-	0
	LL	-	0	-	0	-	0	-	0
AMS 7A	AL	0	-	-	0	0	-	-	0
	LL	0	-	-	0	0	-	-	0
AMS 9	AL	0	-	-	0	0	-	-	0
	LL	0	-	-	0	0	-	-	0
AMS 12	AL	-	0	-	0	-	0	-	0
	LL	-	0	-	0	-	0	-	0
AMS 13	AL	-	-	0	0	-	-	0	0
	LL	-	-	0	0	-	-	0	0
AMS 14	AL	-	-	0	0	-	-	0	0
	LL	-	-	0	0	-	-	0	0
AMS 15	AL	-	0	-	0	-	0	-	0
	LL	-	0	-	0	-	0	-	0
Total	AL	0	0	0	0	0	0	0	0
	LL	0	0	0	0	0	0	0	0

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Table 6.2 Summary of Exceedance of Noise Monitoring in Reporting Period

Monitoring Station		Number of exceedance in the reporting period			
		Leq (30min) dB(A)			Total
		Dec 2018	Jan 2019	Feb 2019	
NMS 1	AL	0	0	0	0
	LL	0	0	0	0
NMS 2	AL	0	0	0	0
	LL	0	0	0	0
NMS 3	AL	0	0	0	0
	LL	0	0	0	0
NMS 4	AL	0	0	0	0
	LL	0	0	0	0
NMS 5A	AL	0	0	0	0
	LL	0	0	0	0
NMS 6A	AL	0	0	0	0
	LL	0	0	0	0
NMS 7	AL	0	0	0	0
	LL	0	0	0	0
NMS 8	AL	0	0	0	0
	LL	0	0	0	0
NMS 9	AL	0	0	0	0
	LL	0	0	0	0
NMS 10	AL	0	0	0	0
	LL	0	0	0	0
NMS 11	AL	0	0	0	0
	LL	0	0	0	0
NMS 12	AL	0	0	0	0
	LL	0	0	0	0
NMS 13	AL	0	0	0	0
	LL	0	0	0	0
NMS 14	AL	0	0	0	0
	LL	0	0	0	0
NMS 15	AL	0	0	0	0
	LL	0	0	0	0
NMS 16	AL	0	0	0	0
	LL	0	0	0	0
NMS 17	AL	0	0	0	0
	LL	0	0	0	0
NMS 18	AL	0	0	0	0
	LL	0	0	0	0
NMS 19	AL	0	0	0	0
	LL	0	0	0	0
NMS 20	AL	0	0	0	0
	LL	0	0	0	0
NMS 23	AL	0	0	0	0
	LL	0	0	0	0
NMS 24	AL	0	0	0	0
	LL	0	0	0	0
NMS 25A	AL	0	0	0	0
	LL	0	0	0	0
NMS 26	AL	0	0	0	0
	LL	0	0	0	0
NMS 27	AL	0	0	0	0
	LL	0	0	0	0
Total	AL	0	0	0	0
	LL	0	0	0	0

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6.2 Complaints, Notification of Summons and Prosecution

6.2.1 Two complaints were received in the reporting period. No notification of summons or prosecution was received in the reporting period. Cumulative complaint log, summaries of complaints, notification of summons and successful prosecutions are presented in **Table 6.3, 6.4** and **6.5**.

Table 6.3 Environmental Complaints Log

Reference No.	Date of Complaint Received	Received From	Nature of Complaint	Investigation/Mitigation Action	Outcome	Status
COM-2019-005	13/2/2019	EPD	Regarding to continuous noise nuisance starting from around 1 a.m. near Lek Yuen Estate Kwai Wo House.	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.	Project-related	Closed
COM-2019-006	22/2/2019	Project Hotline of NE/2017/05	Regarding to continuous noise generated from the tree felling works during the midnight 12:00am near Lek Yuen Estate Kwai Wo House.	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	Project-related	Closed

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				was recommended to 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.		

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Table 6.4 Cumulative Statistics on Complaints

Environmental Parameters	Cumulative No. Brought Forward	No. of Complaints in the Reporting Period			Cumulative Project-to-Date
		December 2018	January 2019	February 2019	
Air	0	0	0	0	0
Noise	0	0	0	2	2
Water	0	0	0	0	0
Waste	0	0	0	0	0
Total	0	0	0	0	0

Table 6.5 Cumulative Statistics on Successful Prosecutions

Environmental Parameters	Cumulative No. Brought Forward	No. of Complaints This Reporting Period			Cumulative Project-to-Date
		December 2018	January 2019	February 2019	
Air	0	0	0	0	0
Noise	0	0	0	0	0
Water	0	0	0	0	0
Waste	0	0	0	0	0
Total	0	0	0	0	0

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7. IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES

7.1 Implementation Status

7.1.1 The Contractor has implemented environmental mitigation measures and requirements as stated in the EIA Reports, the EP and the EM&A Manuals. The implementation status of the mitigation measures during the reporting period is summarized in **Appendix F**.

8. CONCLUSIONS

8.1.1 No Action and Limit Level exceedance for 24-hr & 1-hr TSP and noise was recorded in the reporting period at all monitoring stations.

8.1.2 Two complaint cases were received during the reporting month. A complaint received on 13/2/2019 referred EPD hotline regarding noise from tree-felling works by using chain saw near Lek Yuen Estate Kwai Wo House on 1 am. Another complaint received on 22/2/2019 from project hotline of NE/2017/05 regarding the noise generated from the tree felling works during the mid-nights. After ET's investigation, the complaint cases were considered project-related.

8.1.3 15 weekly environmental site inspections were carried out in the reporting period. Recommendations on mitigation measures on air quality, noise quality, water quality, chemical and waste management, landscape and visual impact were given to the Contractor for remediating the deficiencies identified during the site inspections.

8.1.4 Referring to the Contractor's information, no notification of summons and successful prosecution was received in the reporting period.

Comment and Recommendations

8.1.5 The recommended environmental mitigation measures, as proposed in the EIA reports and EM&A Manuals shall be effectively implemented to minimize the potential environmental impacts from the Project. The EM&A programme would effectively monitor the environmental impacts generated from the construction activities and ensure the proper implementation of mitigation measures.

8.1.6 According to the environmental audit performed in the reporting period, the following recommendations were made:

<u>Air Quality Impact</u>
- No specific observation was identified in the reporting period.

<u>Construction Noise Impact</u>
- No specific observation was identified in the reporting period.

<u>Water Quality Impact</u>
- No specific observation was identified in the reporting period.

<u>Chemical and Waste Management</u>
- Contractor was reminded to clear the waste materials at site storage area under Sha Tin Rural Committee Road adjacent to the site exit.
- Contractor was reminded to clear the waste materials at site storage area under Sha Tin Rural Committee Road in Zone 3.
- Contractor was reminded to clear the waste materials at NS37A in Zone 5.

<u>Land Contamination</u>
- No specific observation was identified in the reporting period.

<u>Landscape and Visual Impact</u>
- No specific observation was identified in the reporting period.

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General Condition

- No specific observation was identified in the reporting period.

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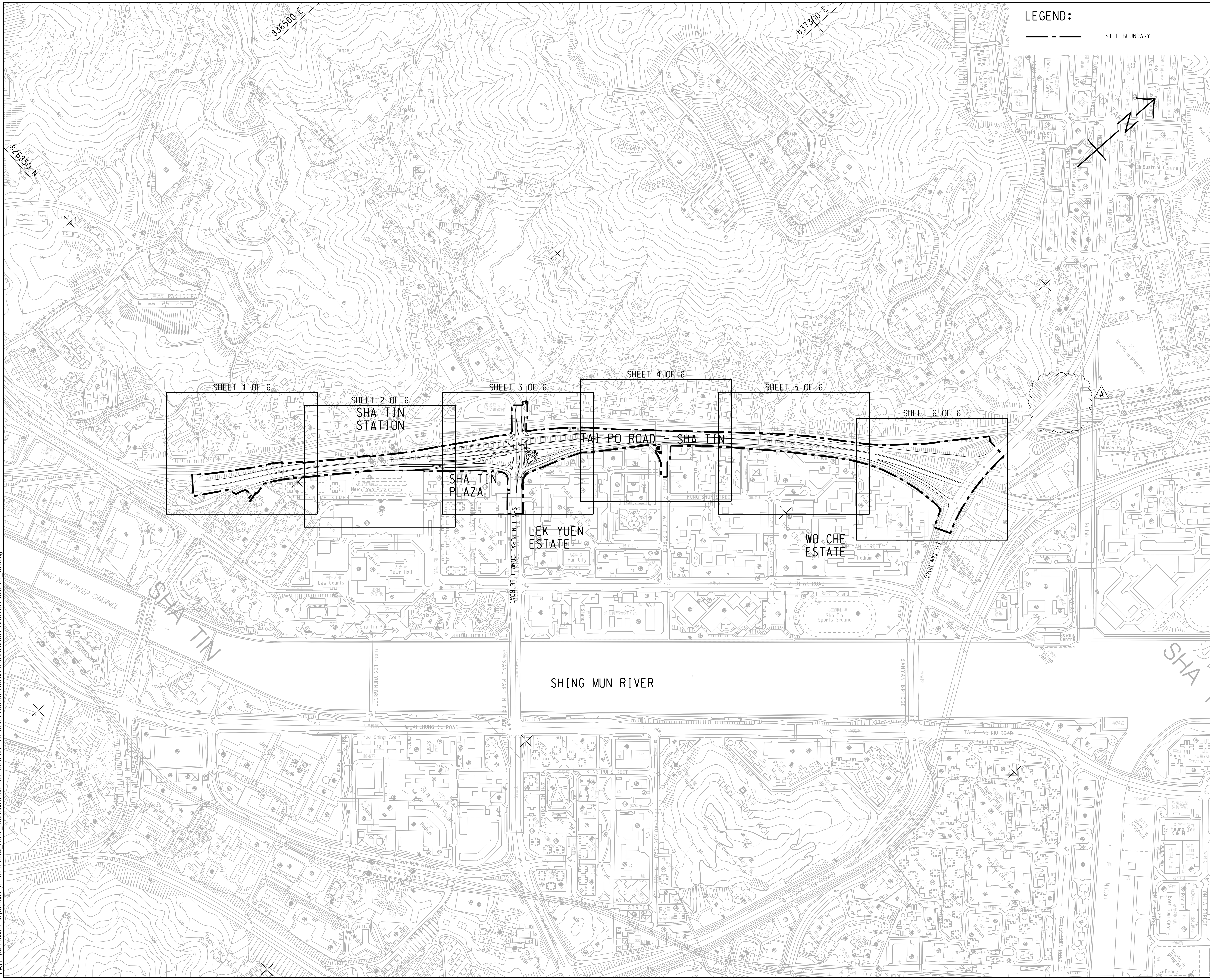
Figure 1

Project General Layout



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

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2/22/2018

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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

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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

CUT LINE A-A

SEE DRAWING NO. 60481656/C1/1002

EXISTING FOOTBRIDGE, NF71A

RSE1

RSE2

FIGURE 1.1a

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PROJECT 項目

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

CLIENT 業主

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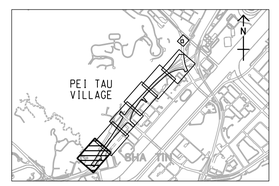
-	JAN. 18	TENDER DRAWING	BCC

STATUS 階段

SCALE 比例
A1 1 : 500

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 40000

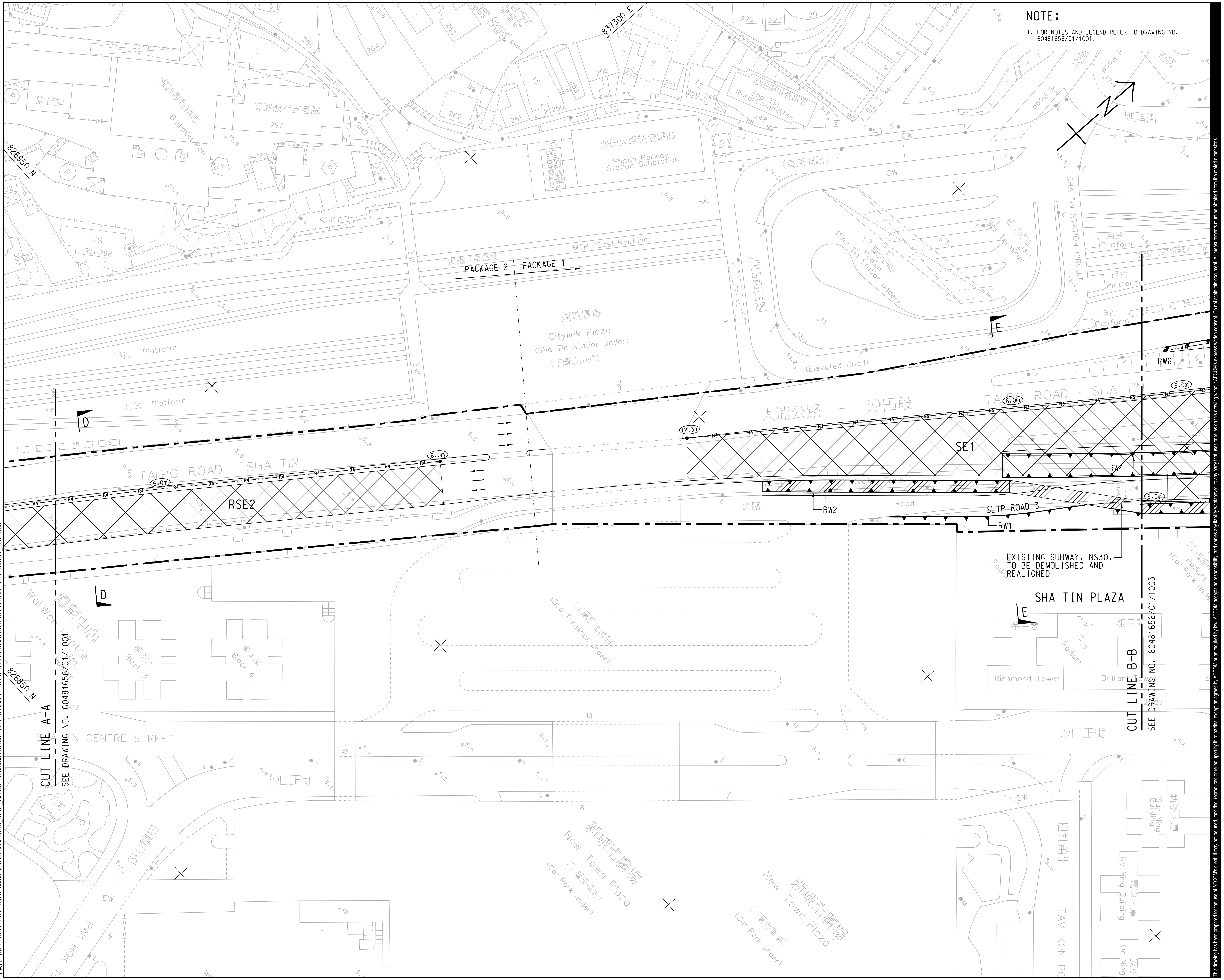


CONTRACT NO. 合約編號
60481656 NE/2017/05

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


NOTE:
1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60481656/C1/1001.
837300 E
826950 N
826850 N
MTR (East Rail Line)
PACKAGE 2
PACKAGE 1
Citylink Plaza
(Sha Tin Station under)
連城廣場
Shatin Railway Station Substation
沙田火車站變電站
Sha Tin Rural Committee
排頭街
SHA TIN STATION CIRCUIT
Bus Terminus
(Elevated Road)
Platform
月台
TAI PO ROAD - SHA TIN
大埔公路 — 沙田段
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
Brilliant Tower
Podium
SHA TIN CENTRE STREET
沙田正街
CUT LINE A-A
SEE DRAWING NO. 60481656/C1/1001
CUT LINE B-B
SEE DRAWING NO. 60481656/C1/1003
New Town Plaza
新城市廣場
(Car Park under)
Sun Ning Building
Ka Ning Building
TAM KON PO
PAK HOK TING
Block 3
Block 4
Wai Wah Centre

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PROJECT

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

CLIENT

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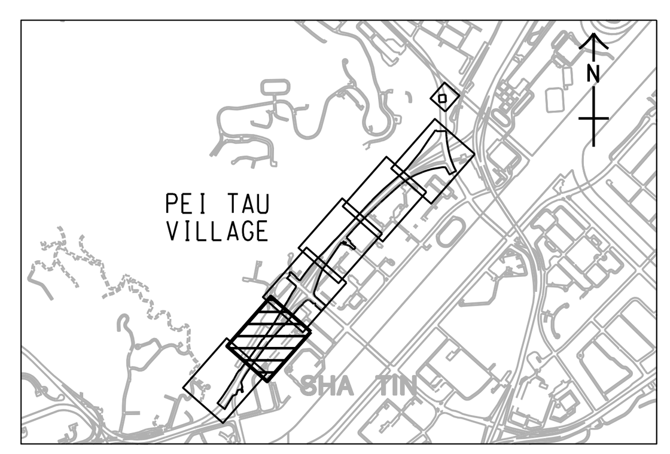
STATUS

SCALE A1 1 : 500

DIMENSION UNIT METRES

KEY PLAN A1 1 : 40000



CONTRACT NO.

NE/2017/05

SHEET TITLE

GENERAL LAYOUT PLAN

FIGURE 1.1b

SHEET 2 OF 6

SHEET NUMBER

60481656/C1/1002

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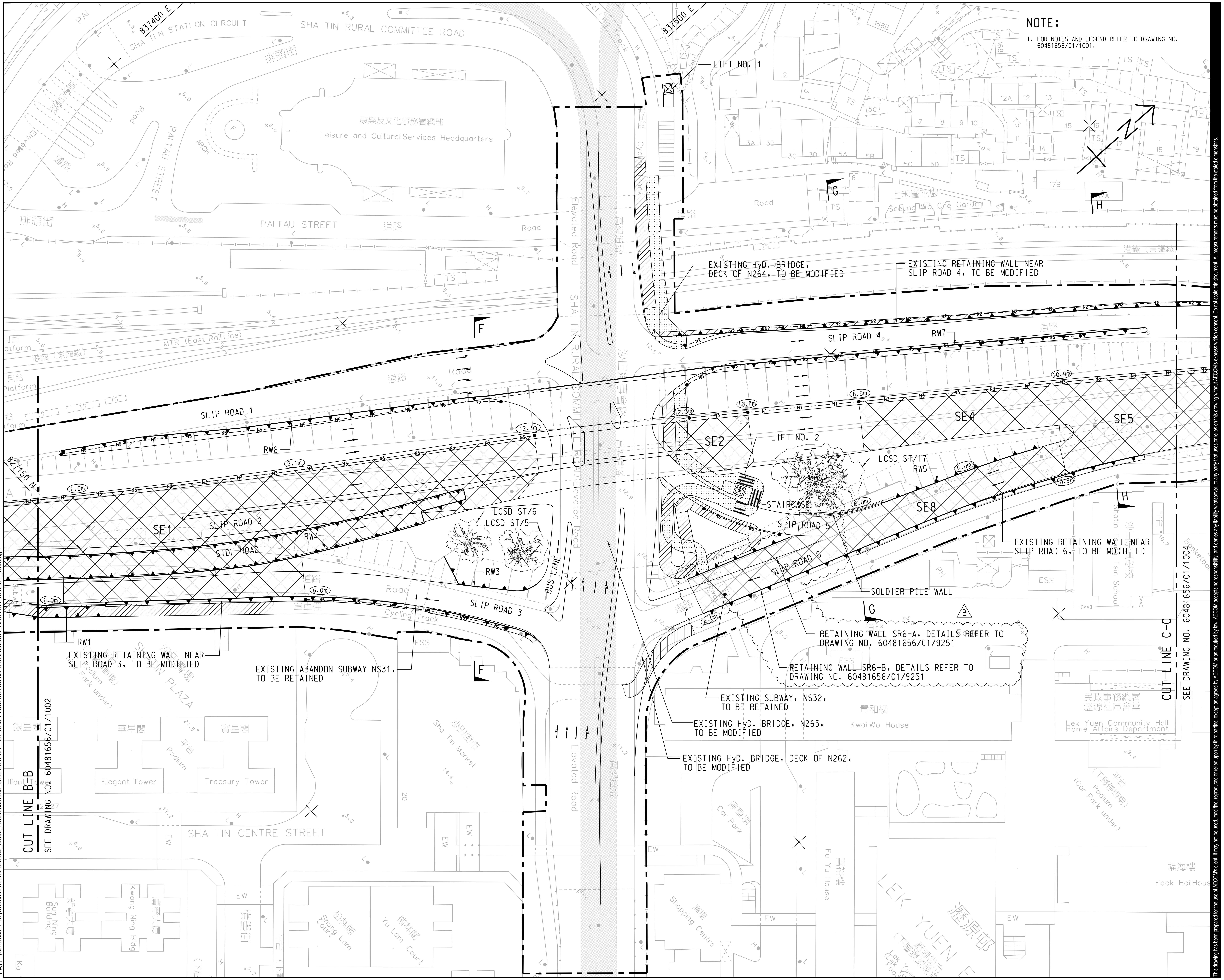
NOTE:
1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60481656/C1/1001.
LIFT NO. 1
EXISTING HyD. BRIDGE, DECK OF N264, TO BE MODIFIED
EXISTING RETAINING WALL NEAR SLIP ROAD 4, TO BE MODIFIED
SLIP ROAD 4
RW7
SLIP ROAD 1
RW6
SE1
SE2
SE4
SE5
SE8
LIFT NO. 2
LCSD ST/17
RW5
STAIRCASE
SLIP ROAD 5
SLIP ROAD 6
SLIP ROAD 2
SIDE ROAD
RW4
LCSD ST/6
LCSD ST/5
RW3
BUS LANE
SLIP ROAD 3
RW1
EXISTING RETAINING WALL NEAR SLIP ROAD 3, TO BE MODIFIED
EXISTING ABANDON SUBWAY NS31, TO BE RETAINED
EXISTING RETAINING WALL NEAR SLIP ROAD 6, TO BE MODIFIED
SOLDIER PILE WALL
RETAINING WALL SR6-A, DETAILS REFER TO DRAWING NO. 60481656/C1/9251
RETAINING WALL SR6-B, DETAILS REFER TO DRAWING NO. 60481656/C1/9251
EXISTING SUBWAY, NS32, TO BE RETAINED
EXISTING HyD. BRIDGE, N263, TO BE MODIFIED
EXISTING HyD. BRIDGE, DECK OF N262, TO BE MODIFIED
CUT LINE B-B
SEE DRAWING NO. 60481656/C1/1002
CUT LINE C-C
SEE DRAWING NO. 60481656/C1/1004
837400 E
837500 E
827150 N
SHA TIN RURAL COMMITTEE ROAD
PAI TAU STREET
SHA TIN STATION CIRCUIT
康樂及文化事務署總部
Leisure and Cultural Services Headquarters
MTR (East Rail Line)
Elevated Road
Cycling Track
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
Shopping Centre
Yu Lam Court
Shung Lam Court
Kwong Ning Bldg
Sun Ning Building
LEK YUEN
PEI TAU VILLAGE
SHA TIN

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

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PROJECT 項目

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

CLIENT 業主

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CEDD Civil Engineering and Development Department

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STATUS 階段

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

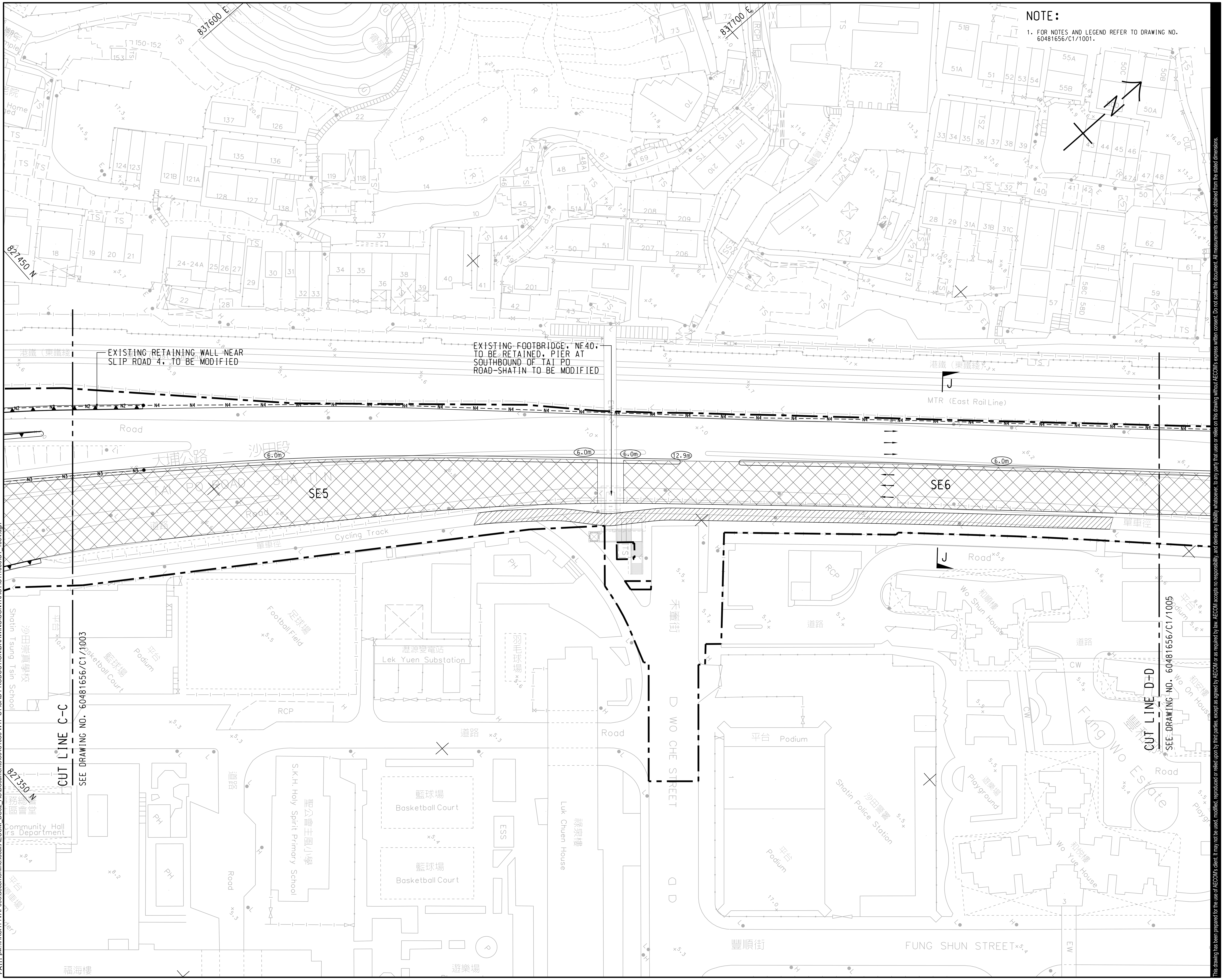
KEY PLAN 索引圖 A1 1 : 40000

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



837600 E
837700 E
827450 N
827350 N
EXISTING RETAINING WALL NEAR SLIP ROAD 4, TO BE MODIFIED
EXISTING FOOTBRIDGE, NE40, TO BE RETAINED, PIER AT SOUTHBOUND OF TAI PO ROAD-SHATIN TO BE MODIFIED
MTR (East Rail Line)
6.0m
12.9m
SE5
SE6
Cycling Track
CUT LINE C-C
SEE DRAWING NO. 60481656/C1/1003
CUT LINE D-D
SEE DRAWING NO. 60481656/C1/1005
Lek Yuen Substation
Football Field
Basketball Court
S.K.H. Holy Spirit Primary School
Shatin Police Station
Wo Shun House
Wo Yue House
Fung Wo Estate
WO CHE STREET
FUNG SHUN STREET
Luk Chuen House
Community Hall
Playground

NOTE:
1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60481656/C1/1001.

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PROJECT 項目

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

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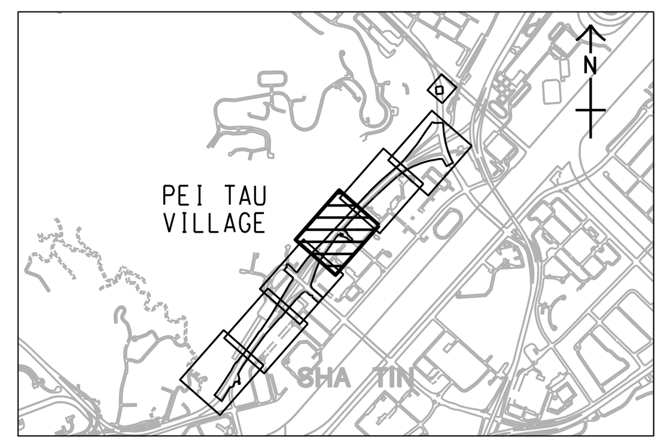
STATUS 階段

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

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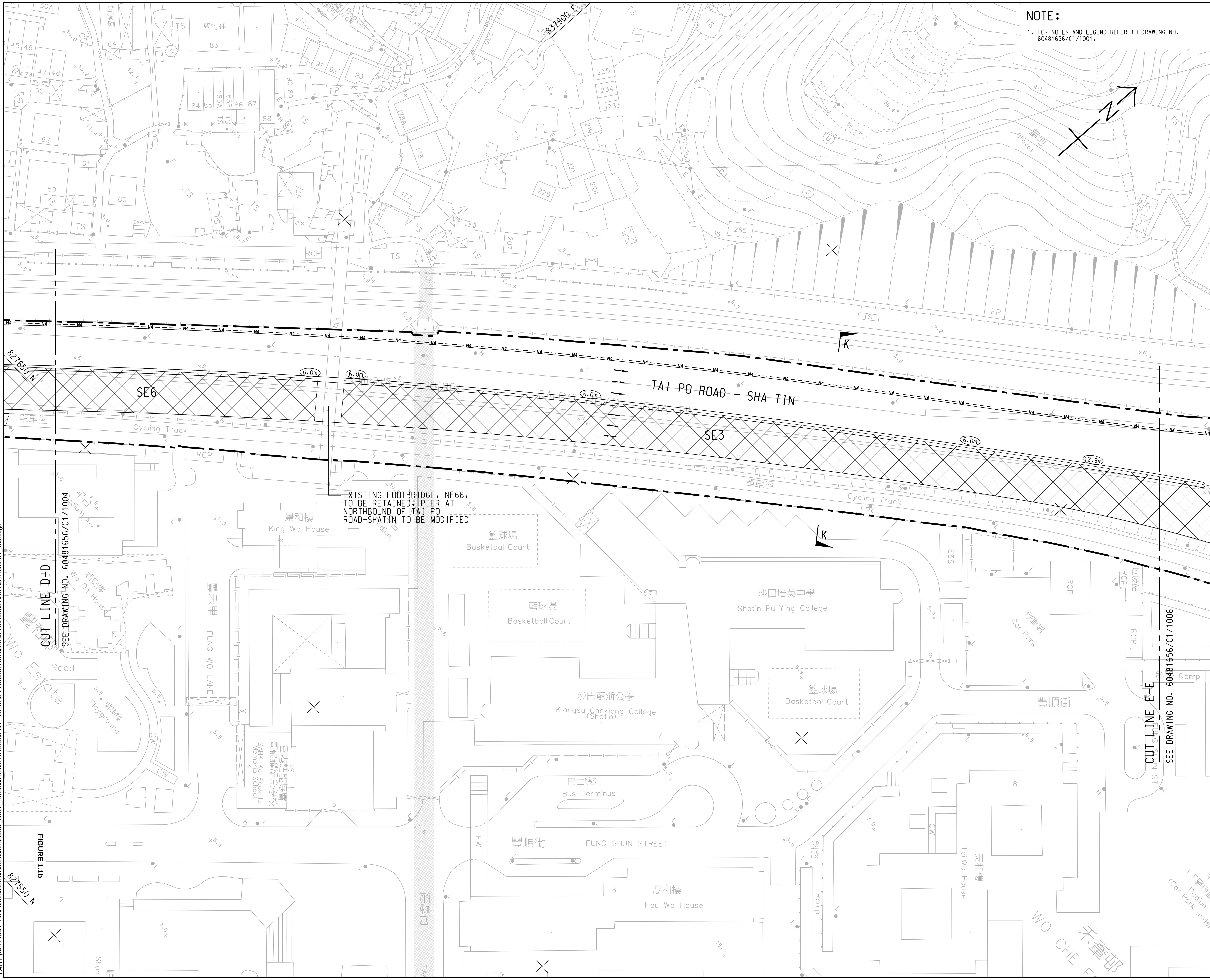
Project Management Initials: Designer: FMSC Checked: BCC Approved: CWN
Plot File by: AS\WUMT 15/01/2018 11:15:19



NOTE:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60481656/C1/1001.

ISO A1 594mm x 841mm

Designer: FMSC Checked: BCC Approved: CWN

Project Management Initials:

16/1/2018

Plot File by: XIEJB

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FIGURE 1.1b

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

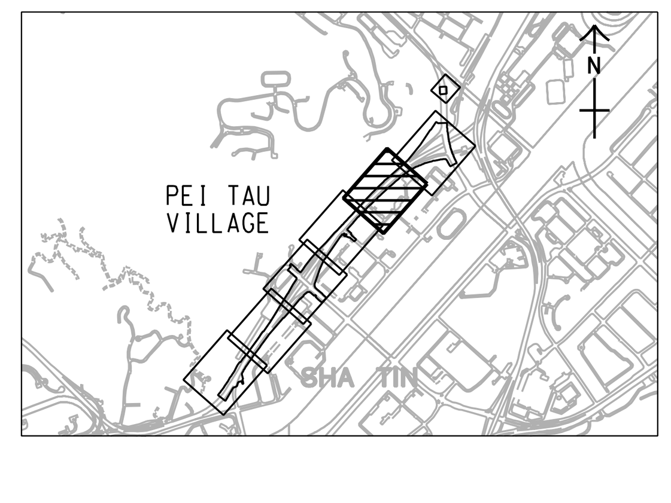
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
-	JAN. 18	TENDER DRAWING	BCC

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

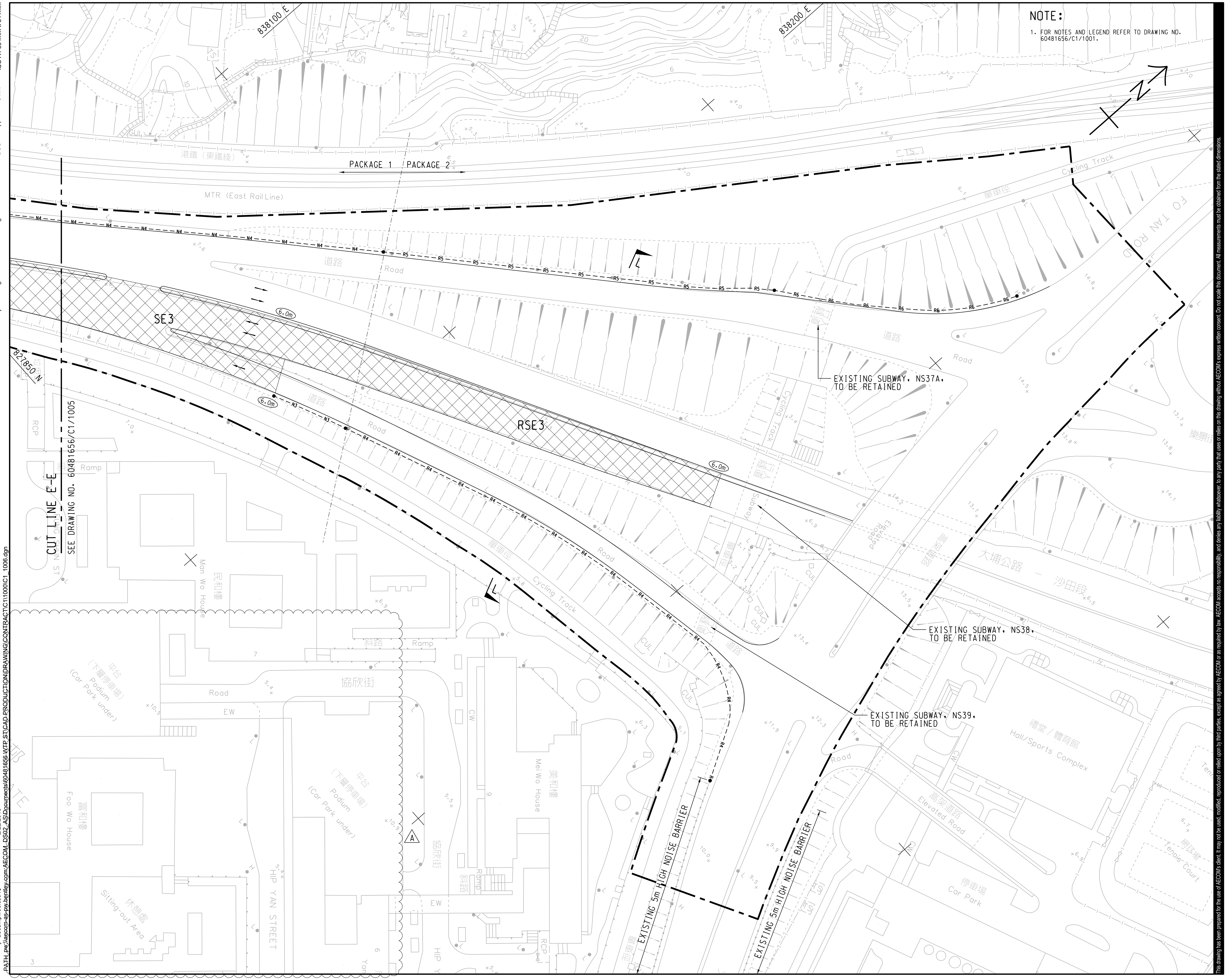
GENERAL LAYOUT PLAN

FIGURE 1.1b

SHEET 5 OF 6

SHEET NUMBER 圖紙編號

60481656/C1/1005



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

ISO A1 594mm x 841mm

AECOM

PROJECT 項目

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

CLIENT 業主

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ISSUE/REVISION 修訂

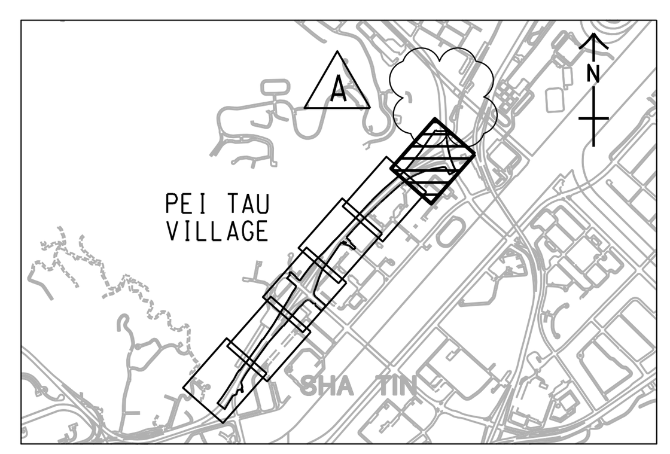
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
A	FEB. 18	TENDER ADDENDUM NO.2	BCC
-	JAN. 18	TENDER DRAWING	BCC

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

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

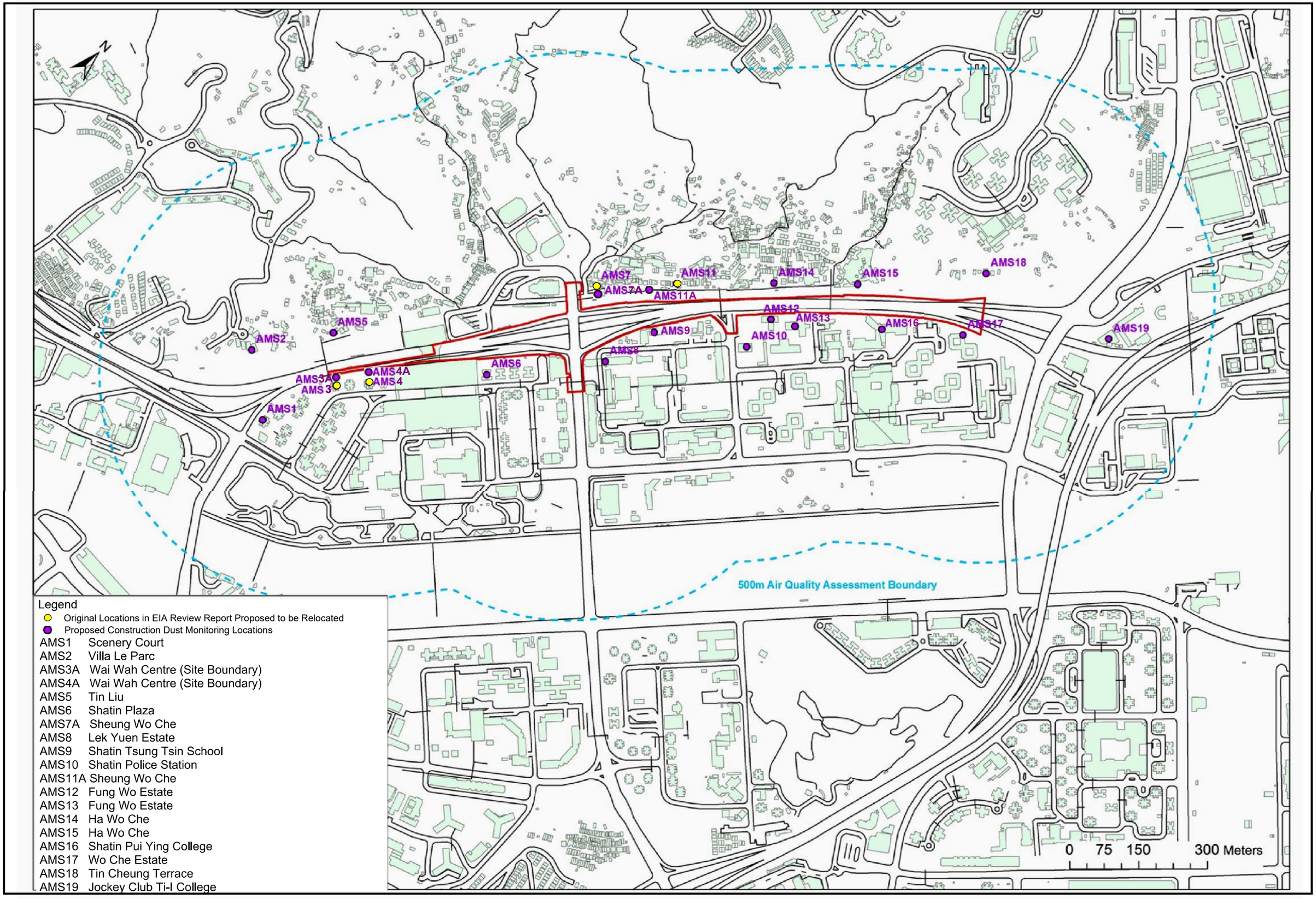


Figure 2a Air Quality Monitoring Locations

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

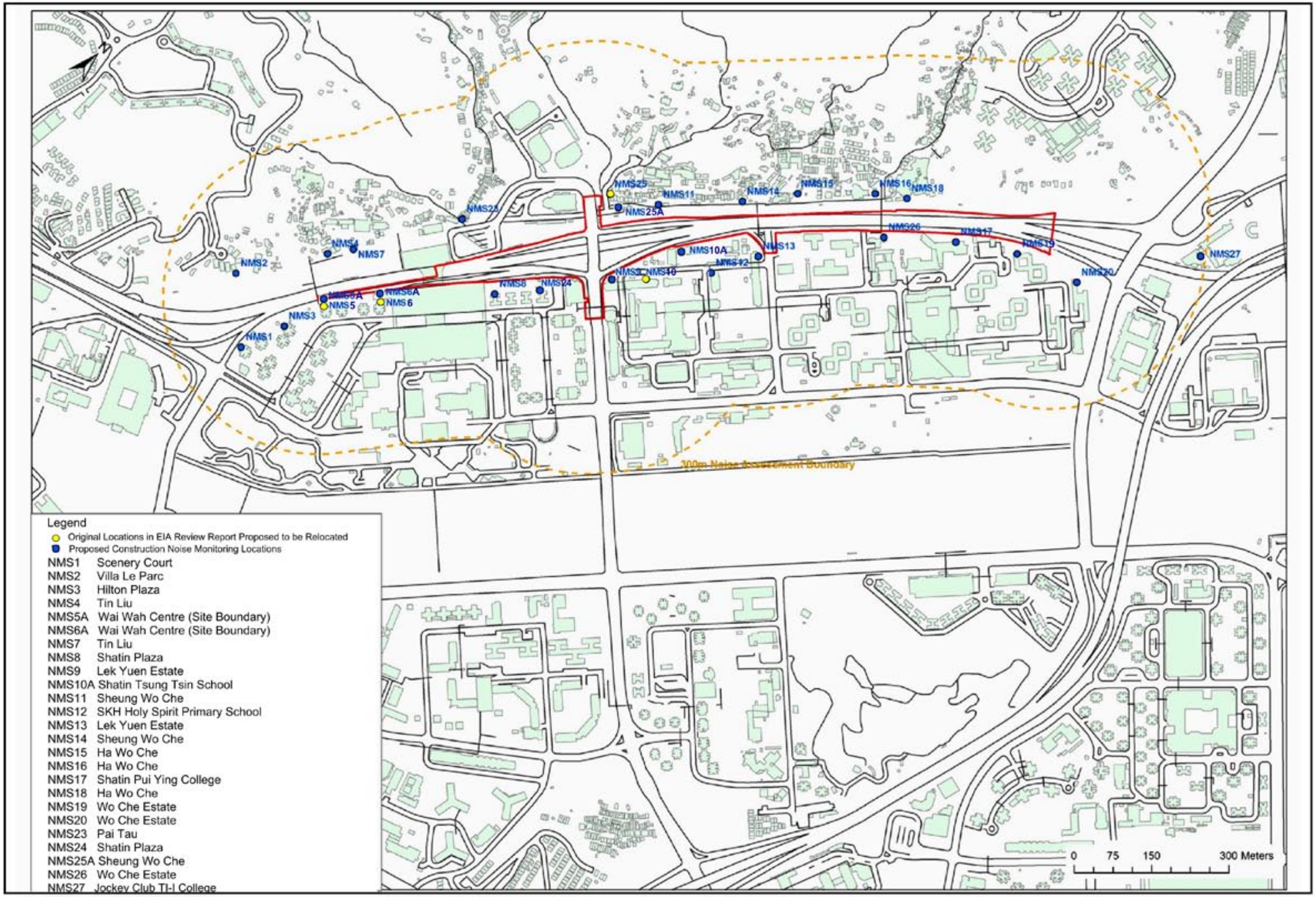


Figure 2b Noise Monitoring Locations

FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
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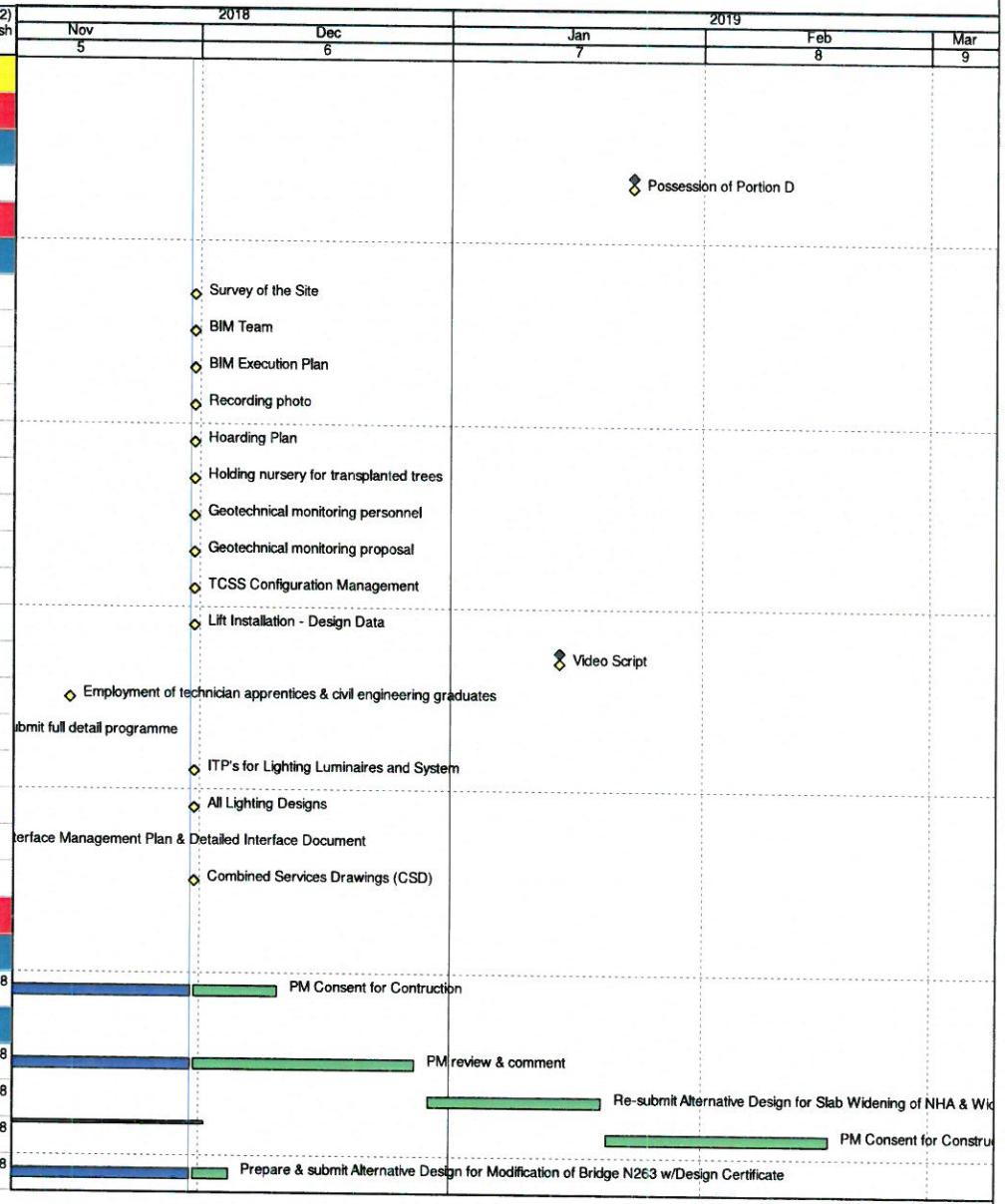
Appendix A

Construction Programme

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

08-Dec-18

Activity ID	Activity Name	Original Duration	Remaining Duration	3MRP Start	3MRP Finish	DWP (AP2) Start	DWP (AP2) Finish
Contract NE/2017/05 Road Widening and Retrofitting Noise Barriers on Tai Po Road (							
PROJECT KEY DATES							
POSSESSION OF SITE							
KEY1050	Possession of Portion D	0	0	23-Jan-19*		23-Jan-19	
PRELIMINARIES & GENERAL REQUIREMENT							
GENERAL SUBMISSION							
SUB1115	Survey of the Site	0	0	30-Nov-18*		03-Aug-18	
SUB1153	BIM Team	0	0	30-Nov-18*		24-Aug-18	
SUB1155	BIM Execution Plan	0	0	30-Nov-18*		25-Sep-18	
SUB1180	Recording photo	0	0	30-Nov-18*		03-Aug-18	
SUB1200	Hoarding Plan	0	0	30-Nov-18*		01-Aug-18	
SUB1305	Holding nursery for transplanted trees	0	0	30-Nov-18*		17-Aug-18	
SUB1307	Geotechnical monitoring personnel	0	0	30-Nov-18*		17-Aug-18	
SUB1309	Geotechnical monitoring proposal	0	0	30-Nov-18*		26-Aug-18	
SUB1343	TCSS Configuration Management	0	0	30-Nov-18*		16-Sep-18	
SUB1347	Lift Installation - Design Data	0	0	30-Nov-18*		25-Sep-18	
SUB1360	Video Script	0	0	14-Jan-19*		14-Jan-19	
SUB1396	Employment of technician apprentices & civil engineering graduates	0	0	15-Nov-18 A		16-Oct-18	
SUB1400	Submit full detail programme	0	0	05-Nov-18 A		21-Oct-18	
SUB1403	ITP's for Lighting Luminaires and System	0	0	30-Nov-18*		16-Oct-18	
SUB1405	All Lighting Designs	0	0	30-Nov-18*		16-Oct-18	
SUB1407	Interface Management Plan & Detailed Interface Document	0	0	05-Nov-18 A		16-Oct-18	
SUB1410	Combined Services Drawings (CSD)	0	0	30-Nov-18*		25-Oct-18	
DESIGN SUBMISSION							
GENERAL							
DES1030	PM Consent for Contruction	28	11	18-Sep-18 A	10-Dec-18	25-Sep-18	22-Oct-18
STRCR INTERCHANGE MODIFICATION WORKS (Alternative Design)							
DES1050	PM review & comment	28	28	10-Oct-18 A	27-Dec-18	14-Sep-18	11-Oct-18
DES1060	Re-submit Alternative Design for Slab Widening of NHA & Widening of Bridge N264 w/Design Certificate	22	22	29-Dec-18	19-Jan-19	13-Oct-18	03-Nov-18
DES1070	PM Consent for Construction	28	28	20-Jan-19	16-Feb-19	04-Nov-18	01-Dec-18
DES1080	Prepare & submit Alternative Design for Modification of Bridge N263 w/Design Certificate	21	5	05-Nov-18 A	04-Dec-18	14-Sep-18	04-Oct-18

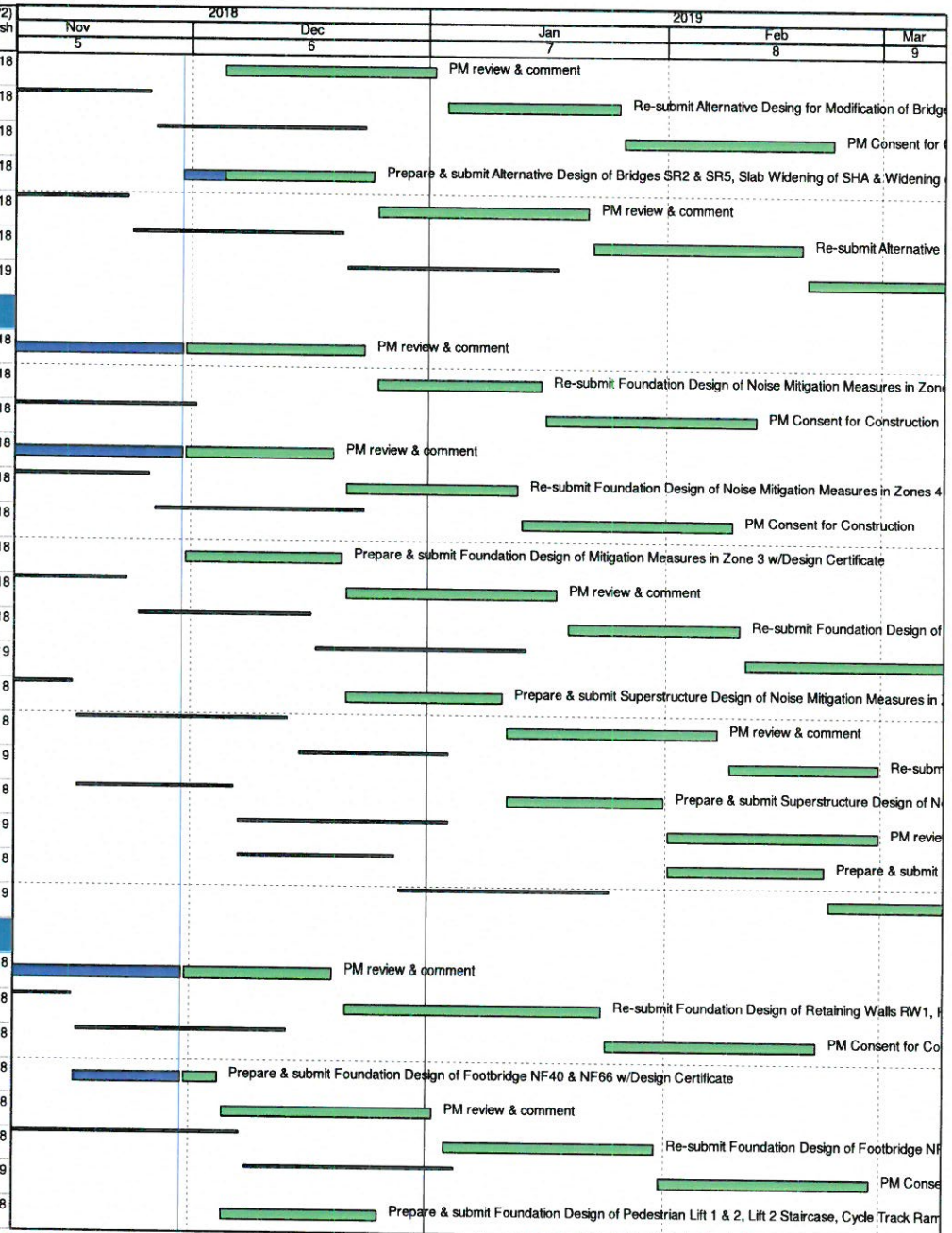


Remaining Level of Effort
Actual Level of Effort
Primary Baseline
Actual Work
Remaining Work
Critical Remaining Work
Milestone
Baseline Milestone

ROAD WIDENING & RETROFITTING NOISE BARRIERS ON TAI PO ROAD (SHA TIN SECTION)
3 Months Rolling Programme (30/11/18)
Page 1 of 6

Date	Revision	Checked	Approved
05/12/18	3MRP DWP 1811	Tim	

Activity ID	Activity Name	Original Duration	Remaining Duration	3MRP Start	3MRP Finish	DWP (AP2) Start	DWP (AP2) Finish
DES1090	PM review & comment	28	28	05-Dec-18	01-Jan-19	05-Oct-18	01-Nov-18
DES1100	Re-submit Alternative Desing for Modification of Bridge N263 w/Design Certificate	23	23	03-Jan-19	25-Jan-19	03-Nov-18	25-Nov-18
DES1110	PM Consent for Construction	28	28	26-Jan-19	22-Feb-19	26-Nov-18	23-Dec-18
DES1120	Prepare & submit Alternative Design of Bridges SR2 & SR5, Slab Widening of SHA & Widening of Bridge N262	21	20	30-Nov-18 A	24-Dec-18	05-Oct-18	25-Oct-18
DES1130	PM review & comment	28	28	25-Dec-18	21-Jan-19	26-Oct-18	22-Nov-18
DES1140	Re-submit Alternative Design of Bridges SR2 & SR5, Slab Widening of SHA & Widening of Bridge N262 w/Design	28	28	22-Jan-19	18-Feb-19	23-Nov-18	20-Dec-18
DES1150	PM Consent for Construction	28	28	19-Feb-19	18-Mar-19	21-Dec-18	17-Jan-19
NOISE MITIGATION MEASURES							
DES1170	PM review & comment	28	24	03-Oct-18 A	23-Dec-18	14-Sep-18	11-Oct-18
DES1180	Re-submit Foundation Design of Noise Mitigation Measures in Zones 1 & 2 w/Design Certificate	22	22	25-Dec-18	15-Jan-19	13-Oct-18	03-Nov-18
DES1190	PM Consent for Construction	28	28	16-Jan-19	12-Feb-19	04-Nov-18	01-Dec-18
DES1210	PM review & comment	28	20	25-Oct-18 A	19-Dec-18	05-Oct-18	01-Nov-18
DES1220	Re-submit Foundation Design of Noise Mitigation Measures in Zones 4 & 5 w/Design Certificate	23	23	21-Dec-18	12-Jan-19	03-Nov-18	25-Nov-18
DES1230	PM Consent for Construction	28	28	13-Jan-19	09-Feb-19	26-Nov-18	23-Dec-18
DES1240	Prepare & submit Foundation Design of Mitigation Measures in Zone 3 w/Design Certificate	21	21	30-Nov-18	20-Dec-18	05-Oct-18	25-Oct-18
DES1250	PM review & comment	28	28	21-Dec-18	17-Jan-19	26-Oct-18	22-Nov-18
DES1260	Re-submit Foundation Design of Noise Mitigation Measures in Zone 3 w/Design Certificate	23	23	19-Jan-19	10-Feb-19	24-Nov-18	16-Dec-18
DES1270	PM Consent for Construction	28	28	11-Feb-19	10-Mar-19	17-Dec-18	13-Jan-19
DES1280	Prepare & submit Superstructure Design of Noise Mitigation Measures in Zones 1 & 2 w/Design Certificate	21	21	21-Dec-18	10-Jan-19	26-Oct-18	15-Nov-18
DES1290	PM review & comment	28	28	11-Jan-19	07-Feb-19	16-Nov-18	13-Dec-18
DES1300	Re-submit Superstructure Design of Noise Mitigation Measures in Zone 1 & 2 w/Design Certificate	20	20	09-Feb-19	28-Feb-19	15-Dec-18	03-Jan-19
DES1320	Prepare & submit Superstructure Design of Noise Mitigation Measures in Zone 3 w/Design Certificate	21	21	11-Jan-19	31-Jan-19	16-Nov-18	06-Dec-18
DES1330	PM review & comment	28	28	01-Feb-19	28-Feb-19	07-Dec-18	03-Jan-19
DES1360	Prepare & submit Superstructure Design of Noise Mitigation Measures in Zones 4 & 5 w/Design Certificate	21	21	01-Feb-19	21-Feb-19	07-Dec-18	27-Dec-18
DES1370	PM review & comment	28	28	22-Feb-19	21-Mar-19	28-Dec-18	24-Jan-19
REMAINING WORKS							
DES1410	PM review & comment	28	20	29-Oct-18 A	19-Dec-18	14-Sep-18	11-Oct-18
DES1420	Re-submit Foundation Design of Retaining Walls RW1, RW3, RW6 & RW7 w/Design Certificate	34	34	21-Dec-18	23-Jan-19	13-Oct-18	15-Nov-18
DES1430	PM Consent for Construction	28	28	24-Jan-19	20-Feb-19	16-Nov-18	13-Dec-18
DES1440	Prepare & submit Foundation Design of Footbridge NF40 & NF66 w/Design Certificate	21	5	16-Nov-18 A	04-Dec-18	14-Sep-18	04-Oct-18
DES1450	PM review & comment	28	28	05-Dec-18	01-Jan-19	05-Oct-18	01-Nov-18
DES1460	Re-submit Foundation Design of Footbridge NF40 & NF66 w/Design Certificate	28	28	03-Jan-19	30-Jan-19	03-Nov-18	07-Dec-18
DES1470	PM Consent for Construction	28	28	31-Jan-19	27-Feb-19	08-Dec-18	04-Jan-19
DES1480	Prepare & submit Foundation Design of Pedestrian Lift 1 & 2, Lift 2 Staircase, Cycle Track Ramp & Sign Gantry	21	21	05-Dec-18	25-Dec-18	05-Oct-18	25-Oct-18

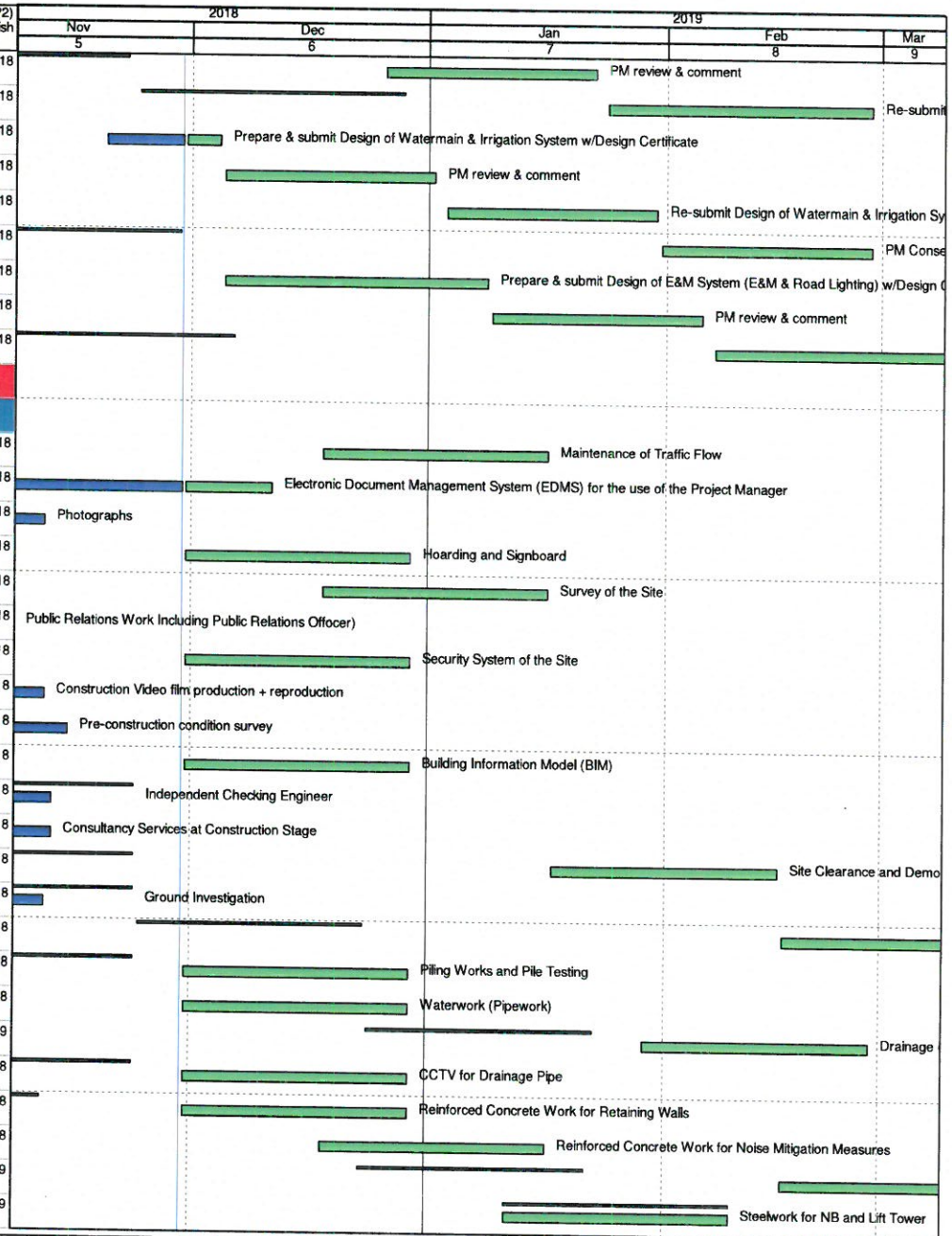


Remaining Level of Effort
Actual Level of Effort
Primary Baseline
Actual Work
Remaining Work
Critical Remaining Work
Milestone
Baseline Milestone

ROAD WIDENING & RETROFITTING NOISE BARRIERS ON TAI PO ROAD (SHA TIN SECTION)
3 Months Rolling Programme (30/11/18)
Page 2 of 6

Date	Revision	Checked	Approved
05/12/18	3MRP DWP 1811	Tim	

Activity ID	Activity Name	Original Duration	Remaining Duration	3MRP Start	3MRP Finish	DWP (AP2) Start	DWP (AP2) Finish
DES1490	PM review & comment	28	28	26-Dec-18	22-Jan-19	26-Oct-18	22-Nov-18
DES1500	Re-submit Foundation Design of Pedestrian Lift 1 & 2, Lift 2 Staircase, Cycle Track Ramp & Sign Gantry w/Design	35	35	24-Jan-19	27-Feb-19	24-Nov-18	28-Dec-18
DES1520	Prepare & submit Design of Watermain & Irrigation System w/Design Certificate	35	5	20-Nov-18 A	04-Dec-18	29-Jul-18	01-Sep-18
DES1530	PM review & comment	28	28	05-Dec-18	01-Jan-19	02-Sep-18	29-Sep-18
DES1540	Re-submit Design of Watermain & Irrigation System w/Design Certificate	28	28	03-Jan-19	30-Jan-19	01-Oct-18	01-Nov-18
DES1550	PM Consent for Construction	28	28	31-Jan-19	27-Feb-19	02-Nov-18	29-Nov-18
DES1560	Prepare & submit Design of E&M System (E&M & Road Lighting) w/Design Certificate	35	35	05-Dec-18	08-Jan-19	02-Sep-18	06-Oct-18
DES1570	PM review & comment	28	28	09-Jan-19	05-Feb-19	07-Oct-18	03-Nov-18
DES1580	Re-submit Design of E&M System (E&M & Road Lighting) w/Design Certificate	32	32	07-Feb-19	10-Mar-19	05-Nov-18	06-Dec-18
SUBLETTING & PROCUREMENT SCHEDULE							
SUBLETTING							
SPS1000	Maintenance of Traffic Flow	30	30	18-Dec-18	16-Jan-19	25-Sep-18	24-Oct-18
SPS1010	Electronic Document Management System (EDMS) for the use of the Project Manager	30	12	18-Oct-18 A	11-Dec-18*	02-Oct-18	31-Oct-18
SPS1020	Photographs	30	0	28-Sep-18 A	12-Nov-18 A	02-Oct-18	31-Oct-18
SPS1030	Hoarding and Signboard	30	30	30-Nov-18	29-Dec-18	02-Oct-18	31-Oct-18
SPS1040	Survey of the Site	30	30	18-Dec-18	16-Jan-19	25-Sep-18	24-Oct-18
SPS1050	Public Relations Work Including Public Relations Offocer)	30	0	28-Sep-18 A	08-Nov-18 A	02-Oct-18	31-Oct-18
SPS1060	Security System of the Site	30	30	30-Nov-18	29-Dec-18	02-Oct-18	31-Oct-18
SPS1070	Construction Video film production + reproduction	30	0	28-Sep-18 A	12-Nov-18 A	02-Oct-18	31-Oct-18
SPS1080	Pre-construction condition survey	30	0	30-Oct-18 A	15-Nov-18 A	25-Sep-18	24-Oct-18
SPS1090	Building Information Model (BIM)	30	30	30-Nov-18	29-Dec-18	02-Oct-18	31-Oct-18
SPS1100	Independent Checking Engineer	30	0	16-Oct-18 A	13-Nov-18 A	25-Oct-18	23-Nov-18
SPS1110	Consultancy Services at Construction Stage	30	0	15-Oct-18 A	13-Nov-18 A	02-Oct-18	31-Oct-18
SPS1140	Site Clearance and Demolition Work	30	30	17-Jan-19	15-Feb-19	25-Oct-18	23-Nov-18
SPS1150	Ground Investigation	30	0	05-Oct-18 A	12-Nov-18 A	25-Oct-18	23-Nov-18
SPS1160	Monitoring and Instrumentation	30	30	16-Feb-19	17-Mar-19	24-Nov-18	23-Dec-18
SPS1170	Piling Works and Pile Testing	30	30	30-Nov-18	29-Dec-18	25-Oct-18	23-Nov-18
SPS1200	Waterwork (Pipework)	30	30	30-Nov-18	29-Dec-18	06-Aug-18	04-Sep-18
SPS1210	Drainage (PC pipe, manhole & gully) and Duct	30	30	29-Jan-19	27-Feb-19	24-Dec-18	22-Jan-19
SPS1220	CCTV for Drainage Pipe	30	30	30-Nov-18	29-Dec-18	25-Oct-18	23-Nov-18
SPS1240	Reinforced Concrete Work for Retaining Walls	30	30	30-Nov-18	29-Dec-18	12-Oct-18	11-Nov-18
SPS1250	Reinforced Concrete Work for Noise Mitigation Measures	30	30	18-Dec-18	16-Jan-19	25-Sep-18	24-Oct-18
SPS1260	Reinforced Concrete Work for Bridge Work	30	30	16-Feb-19	17-Mar-19	23-Dec-18	21-Jan-19
SPS1290	Steelwork for NB and Lift Tower	30	30	11-Jan-19	09-Feb-19	11-Jan-19	09-Feb-19



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Critical Remaining Work
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Baseline Milestone

ROAD WIDENING & RETROFITTING NOISE BARRIERS ON TAI PO ROAD (SHA TIN SECTION)
3 Months Rolling Programme (30/11/18)

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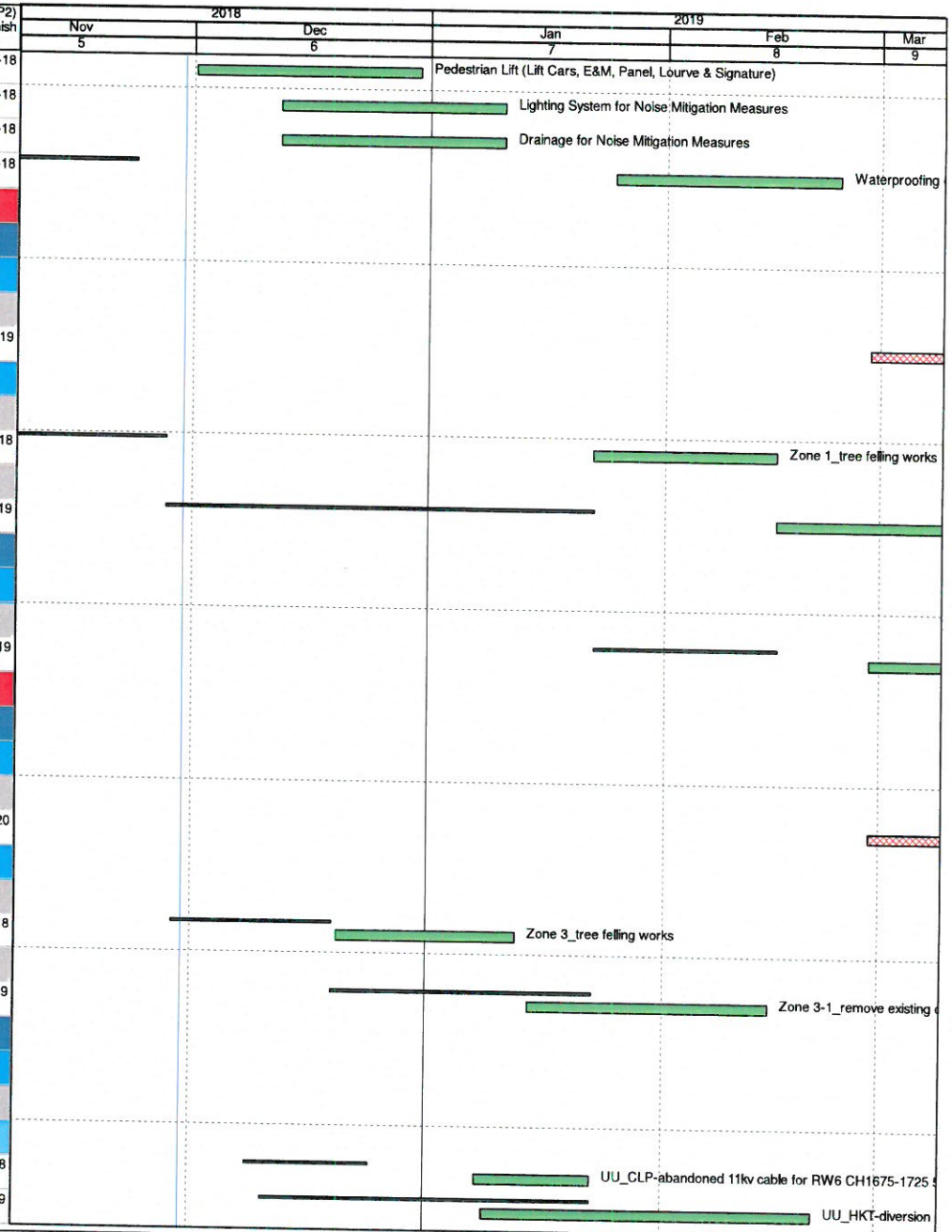
Activity ID	Activity Name	Original Duration	Remaining Duration	3MRP Start	3MRP Finish	DWP (AP2) Start	DWP (AP2) Finish
SPS1410	Pedestrian Lift (Lift Cars, E&M, Panel, Lourve & Signature)	30	30	01-Dec-18	30-Dec-18	17-Sep-18	16-Oct-18
SPS1420	Lighting System for Noise Mitigation Measures	30	30	12-Dec-18	10-Jan-19	25-Aug-18	23-Sep-18
SPS1440	Drainage for Noise Mitigation Measures	30	30	12-Dec-18	10-Jan-19	25-Aug-18	23-Sep-18
SPS1460	Waterproofing (Bitumen Paint)	30	30	25-Jan-19	23-Feb-19	25-Oct-18	23-Nov-18
WORK BETWEEN SHING MUN TUNNELS ROAD AND FOOT BRIDGE NF71A (ZONE							
PRELIMINARIES WORKS							
TEMPORARY TRAFFIC ARRAGEMENT							
TTA PERIOD							
Z1_1410	Construction Zone 1_Stage 1 Southbound structure	271	271	27-Feb-19	29-Jan-20	22-Jan-19	09-Oct-19
PREPARATORY WORKS							
TREE FELLING/TRANPLANT							
Z1_1290	Zone 1_tree felling works	18	18	22-Jan-19	15-Feb-19	06-Nov-18	27-Nov-18
MODIFICATION EXISTING ROAD/TEMPORARY ROAD							
Z1_1270	Zone 1-1_construct temporary road platform along Northbound with remove centre barrier	73	73	15-Feb-19*	18-May-19	27-Nov-18	22-Jan-19
NOISE BARRIER AND SEMI-ENCLOSURE							
PILE FOUNDATION WORKS							
SOUTHBOUND							
Z1_1050	R2_site investigation for R2-02P & 06P (7nr)	18	18	27-Feb-19	20-Mar-19	22-Jan-19	15-Feb-19
WORK BETWEEN CITYLINE PLAZA AND FOOTBRIDGE NF40 (ZONE 3)							
PRELIMINARIES WORKS							
TEMPORARY TRAFFIC ARRAGEMENT							
TTA PERIOD							
Z3_3270	Construction period of Zone 3a_1	324	324	27-Feb-19	31-Mar-20	22-Jan-19	11-Mar-20
PREPARATORY WORKS							
TREE FELLING/TRANPLANT							
Z3_2800	Zone 3_tree felling works	18	18	20-Dec-18	12-Jan-19	28-Nov-18	19-Dec-18
MODIFICATION EXISTING ROAD/TEMPORARY ROAD							
Z3_2810	Zone 3-1_remove existing central barrier	21	21	14-Jan-19	14-Feb-19	19-Dec-18	22-Jan-19
BRIDGE AND STRUCTURE WORKS							
PRELIMINARIES WORKS							
UTILITIES DIVERSION							
NORTHBOUND							
Z3_2910	UU_CLP-abandoned 11kv cable for RW6 CH1675-1725 50m	13	13	07-Jan-19	22-Jan-19	08-Dec-18	24-Dec-18
Z3_2920	UU_HKT-diversion cable for RW7 CH1830-2000 170m	34	34	08-Jan-19	20-Feb-19	10-Dec-18	22-Jan-19



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ROAD WIDENING & RETROFITTING NOISE BARRIERS ON TAI PO ROAD (SHA TIN SECTION)
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Page 4 of 6

Date	Revision	Checked	Approved
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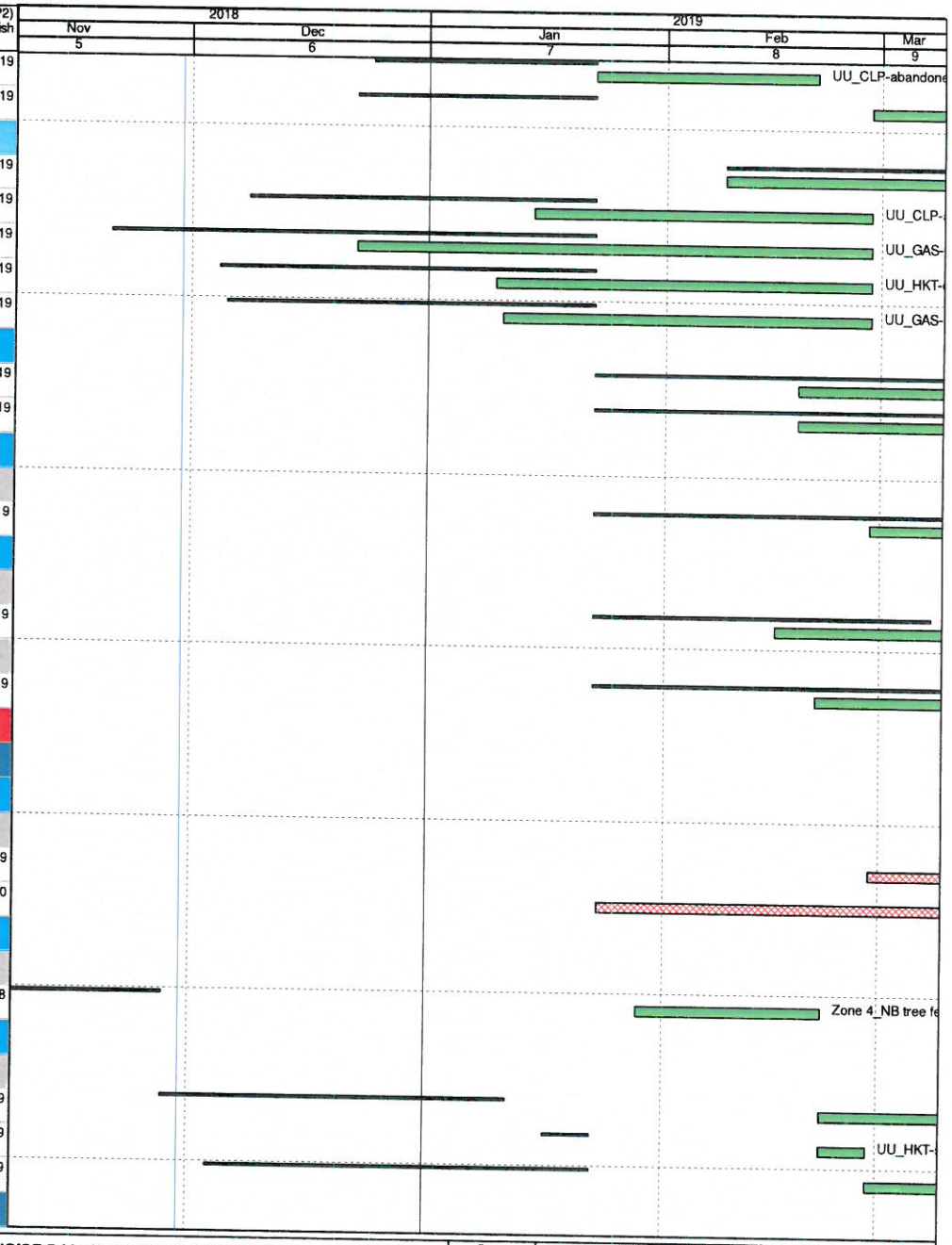
Activity ID	Activity Name	Original Duration	Remaining Duration	3MRP Start	3MRP Finish	DWP (AP2) Start	DWP (AP2) Finish
Z3_2930	UU_CLP-abandoned 11kv cable for RW7 & SR4 CH1825-1950 125m	22	22	22-Jan-19	20-Feb-19	24-Dec-18	22-Jan-19
Z3_3130	UU_Fresh watermain for SR4 178m 200mm	23	23	27-Feb-19	26-Mar-19	22-Dec-18	22-Jan-19
SOUTHBOUND							
Z3_2970	UU_HKT-new cable for RW1 & SR3 CH1450-2300 850m	127	127	08-Feb-19	16-Jul-19	08-Feb-19	16-Jul-19
Z3_3050	UU_CLP-abandoned 11kv cable for SR2 & N263 CH1710-1950 240m	35	35	14-Jan-19	27-Feb-19	08-Dec-18	22-Jan-19
Z3_3060	UU_GAS-diversion LP pipe for SR2 & N263 CH1640-1850 210m	51	51	22-Dec-18	27-Feb-19	20-Nov-18	22-Jan-19
Z3_3070	UU_HKT-diversion cable for SR2 & N263 CH1630-1840 210m	39	39	09-Jan-19	27-Feb-19	04-Dec-18	22-Jan-19
Z3_3110	UU_GAS-diversion LP pipe for N263 CH1825-1960 135m	38	38	10-Jan-19	27-Feb-19	05-Dec-18	22-Jan-19
WIDENING FOR NORTH HOLLOW ABUTMENT (N264)							
Z3_4200	C01_ELS & footing construction	45	45	18-Feb-19	11-Apr-19	22-Jan-19	19-Mar-19
Z3_4220	N264_modification existing MTRC fencing for deck widening	60	60	18-Feb-19	03-May-19	22-Jan-19	05-Apr-19
MODIFICATION OF BRIDGE N263							
MODIFICATION EXISTING PIER WALL OF N263							
Z3_3870	SAW-1_piling works for new NHA wall 3nr 1.5m bored pile	42	42	27-Feb-19	18-Apr-19	22-Jan-19	15-Mar-19
RETAINING WALL & SUBWAY							
RETAINING WALL NO.6							
Z3_4390	RW6_ELS works for Bay 601 to Bay 608 (62m_2 side)	35	35	15-Feb-19*	27-Mar-19	22-Jan-19	07-Mar-19
RETAINING WALL NO.7							
Z3_4510	RW7_ELS works for Bay 701 to Bay 705 (75m_2 side)	42	42	20-Feb-19	11-Apr-19	22-Jan-19	15-Mar-19
WORK BETWEEN FOOTBRIDGE NF40 AND NF66 (ZONE 4)							
PRELIMINARIES WORKS							
TEMPORARY TRAFFIC ARRAGEMENT							
TTA PERIOD							
Z4_1470	Construction Zone 4_NF66 Construction	243	243	27-Feb-19	20-Dec-19	22-Jan-19	18-Nov-19
Z4_1480	Construction Zone 4_NF40 Construction	489	489	23-Jan-19	16-Sep-20	23-Jan-19	16-Sep-20
PREPARATORY WORKS							
TREE FELLING/TRANPLANT							
Z4_1320	Zone 4_NB tree felling works	18	18	28-Jan-19	21-Feb-19	06-Nov-18	27-Nov-18
UTILITIES DIVERSION							
NORTHBOUND							
Z4_1270	UU_CLP-abandoned 33kv cable for N4 CH2100-2350 250m	36	36	21-Feb-19	04-Apr-19	27-Nov-18	11-Jan-19
Z4_1300	UU_HKT-slew cable for N4 & NF66 CH2320-2360 40m	5	5	21-Feb-19	27-Feb-19	16-Jan-19	22-Jan-19
Z4_1360	UU_Fresh watermain for N4 CH2150-2200 77m 600mm	40	40	27-Feb-19	16-Apr-19	03-Dec-18	22-Jan-19
BRIDGE AND STRUCTURE WORKS							



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

ROAD WIDENING & RETROFITTING NOISE BARRIERS ON TAI PO ROAD (SHA TIN SECTION)
3 Months Rolling Programme (30/11/18)
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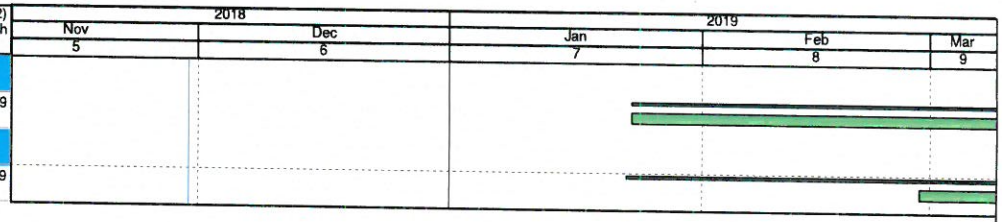
Date	Revision	Checked	Approved
05/12/18	3MRP DWP 1811	Tim	

Activity ID	Activity Name	Original Duration	Remaining Duration	3MRP Start	3MRP Finish	DWP (AP2) Start	DWP (AP2) Finish
MODIFICATION WORKS FOR NF40							
NF40_1000	Construct temporary staircase	60	60	23-Jan-19	05-Apr-19	23-Jan-19	05-Apr-19
MODIFICATION WORKS FOR NF66							
NF66_1000	Piling for NF66 new support 12nr mini pile	48	48	27-Feb-19	29-Apr-19	22-Jan-19	22-Mar-19



Remaining Level of Effort
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ROAD WIDENING & RETROFITTING NOISE BARRIERS ON TAI PO ROAD (SHA TIN SECTION)
3 Months Rolling Programme (30/11/18)
Page 6 of 6

Date	Revision	Checked	Approved
05/12/18	3MRP DWP 1811	Tim	

Activity ID	Activity Name	Original Duration	Remaining Duration	3MRP Start	3MRP Finish	DWP (AP3) Start	DWP (AP3) Finish
Contract NE/2017/05 Road Widening and Retrofitting Noise Barriers on Tai Po Road							
PROJECT KEY DATES							
POSSESSION OF SITE							
KEY1050	Possession of Portion D	0	0	23-Jan-19*		23-Jan-19	
PRELIMINARIES & GENERAL REQUIREMENT							
GENERAL SUBMISSION							
SUB1115	Survey of the Site	0	0	31-Dec-18*		30-Nov-18	
SUB1153	BIM Team	0	0	31-Dec-18*		30-Nov-18	
SUB1155	BIM Execution Plan	0	0	31-Dec-18*		30-Nov-18	
SUB1180	Recording photo	0	0	31-Dec-18*		30-Nov-18	
SUB1200	Hoarding Plan	0	0	31-Dec-18*		30-Nov-18	
SUB1305	Holding nursery for transplanted trees	0	0	31-Dec-18*		30-Nov-18	
SUB1307	Geotechnical monitoring personnel	0	0	31-Dec-18*		30-Nov-18	
SUB1309	Geotechnical monitoring proposal	0	0	31-Dec-18*		30-Nov-18	
SUB1343	TCSS Configuration Management	0	0	31-Dec-18*		30-Nov-18	
SUB1347	Lift Installation - Design Data	0	0	31-Dec-18*		30-Nov-18	
SUB1360	Video Script	0	0	14-Jan-19*		14-Jan-19	
SUB1403	ITP's for Lighting Luminaires and System	0	0	31-Dec-18*		30-Nov-18	
SUB1405	All Lighting Designs	0	0	31-Dec-18*		30-Nov-18	
SUB1410	Combined Services Drawings (CSD)	0	0	31-Dec-18*		30-Nov-18	
DESIGN SUBMISSION							
GENERAL							
DES1030	PM Consent for Contruction	28	25	18-Sep-18 A	24-Jan-19	30-Nov-18	27-Dec-18
STRCR INTERCHANGE MODIFICATION WORKS (Alternative Design)							
DES1070	PM Consent for Construction	28	20	06-Nov-18 A	21-Feb-19	20-Jan-19	16-Feb-19
DES1080	Prepare & submit Alternative Design for Modification of Bridge N263 w/Design Certificate	21	0	05-Nov-18 A	06-Dec-18 A	30-Nov-18	20-Dec-18
DES1090	PM review & comment	28	10	07-Dec-18 A	09-Jan-19	05-Dec-18	01-Jan-19
DES1100	Re-submit Alternative Desing for Modification of Bridge N263 w/Design Certificate	23	23	11-Jan-19	02-Feb-19	03-Jan-19	25-Jan-19
DES1110	PM Consent for Construction	28	28	03-Feb-19	02-Mar-19	26-Jan-19	22-Feb-19
DES1120	Prepare & submit Alternative Design of Bridges SR2 & SR5, Slab Widening of SHA & Widening of Bridge N262	21	17	30-Nov-18 A	16-Jan-19	01-Dec-18	21-Dec-18
DES1130	PM review & comment	28	28	17-Jan-19	13-Feb-19	25-Dec-18	21-Jan-19
DES1140	Re-submit Alternative Design of Bridges SR2 & SR5, Slab Widening of SHA & Widening of Bridge N262	28	28	14-Feb-19	13-Mar-19	22-Jan-19	18-Feb-19
DES1150	PM Consent for Construction	28	28	14-Mar-19	10-Apr-19	19-Feb-19	18-Mar-19
NOISE MITIGATION MEASURES							
DES1180	Re-submit Foundation Design of Noise Mitigation Measures in Zones 1 & 2 w/Design Certificate	22	12	24-Nov-18 A	11-Jan-19	25-Dec-18	15-Jan-19
DES1190	PM Consent for Construction	28	28	25-Jan-19	21-Feb-19	16-Jan-19	12-Feb-19
DES1220	Re-submit Foundation Design of Noise Mitigation Measures in Zones 4 & 5 w/Design Certificate	23	0	10-Nov-18 A	31-Dec-18 A	21-Dec-18	12-Jan-19
DES1230	PM Consent for Construction	28	28	25-Jan-19	21-Feb-19	13-Jan-19	09-Feb-19
DES1240	Prepare & submit Foundation Design of Mitigation Measures in Zone 3 w/Design Certificate	21	8	26-Nov-18 A	07-Jan-19	30-Nov-18	20-Dec-18
DES1250	PM review & comment	28	28	08-Jan-19	04-Feb-19	21-Dec-18	17-Jan-19
DES1260	Re-submit Foundation Design of Noise Mitigation Measures in Zone 3 w/Design Certificate	23	23	06-Feb-19	28-Feb-19	19-Jan-19	10-Feb-19
DES1270	PM Consent for Construction	28	28	01-Mar-19	28-Mar-19	11-Feb-19	10-Mar-19
DES1280	Prepare & submit Superstructure Design of Noise Mitigation Measures in Zones 1 & 2 w/Design	21	21	08-Jan-19	28-Jan-19	21-Dec-18	10-Jan-19

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ROAD WIDENING & RETROFITTING NOISE BARRIERS ON TAI PO ROAD (SHA TIN SECTION)
3 Months Rolling Programme (31/12/18)
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Date	Revision	Checked	Approved
10-Jan-19	3MRP DWP 1812	Tim	

Activity ID	Activity Name	Original Duration	Remaining Duration	3MRP Start	3MRP Finish	DWP (AP3) Start	DWP (AP3) Finish
DES1290	PM review & comment	28	28	29-Jan-19	25-Feb-19	11-Jan-19	07-Feb-19
DES1300	Re-submit Superstructure Design of Noise Mitigation Measures in Zone 1 & 2 w/Design Certificate	20	20	27-Feb-19	18-Mar-19	09-Feb-19	28-Feb-19
DES1310	PM Consent for Construction	28	28	19-Mar-19	15-Apr-19	01-Mar-19	28-Mar-19
DES1320	Prepare & submit Superstructure Design of Noise Mitigation Measures in Zone 3 w/Design Certificate	21	21	29-Jan-19	18-Feb-19	11-Jan-19	31-Jan-19
DES1330	PM review & comment	28	28	19-Feb-19	18-Mar-19	01-Feb-19	28-Feb-19
DES1340	Re-submit Superstructure Design of Noise Mitigation Measures in Zone 3 w/Design Certificate	21	21	20-Mar-19	09-Apr-19	02-Mar-19	22-Mar-19
DES1360	Prepare & submit Superstructure Design of Noise Mitigation Measures in Zones 4 & 5 w/Design	21	21	19-Feb-19	11-Mar-19	01-Feb-19	21-Feb-19
DES1370	PM review & comment	28	28	12-Mar-19	08-Apr-19	22-Feb-19	21-Mar-19
REMAINING WORKS							
DES1410	PM review & comment	28	0	29-Oct-18 A	20-Dec-18 A	30-Nov-18	27-Dec-18
DES1420	Re-submit Foundation Design of Retaining Walls RW1, RW3, RW6 & RW7 w/Design Certificate	34	32	21-Dec-18 A	31-Jan-19	21-Dec-18	23-Jan-19
DES1430	PM Consent for Construction	28	28	01-Feb-19	28-Feb-19	24-Jan-19	20-Feb-19
DES1440	Prepare & submit Foundation Design of Footbridge NF40 & NF66 w/Design Certificate	21	0	16-Nov-18 A	31-Dec-18 A	30-Nov-18	20-Dec-18
DES1450	PM review & comment	28	28	31-Dec-18	27-Jan-19	05-Dec-18	01-Jan-19
DES1460	Re-submit Foundation Design of Footbridge NF40 & NF66 w/Design Certificate	35	35	29-Jan-19	04-Mar-19	03-Jan-19	30-Jan-19
DES1470	PM Consent for Construction	28	28	05-Mar-19	01-Apr-19	31-Jan-19	27-Feb-19
DES1480	Prepare & submit Foundation Design of Pedestrian Lift 1 & 2, Lift 2 Staircase, Cycle Track Ramp & Sign	21	8	26-Nov-18 A	07-Jan-19	05-Dec-18	25-Dec-18
DES1490	PM review & comment	28	28	08-Jan-19	04-Feb-19	26-Dec-18	22-Jan-19
DES1500	Re-submit Foundation Design of Pedestrian Lift 1 & 2, Lift 2 Staircase, Cycle Track Ramp & Sign Gantry	35	35	06-Feb-19	12-Mar-19	24-Jan-19	27-Feb-19
DES1510	PM Consent for Construction	28	28	13-Mar-19	09-Apr-19	28-Feb-19	27-Mar-19
DES1520	Prepare & submit Design of Watermain & Irrigation System w/Design Certificate	35	0	20-Nov-18 A	31-Dec-18 A	30-Nov-18	03-Jan-19
DES1530	PM review & comment	28	28	31-Dec-18	27-Jan-19	05-Dec-18	01-Jan-19
DES1540	Re-submit Design of Watermain & Irrigation System w/Design Certificate	32	32	29-Jan-19	01-Mar-19	03-Jan-19	30-Jan-19
DES1550	PM Consent for Construction	28	28	02-Mar-19	29-Mar-19	31-Jan-19	27-Feb-19
DES1560	Prepare & submit Design of E&M System (E&M & Road Lighting) w/Design Certificate	35	35	31-Dec-18	03-Feb-19	05-Dec-18	08-Jan-19
DES1570	PM review & comment	28	28	04-Feb-19	03-Mar-19	09-Jan-19	05-Feb-19
DES1580	Re-submit Design of E&M System (E&M & Road Lighting) w/Design Certificate	32	32	05-Mar-19	05-Apr-19	07-Feb-19	10-Mar-19
SUBLETTING & PROCUREMENT SCHEDULE							
SUBLETTING							
SPS1000	Maintenance of Traffic Flow	30	30	31-Dec-18	29-Jan-19	18-Dec-18	16-Jan-19
SPS1010	Electronic Document Management System (EDMS) for the use of the Project Manager	30	12	18-Oct-18 A	11-Jan-19*	30-Nov-18	29-Dec-18
SPS1030	Hoarding and Signboard	30	30	31-Dec-18	29-Jan-19	30-Nov-18	29-Dec-18
SPS1040	Survey of the Site	30	30	31-Dec-18	29-Jan-19	18-Dec-18	16-Jan-19
SPS1060	Security System of the Site	30	30	31-Dec-18	29-Jan-19	30-Nov-18	29-Dec-18
SPS1090	Building Information Model (BIM)	30	30	31-Dec-18	29-Jan-19	30-Nov-18	29-Dec-18
SPS1140	Site Clearance and Demolition Work	30	30	30-Jan-19	28-Feb-19	17-Jan-19	15-Feb-19
SPS1160	Monitoring and Instrumentation	30	30	01-Mar-19	30-Mar-19	16-Feb-19	17-Mar-19
SPS1170	Piling Works and Pile Testing	30	30	01-Jan-19	30-Jan-19	30-Nov-18	29-Dec-18
SPS1200	Waterwork (Pipework)	30	30	31-Dec-18	29-Jan-19	30-Nov-18	29-Dec-18
SPS1210	Drainage (PC pipe, manhole & gully) and Duct	30	30	01-Mar-19	30-Mar-19	29-Jan-19	27-Feb-19
SPS1220	CCTV for Drainage Pipe	30	30	31-Dec-18	29-Jan-19	30-Nov-18	29-Dec-18
SPS1240	Reinforced Concrete Work for Retaining Walls	30	30	31-Dec-18	29-Jan-19	30-Nov-18	29-Dec-18
SPS1250	Reinforced Concrete Work for Noise Mitigation Measures	30	30	31-Dec-18	29-Jan-19	18-Dec-18	16-Jan-19
SPS1260	Reinforced Concrete Work for Bridge Work	30	30	15-Mar-19	13-Apr-19	16-Feb-19	17-Mar-19
SPS1290	Steelwork for NB and Lift Tower	30	30	11-Jan-19	09-Feb-19	11-Jan-19	09-Feb-19
SPS1410	Pedestrian Lift (Lift Cars, E&M, Panel, Lourve & Signature)	30	30	31-Dec-18	29-Jan-19	01-Dec-18	30-Dec-18
SPS1420	Lighting System for Noise Mitigation Measures	30	30	31-Dec-18	29-Jan-19	12-Dec-18	10-Jan-19

Remaining Level of Effort
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ROAD WIDENING & RETROFITTING NOISE BARRIERS ON TAI PO ROAD (SHA TIN SECTION)
3 Months Rolling Programme (31/12/18)
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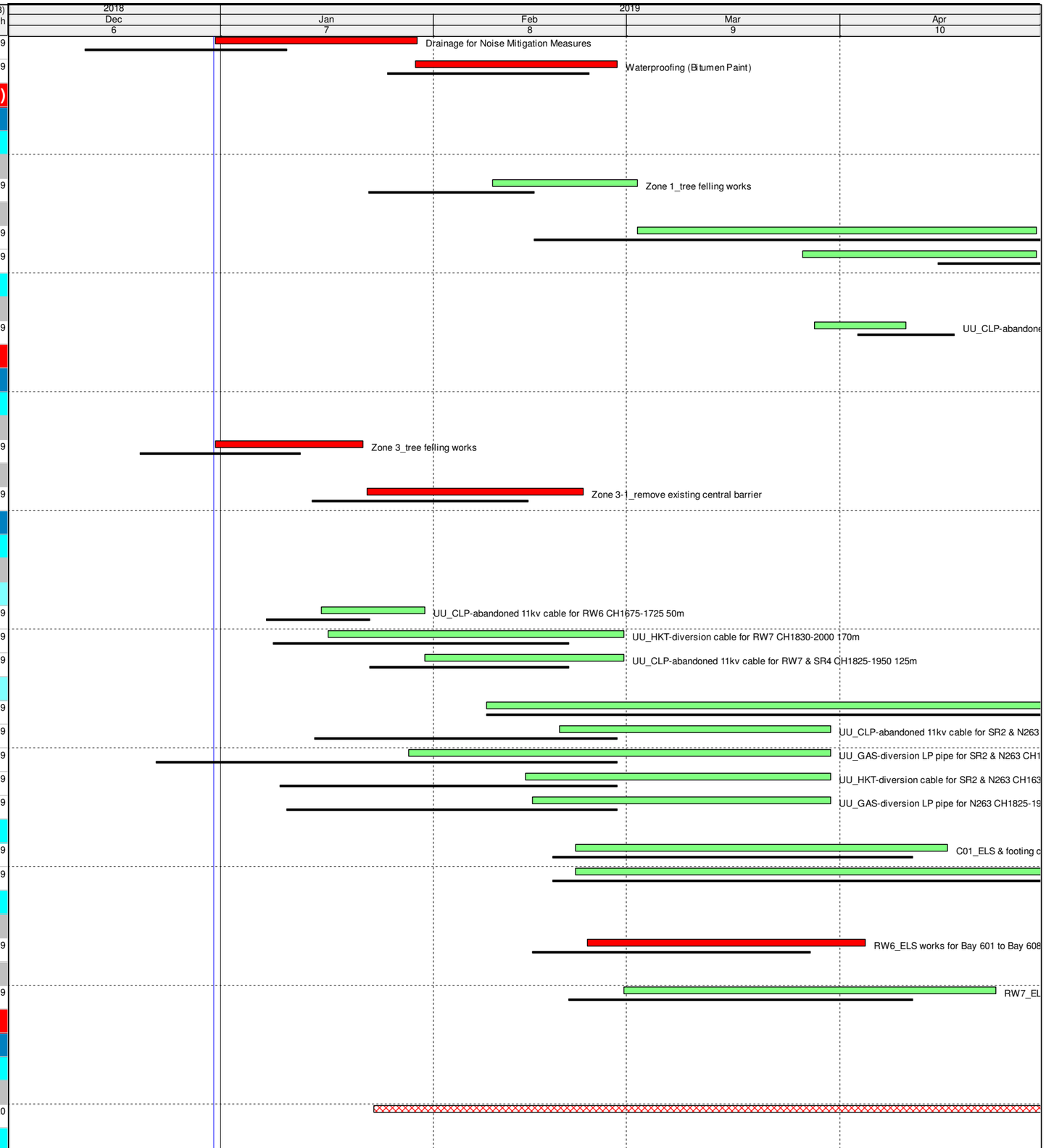
Date	Revision	Checked	Approved
10-Jan-19	3MRP DWP 1812	Tim	

Activity ID	Activity Name	Original Duration	Remaining Duration	3MRP Start	3MRP Finish	DWP (AP3) Start	DWP (AP3) Finish
SPS1440	Drainage for Noise Mitigation Measures	30	30	31-Dec-18	29-Jan-19	12-Dec-18	10-Jan-19
SPS1460	Waterproofing (Bitumen Paint)	30	30	29-Jan-19	27-Feb-19	25-Jan-19	23-Feb-19
WORK BETWEEN SHING MUN TUNNELS ROAD AND FOOT BRIDGE NF71A (ZONE 1)							
PRELIMINARIES WORKS							
PREPARATORY WORKS							
TREE FELLING/TRANPLANT							
Z1_1290	Zone 1_tree felling works	18	18	09-Feb-19	02-Mar-19	22-Jan-19	15-Feb-19
MODIFICATION EXISTING ROAD/TEMPORARY ROAD							
Z1_1270	Zone 1-1_construct temporary road platform along Northbound	45	45	02-Mar-19	29-Apr-19	15-Feb-19	18-May-19
Z1_1280	Zone 1-1_remove existing central barrier	21	21	26-Mar-19	29-Apr-19	15-Apr-19	17-May-19
UTILITIES DIVERSION							
NORTHBOUND							
Z1_1330	UU_CLP-abandoned 33kv cable for R1 & R2 CH1075 30m	11	11	28-Mar-19	10-Apr-19	03-Apr-19	17-Apr-19
WORK BETWEEN CITYLINE PLAZA AND FOOTBRIDGE NF40 (ZONE 3)							
PRELIMINARIES WORKS							
PREPARATORY WORKS							
TREE FELLING/TRANPLANT							
Z3_2800	Zone 3_tree felling works	18	18	31-Dec-18	21-Jan-19	20-Dec-18	12-Jan-19
MODIFICATION EXISTING ROAD/TEMPORARY ROAD							
Z3_2810	Zone 3-1_remove existing central barrier	21	21	22-Jan-19	22-Feb-19	14-Jan-19	14-Feb-19
BRIDGE AND STRUCTURE WORKS							
PRELIMINARIES WORKS							
UTILITIES DIVERSION							
NORTHBOUND							
Z3_2910	UU_CLP-abandoned 11kv cable for RW6 CH1675-1725 50m	13	13	15-Jan-19	30-Jan-19	07-Jan-19	22-Jan-19
Z3_2920	UU_HKT-diversion cable for RW7 CH1830-2000 170m	34	34	16-Jan-19	28-Feb-19	08-Jan-19	20-Feb-19
Z3_2930	UU_CLP-abandoned 11kv cable for RW7 & SR4 CH1825-1950 125m	22	22	30-Jan-19	28-Feb-19	22-Jan-19	20-Feb-19
SOUTHBOUND							
Z3_2970	UU_HKT-new cable for RW1 & SR3 CH1450-2300 850m	127	127	08-Feb-19	16-Jul-19	08-Feb-19	16-Jul-19
Z3_3050	UU_CLP-abandoned 11kv cable for SR2 & N263 CH1710-1950 240m	35	35	19-Feb-19	30-Mar-19	14-Jan-19	27-Feb-19
Z3_3060	UU_GAS-diversion LP pipe for SR2 & N263 CH1640-1850 210m	51	51	28-Jan-19	30-Mar-19	22-Dec-18	27-Feb-19
Z3_3070	UU_HKT-diversion cable for SR2 & N263 CH1630-1840 210m	39	39	14-Feb-19	30-Mar-19	09-Jan-19	27-Feb-19
Z3_3110	UU_GAS-diversion LP pipe for N263 CH1825-1960 135m	38	38	15-Feb-19	30-Mar-19	10-Jan-19	27-Feb-19
WIDENING FOR NORTH HOLLOW ABUTMENT (N264)							
Z3_4200	C01_ELS & footing construction	45	45	21-Feb-19	16-Apr-19	18-Feb-19	11-Apr-19
Z3_4220	N264_modification existing MTRC fencing for deck widening	60	60	21-Feb-19	08-May-19	18-Feb-19	03-May-19
RETAINING WALL & SUBWAY							
RETAINING WALL NO.6							
Z3_4390	RW6_ELS works for Bay 601 to Bay 608 (62m_2 side)	35	35	23-Feb-19	04-Apr-19	15-Feb-19	27-Mar-19
RETAINING WALL NO.7							
Z3_4510	RW7_ELS works for Bay 701 to Bay 705 (75m_2 side)	42	42	28-Feb-19	23-Apr-19	20-Feb-19	11-Apr-19
WORK BETWEEN FOOTBRIDGE NF40 AND NF66 (ZONE 4)							
PRELIMINARIES WORKS							
TEMPORARY TRAFFIC ARRAGEMENT							
TTA PERIOD							
Z4_1480	Construction Zone 4_NF40 Construction	489	489	23-Jan-19	16-Sep-20	23-Jan-19	16-Sep-20
PREPARATORY WORKS							



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ROAD WIDENING & RETROFITTING NOISE BARRIERS ON TAI PO ROAD (SHA TIN SECTION)
3 Months Rolling Programme (31/12/18)
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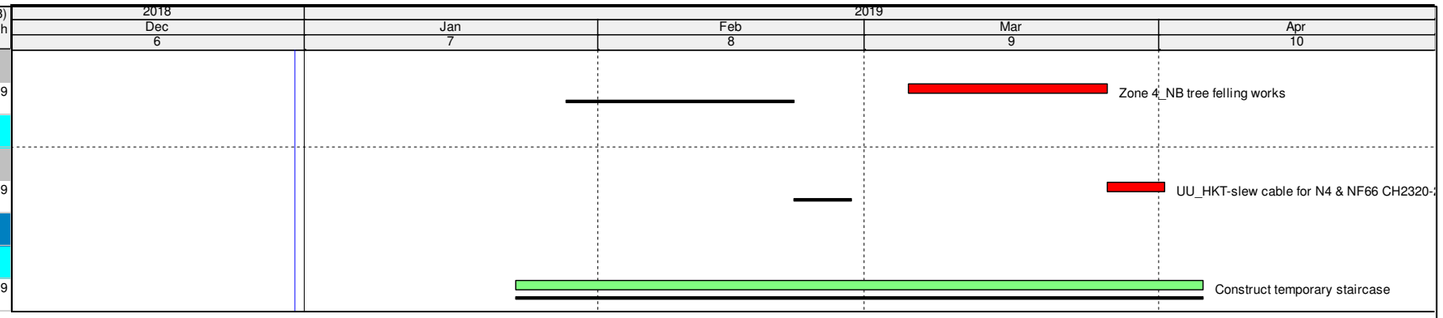
Date	Revision	Checked	Approved
10-Jan-19	3MRP DWP 1812	Tim	

Activity ID	Activity Name	Original Duration	Remaining Duration	3MRP Start	3MRP Finish	DWP (AP3) Start	DWP (AP3) Finish
TREE FELLING/TRANPLANT							
Z4_1320	Zone 4_NB tree felling works	18	18	05-Mar-19	26-Mar-19	28-Jan-19	21-Feb-19
UTILITIES DIVERSION							
NORTHBOUND							
Z4_1300	UU_HKT-slew cable for N4 & NF66 CH2320-2360 40m	5	5	26-Mar-19	01-Apr-19	21-Feb-19	27-Feb-19
BRIDGE AND STRUCTURE WORKS							
MODIFICATION WORKS FOR NF40							
NF40_1000	Construct temporary staircase	60	60	23-Jan-19	05-Apr-19	23-Jan-19	05-Apr-19



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ROAD WIDENING & RETROFITTING NOISE BARRIERS ON TAI PO ROAD (SHA TIN SECTION)
3 Months Rolling Programme (31/12/18)
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中國中鐵–中鐵一局–振華工程聯營
CHINA RAILWAY - CHINA RAILWAY FIRST GROUP - ZHEN HUA ENGINEERING JOINT VENTURE

Contract NE/2017/05 Road Widening and Retrofitting Noise Barriers on Tai Po Road

Activity ID	Activity Name	Original Duration	Remaining Duration	3MRP Start	3MRP Finish	DWP (AP3) Start	DWP (AP3) Finish
PROJECT KEY DATES							
POSSESSION OF SITE							
KEY1050	Possession of Portion D	0	0	23-Jan-19 A		23-Jan-19	
PRELIMINARIES & GENERAL REQUIREMENT							
GENERAL SUBMISSION							
SUB1115	Survey of the Site	0	0	31-Jan-19*		30-Nov-18	
SUB1153	BIM Team	0	0	31-Jan-19*		30-Nov-18	
SUB1155	BIM Execution Plan	0	0	31-Jan-19*		30-Nov-18	
SUB1180	Recording photo	0	0	31-Jan-19*		30-Nov-18	
SUB1200	Hoarding Plan	0	0	31-Jan-19*		30-Nov-18	
SUB1305	Holding nursery for transplanted trees	0	0	31-Jan-19*		30-Nov-18	
SUB1307	Geotechnical monitoring personnel	0	0	31-Jan-19*		30-Nov-18	
SUB1309	Geotechnical monitoring proposal	0	0	31-Jan-19*		30-Nov-18	
SUB1343	TCSS Configuration Management	0	0	31-Jan-19*		30-Nov-18	
SUB1347	Lift Installation - Design Data	0	0	31-Jan-19*		30-Nov-18	
SUB1360	Video Script	0	0	31-Jan-19*		14-Jan-19	
SUB1403	ITP's for Lighting Luminaires and System	0	0	31-Jan-19*		30-Nov-18	
SUB1405	All Lighting Designs	0	0	31-Jan-19*		30-Nov-18	
SUB1410	Combined Services Drawings (CSD)	0	0	31-Jan-19*		30-Nov-18	
DESIGN SUBMISSION							
STRCR INTERCHANGE MODIFICATION WORKS (Alternative Design)							
DES1070	PM Consent for Construction	28	6	06-Nov-18 A	05-Feb-19	20-Jan-19	16-Feb-19
DES1090	PM review & comment	28	5	07-Dec-18 A	04-Feb-19	05-Dec-18	01-Jan-19
DES1100	Re-submit Alternative Desing for Modification of Bridge N263 w/Design Certificate	23	23	06-Feb-19	28-Feb-19	03-Jan-19	25-Jan-19
DES1110	PM Consent for Construction	28	28	01-Mar-19	28-Mar-19	26-Jan-19	22-Feb-19
DES1120	Prepare & submit Alternative Design of Bridges SR2 & SR5, Slab Widening of SHA & Widening of Bridge N262	21	0	30-Nov-18 A	04-Jan-19 A	01-Dec-18	21-Dec-18
DES1130	PM review & comment	28	12	05-Jan-19 A	11-Feb-19	25-Dec-18	21-Jan-19
DES1140	Re-submit Alternative Design of Bridges SR2 & SR5, Slab Widening of SHA & Widening of Bridge N262	28	28	12-Feb-19	11-Mar-19	22-Jan-19	18-Feb-19
DES1150	PM Consent for Construction	28	28	12-Mar-19	08-Apr-19	19-Feb-19	18-Mar-19
NOISE MITIGATION MEASURES							
DES1180	Re-submit Foundation Design of Noise Mitigation Measures in Zones 1 & 2 w/Design Certificate	22	6	24-Nov-18 A	05-Feb-19	25-Dec-18	15-Jan-19
DES1190	PM Consent for Construction	28	28	06-Feb-19	05-Mar-19	16-Jan-19	12-Feb-19
DES1230	PM Consent for Construction	28	14	02-Jan-19 A	13-Feb-19	13-Jan-19	09-Feb-19
DES1240	Prepare & submit Foundation Design of Mitigation Measures in Zone 3 w/Design Certificate	21	5	26-Nov-18 A	04-Feb-19	30-Nov-18	20-Dec-18
DES1250	PM review & comment	28	28	05-Feb-19	04-Mar-19	21-Dec-18	17-Jan-19
DES1260	Re-submit Foundation Design of Noise Mitigation Measures in Zone 3 w/Design Certificate	23	23	06-Mar-19	28-Mar-19	19-Jan-19	10-Feb-19
DES1270	PM Consent for Construction	28	28	29-Mar-19	25-Apr-19	11-Feb-19	10-Mar-19
DES1280	Prepare & submit Superstructure Design of Noise Mitigation Measures in Zones 1 & 2 w/Design	21	3	14-Jan-19 A	07-Feb-19	21-Dec-18	10-Jan-19
DES1290	PM review & comment	28	28	08-Feb-19	07-Mar-19	11-Jan-19	07-Feb-19
DES1300	Re-submit Superstructure Design of Noise Mitigation Measures in Zone 1 & 2 w/Design Certificate	20	20	09-Mar-19	28-Mar-19	09-Feb-19	28-Feb-19
DES1310	PM Consent for Construction	28	28	29-Mar-19	25-Apr-19	01-Mar-19	28-Mar-19
DES1320	Prepare & submit Superstructure Design of Noise Mitigation Measures in Zone 3 w/Design Certificate	21	21	08-Feb-19	28-Feb-19	11-Jan-19	31-Jan-19

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

ROAD WIDENING & RETROFITTING NOISE BARRIERS ON TAI PO ROAD (SHA TIN SECTION)
3 Months Rolling Programme (31/01/19)

Date	Revision	Checked	Approved
09-Feb-19	3MRP DWP 1901	Tim	

Activity ID	Activity Name	Original Duration	Remaining Duration	3MRP Start	3MRP Finish	DWP (AP3) Start	DWP (AP3) Finish
DES1330	PM review & comment	28	28	01-Mar-19	28-Mar-19	01-Feb-19	28-Feb-19
DES1340	Re-submit Superstructure Design of Noise Mitigation Measures in Zone 3 w/Design Certificate	21	21	30-Mar-19	19-Apr-19	02-Mar-19	22-Mar-19
DES1350	PM Consent for Construction	28	28	20-Apr-19	17-May-19	23-Mar-19	19-Apr-19
DES1360	Prepare & submit Superstructure Design of Noise Mitigation Measures in Zones 4 & 5 w/Design	21	21	01-Mar-19	21-Mar-19	01-Feb-19	21-Feb-19
DES1370	PM review & comment	28	28	22-Mar-19	18-Apr-19	22-Feb-19	21-Mar-19
DES1380	Re-submit Superstructure Design of Noise Mitigation Measures in Zones 4 & 5 w/Design Certificate	20	20	20-Apr-19	09-May-19	23-Mar-19	11-Apr-19
REMAINING WORKS							
DES1420	Re-submit Foundation Design of Retaining Walls RW1, RW3, RW6 & RW7 w/Design Certificate	34	0	21-Dec-18 A	10-Jan-19 A	21-Dec-18	23-Jan-19
DES1430	PM Consent for Construction	28	26	11-Jan-19 A	25-Feb-19	24-Jan-19	20-Feb-19
DES1450	PM review & comment	28	5	02-Jan-19 A	04-Feb-19	05-Dec-18	01-Jan-19
DES1460	Re-submit Foundation Design of Footbridge NF40 & NF66 w/Design Certificate	35	35	06-Feb-19	12-Mar-19	03-Jan-19	30-Jan-19
DES1470	PM Consent for Construction	28	28	13-Mar-19	09-Apr-19	31-Jan-19	27-Feb-19
DES1480	Prepare & submit Foundation Design of Pedestrian Lift 1 & 2, Lift 2 Staircase, Cycle Track Ramp & Sign	21	5	26-Nov-18 A	04-Feb-19	05-Dec-18	25-Dec-18
DES1490	PM review & comment	28	28	05-Feb-19	04-Mar-19	26-Dec-18	22-Jan-19
DES1500	Re-submit Foundation Design of Pedestrian Lift 1 & 2, Lift 2 Staircase, Cycle Track Ramp & Sign Gantry	35	35	06-Mar-19	09-Apr-19	24-Jan-19	27-Feb-19
DES1510	PM Consent for Construction	28	28	10-Apr-19	07-May-19	28-Feb-19	27-Mar-19
DES1530	PM review & comment	28	10	02-Jan-19 A	09-Feb-19	05-Dec-18	01-Jan-19
DES1540	Re-submit Design of Watermain & Irrigation System w/Design Certificate	32	32	11-Feb-19	14-Mar-19	03-Jan-19	30-Jan-19
DES1550	PM Consent for Construction	28	28	15-Mar-19	11-Apr-19	31-Jan-19	27-Feb-19
DES1560	Prepare & submit Design of E&M System (E&M & Road Lighting) w/Design Certificate	35	35	31-Jan-19	06-Mar-19	05-Dec-18	08-Jan-19
DES1570	PM review & comment	28	28	07-Mar-19	03-Apr-19	09-Jan-19	05-Feb-19
DES1580	Re-submit Design of E&M System (E&M & Road Lighting) w/Design Certificate	32	32	05-Apr-19	06-May-19	07-Feb-19	10-Mar-19
SUBLETTING & PROCUREMENT SCHEDULE							
SUBLETTING							
SPS1000	Maintenance of Traffic Flow	30	30	31-Jan-19	01-Mar-19	18-Dec-18	16-Jan-19
SPS1010	Electronic Document Management System (EDMS) for the use of the Project Manager	30	12	18-Oct-18 A	11-Feb-19*	30-Nov-18	29-Dec-18
SPS1030	Hoarding and Signboard	30	30	31-Jan-19	01-Mar-19	30-Nov-18	29-Dec-18
SPS1040	Survey of the Site	30	30	31-Jan-19	01-Mar-19	18-Dec-18	16-Jan-19
SPS1060	Security System of the Site	30	30	31-Jan-19	01-Mar-19	30-Nov-18	29-Dec-18
SPS1090	Building Information Model (BIM)	30	30	31-Jan-19	01-Mar-19	30-Nov-18	29-Dec-18
SPS1140	Site Clearance and Demolition Work	30	30	02-Mar-19	31-Mar-19	17-Jan-19	15-Feb-19
SPS1160	Monitoring and Instrumentation	30	30	01-Apr-19	30-Apr-19	16-Feb-19	17-Mar-19
SPS1170	Piling Works and Pile Testing	30	30	31-Jan-19	01-Mar-19	30-Nov-18	29-Dec-18
SPS1200	Waterwork (Pipework)	30	30	31-Jan-19	01-Mar-19	30-Nov-18	29-Dec-18
SPS1210	Drainage (PC pipe, manhole & gully) and Duct	30	30	01-Apr-19	30-Apr-19	29-Jan-19	27-Feb-19
SPS1220	CCTV for Drainage Pipe	30	30	31-Jan-19	01-Mar-19	30-Nov-18	29-Dec-18
SPS1240	Reinforced Concrete Work for Retaining Walls	30	30	31-Jan-19	01-Mar-19	30-Nov-18	29-Dec-18
SPS1250	Reinforced Concrete Work for Noise Mitigation Measures	30	30	31-Jan-19	01-Mar-19	18-Dec-18	16-Jan-19
SPS1260	Reinforced Concrete Work for Bridge Work	30	30	17-Mar-19	16-Apr-19	16-Feb-19	17-Mar-19
SPS1290	Steelwork for NB and Lift Tower	30	30	31-Jan-19	01-Mar-19	11-Jan-19	09-Feb-19
SPS1410	Pedestrian Lift (Lift Cars, E&M, Panel, Lourve & Signature)	30	30	01-Feb-19	02-Mar-19	01-Dec-18	30-Dec-18
SPS1420	Lighting System for Noise Mitigation Measures	30	30	01-Feb-19	02-Mar-19	12-Dec-18	10-Jan-19
SPS1440	Drainage for Noise Mitigation Measures	30	30	01-Feb-19	02-Mar-19	12-Dec-18	10-Jan-19
SPS1460	Waterproofing (Bitumen Paint)	30	30	28-Feb-19	29-Mar-19	25-Jan-19	23-Feb-19
WORK BETWEEN SHING MUN TUNNELS ROAD AND FOOT BRIDGE NF71A (ZONE 1)							
PRELIMINARIES WORKS							

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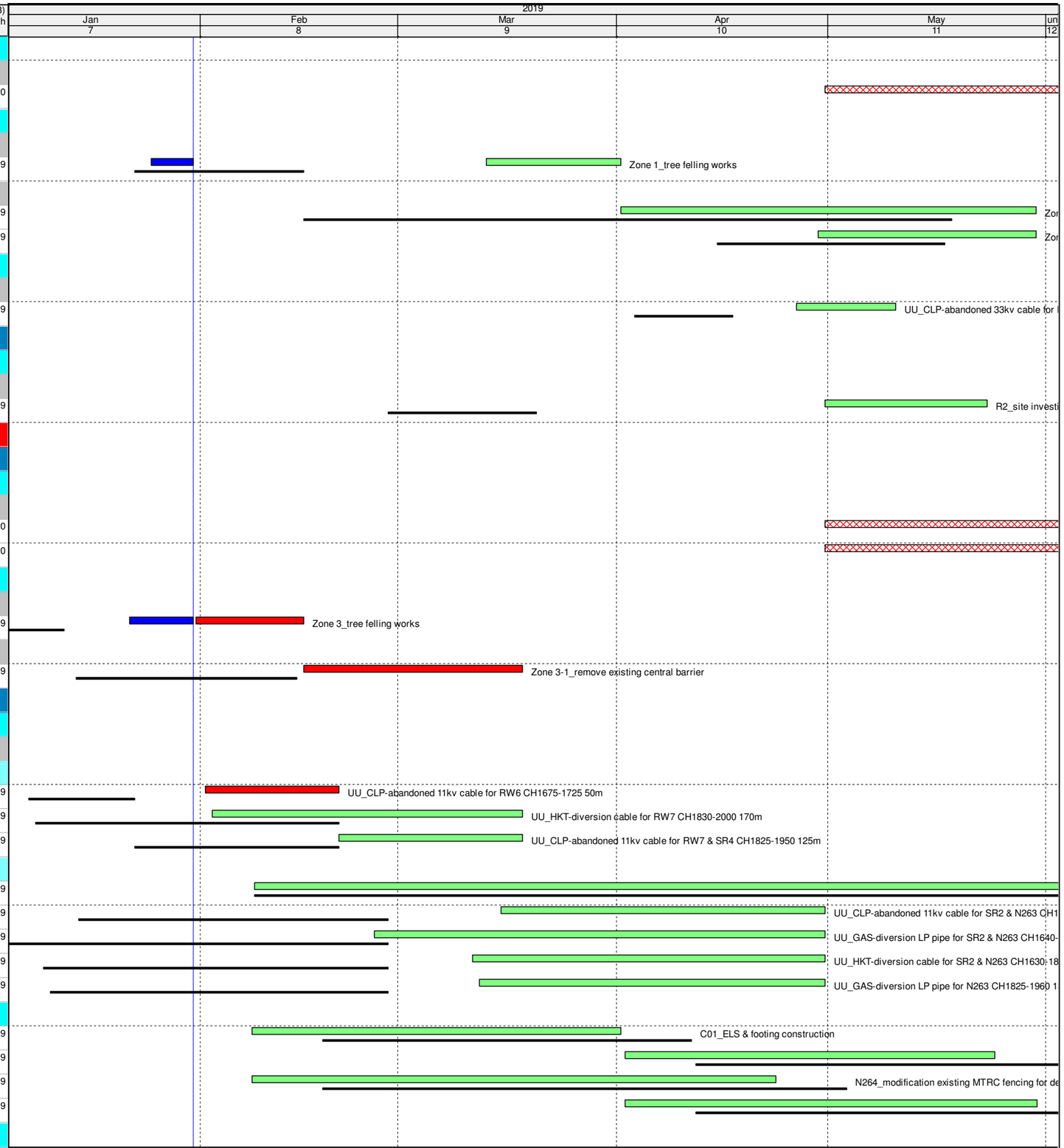
Remaining Work
Critical Remaining Work
Baseline Milestone
Milestone

ROAD WIDENING & RETROFITTING NOISE BARRIERS ON TAI PO ROAD (SHA TIN SECTION)
3 Months Rolling Programme (31/01/19)
Page 2 of 4

Date	Revision	Checked	Approved
09-Feb-19	3MRP DWP 1901	Tim	

Activity ID	Activity Name	Original Duration	Remaining Duration	3MRP Start	3MRP Finish	DWP (AP3) Start	DWP (AP3) Finish
TEMPORARY TRAFFIC ARRAGEMENT							
TTA PERIOD							
Z1_1410	Construction Zone 1_Stage 1 Southbound structure	260	260	30-Apr-19	13-Mar-20	27-Feb-19	29-Jan-20
PREPARATORY WORKS							
TREE FELLING/TRANPLANT							
Z1_1290	Zone 1_tree felling works	18	16	25-Jan-19 A	01-Apr-19	22-Jan-19	15-Feb-19
MODIFICATION EXISTING ROAD/TEMPORARY ROAD							
Z1_1270	Zone 1-1_construct temporary road platform along Northbound	45	45	01-Apr-19	30-May-19	15-Feb-19	18-May-19
Z1_1280	Zone 1-1_remove existing central barrier	21	21	29-Apr-19	30-May-19	15-Apr-19	17-May-19
UTILITIES DIVERSION							
NORTHBOUND							
Z1_1330	UU_CLP-abandoned 33kv cable for R1 & R2 CH1075 30m	11	11	26-Apr-19	10-May-19	03-Apr-19	17-Apr-19
NOISE BARRIER AND SEMI-ENCLOSURE							
PILE FOUNDATION WORKS							
SOUTHBOUND							
Z1_1050	R2_site investigation for R2-02P & 06P (7nr)	18	18	30-Apr-19	23-May-19	27-Feb-19	20-Mar-19
WORK BETWEEN CITYLINE PLAZA AND FOOTBRIDGE NF40 (ZONE 3)							
PRELIMINARIES WORKS							
TEMPORARY TRAFFIC ARRAGEMENT							
TTA PERIOD							
Z3_3270	Construction period of Zone 3a_1	354	354	30-Apr-19	10-Jul-20	27-Feb-19	31-Mar-20
Z3_3400	Construction period of Zone 3b_1	401	401	30-Apr-19	03-Sep-20	18-Mar-19	29-May-20
PREPARATORY WORKS							
TREE FELLING/TRANPLANT							
Z3_2800	Zone 3_tree felling works	18	11	22-Jan-19 A	15-Feb-19	20-Dec-18	12-Jan-19
MODIFICATION EXISTING ROAD/TEMPORARY ROAD							
Z3_2810	Zone 3-1_remove existing central barrier	21	21	15-Feb-19	18-Mar-19	14-Jan-19	14-Feb-19
BRIDGE AND STRUCTURE WORKS							
PRELIMINARIES WORKS							
UTILITIES DIVERSION							
NORTHBOUND							
Z3_2910	UU_CLP-abandoned 11kv cable for RW6 CH1675-1725 50m	13	13	01-Feb-19	20-Feb-19	07-Jan-19	22-Jan-19
Z3_2920	UU_HKT-diversion cable for RW7 CH1830-2000 170m	34	34	02-Feb-19	18-Mar-19	08-Jan-19	20-Feb-19
Z3_2930	UU_CLP-abandoned 11kv cable for RW7 & SR4 CH1825-1950 125m	22	22	20-Feb-19	18-Mar-19	22-Jan-19	20-Feb-19
SOUTHBOUND							
Z3_2970	UU_HKT-new cable for RW1 & SR3 CH1450-2300 850m	127	127	08-Feb-19	16-Jul-19	08-Feb-19	16-Jul-19
Z3_3050	UU_CLP-abandoned 11kv cable for SR2 & N263 CH1710-1950 240m	35	35	15-Mar-19	30-Apr-19	14-Jan-19	27-Feb-19
Z3_3060	UU_GAS-diversion LP pipe for SR2 & N263 CH1640-1850 210m	51	51	25-Feb-19	30-Apr-19	22-Dec-18	27-Feb-19
Z3_3070	UU_HKT-diversion cable for SR2 & N263 CH1630-1840 210m	39	39	11-Mar-19	30-Apr-19	09-Jan-19	27-Feb-19
Z3_3110	UU_GAS-diversion LP pipe for N263 CH1825-1960 135m	38	38	12-Mar-19	30-Apr-19	10-Jan-19	27-Feb-19
WIDENING FOR NORTH HOLLOW ABUTMENT (N264)							
Z3_4200	C01_ELS & footing construction	45	45	08-Feb-19	01-Apr-19	18-Feb-19	11-Apr-19
Z3_4210	C01_cloumn construction	40	40	02-Apr-19	24-May-19	12-Apr-19	03-Jun-19
Z3_4220	N264_modification existing MTRC fencing for deck widening	60	60	08-Feb-19	23-Apr-19	18-Feb-19	03-May-19
Z3_4240	N264_temporary protection MTRC cable	45	45	02-Apr-19	30-May-19	12-Apr-19	10-Jun-19
MODIFICATION OF BRIDGE N263							

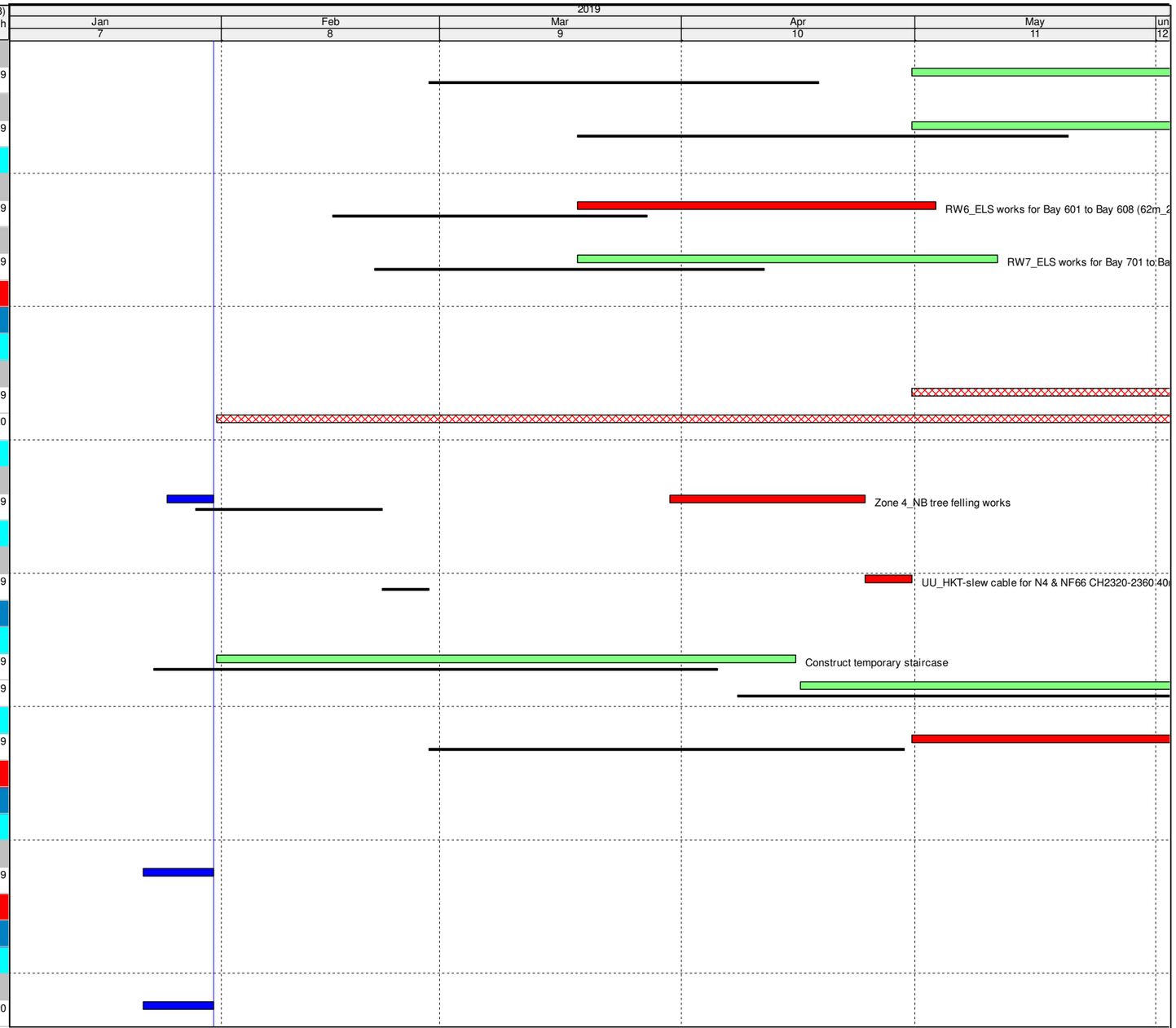


Remaining Level of Effort
Actual Level of Effort
Primary Baseline
Actual Work
Remaining Work
Critical Remaining Work
Baseline Milestone
Milestone

ROAD WIDENING & RETROFITTING NOISE BARRIERS ON TAI PO ROAD (SHA TIN SECTION)
3 Months Rolling Programme (31/01/19)

Date	Revision	Checked	Approved
09-Feb-19	3MRP DWP 1901	Tim	

Activity ID	Activity Name	Original Duration	Remaining Duration	3MRP Start	3MRP Finish	DWP (AP3) Start	DWP (AP3) Finish
	MODIFICATION EXISTING PIER WALL OF N263						
Z3_3870	SAW-1_piling works for new NHA wall 3nr 1.5m bored pile	42	42	30-Apr-19	21-Jun-19	27-Feb-19	18-Apr-19
	MODIFICATION EXISTING SOUTH HOLLOW ABUTMENT WALL						
Z3_3950	SHA_piling works for pier SHA 6 nos. Socket H-pile	48	48	30-Apr-19	28-Jun-19	18-Mar-19	20-May-19
	RETAINING WALL & SUBWAY						
	RETAINING WALL NO.6						
Z3_4390	RW6_ELS works for Bay 601 to Bay 608 (62m_2 side)	35	35	18-Mar-19	03-May-19	15-Feb-19	27-Mar-19
	RETAINING WALL NO.7						
Z3_4510	RW7_ELS works for Bay 701 to Bay 705 (75m_2 side)	42	42	18-Mar-19	11-May-19	20-Feb-19	11-Apr-19
	WORK BETWEEN FOOTBRIDGE NF40 AND NF66 (ZONE 4)						
	PRELIMINARIES WORKS						
	TEMPORARY TRAFFIC ARRAGEMENT						
	TTA PERIOD						
Z4_1470	Construction Zone 4_NF66 Construction	243	243	30-Apr-19	22-Feb-20	27-Feb-19	20-Dec-19
Z4_1480	Construction Zone 4_NF40 Construction	489	489	31-Jan-19	24-Sep-20	23-Jan-19	16-Sep-20
	PREPARATORY WORKS						
	TREE FELLING/TRANPLANT						
Z4_1320	Zone 4_NB tree felling works	18	17	25-Jan-19 A	24-Apr-19	28-Jan-19	21-Feb-19
	UTILITIES DIVERSION						
	NORTHBOUND						
Z4_1300	UU_HKT-slew cable for N4 & NF66 CH2320-2360 40m	5	5	24-Apr-19	30-Apr-19	21-Feb-19	27-Feb-19
	BRIDGE AND STRUCTURE WORKS						
	MODIFICATION WORKS FOR NF40						
NF40_1000	Construct temporary staircase	60	60	31-Jan-19	15-Apr-19	23-Jan-19	05-Apr-19
NF40_1010	Demolish existing staircase & part of existing footing	45	45	16-Apr-19	13-Jun-19	08-Apr-19	04-Jun-19
	MODIFICATION WORKS FOR NF66						
NF66_1000	Piling for NF66 new support 12nr mini pile	48	48	30-Apr-19	28-Jun-19	27-Feb-19	29-Apr-19
	WORK BETWEEN FOOTBRIDGE NF66 AND FO TAN ROAD (ZONE 5)						
	PRELIMINARIES WORKS						
	PREPARATORY WORKS						
	TREE FELLING/TRANPLANT						
Z5_1710	Zone 5_tree felling works	18	17	22-Jan-19 A	13-Feb-20	17-Oct-19	07-Nov-19
	PORTION E (ZONE 5)						
	PRELIMINARIES WORKS						
	PREPARATORY WORKS						
	TREE FELLING/TRANPLANT						
Z5E_1140	Portion E_tree felling works	30	28	22-Jan-19 A	15-Sep-20	09-May-20	13-Jun-20



Remaining Level of Effort
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ROAD WIDENING & RETROFITTING NOISE BARRIERS ON TAI PO ROAD (SHA TIN SECTION)
3 Months Rolling Programme (31/01/19)
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Appendix B

Project Organization Chart

FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
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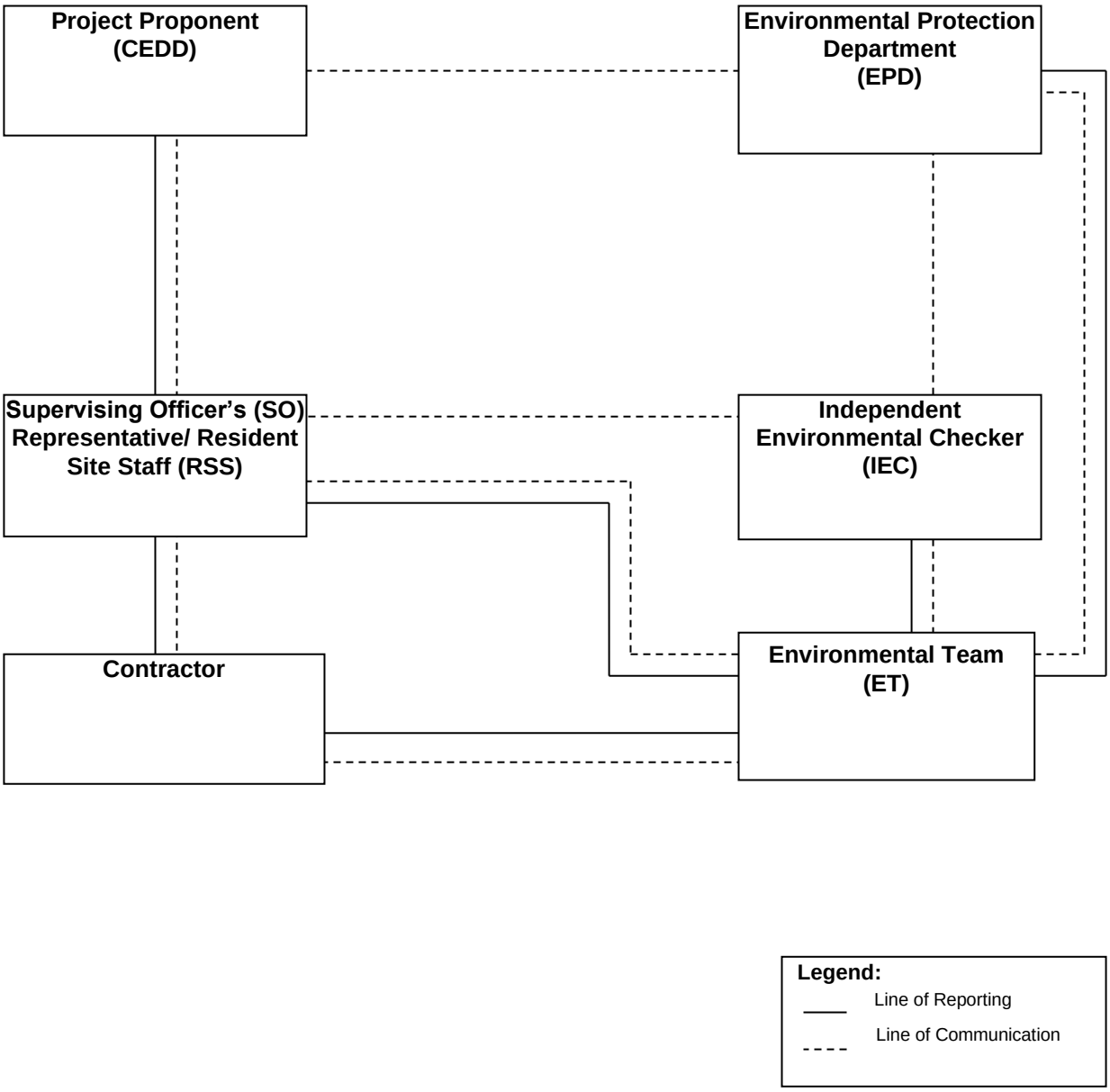

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Appendix C

Action and Limit Levels for Air Quality and Noise

FUGRO TECHNICAL SERVICES LIMITED
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Action and Limit Levels for 24-hr TSP and 1-hr TSP

Parameter	Monitoring Station	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/ m^3$)
24-hr TSP ($\mu g/m^3$)	AMS 1	171	260
	AMS 2	166	
	AMS 3A	200	
	AMS 4A	200	
	AMS 7A	171	
	AMS 9	159	
	AMS 12	168	
	AMS 13	174	
	AMS 14	174	
	AMS 15	172	
1-hr TSP ($\mu g/m^3$)	AMS 1	350	500
	AMS 2	324	
	AMS 3A	350	
	AMS 4A	348	
	AMS 7A	344	
	AMS 9	327	
	AMS 12	296	
	AMS 13	303	
	AMS 14	350	
	AMS 15	350	

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

Time Period	Location	Action	Limit
0700-1900 hrs on normal weekdays	NMS1 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.

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Appendix D

Graphical Presentation of 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)

AMS 1 Scenery Court

1-hour TSP (μg/m³)								
Date	Start Time	1st hr	2nd hr	3rd hr	Average	Action Level	Limit Level	Weather
03-Jan-19	12:00	70	66	66	67	350	500	Cloudy
09-Jan-19	08:30	46	50	50	49			Fine
15-Jan-19	10:00	48	50	52	50			Cloudy
21-Jan-19	13:36	63	78	69	70			Fine
25-Jan-19	14:20	62	64	73	66			Fine
31-Jan-19	08:30	29	31	33	31			Fine

Average	56
Max	78
Min	29

AMS 2 Villa Le Parc

1-hour TSP (μg/m³)								
Date	Start Time	1st hr	2nd hr	3rd hr	Average	Action Level	Limit Level	Weather
04-Dec-18	13:09	18	12	11	14	324	500	Sunny
10-Dec-18	15:13	41	44	44	43			Fine
14-Dec-18	15:56	99	99	130	109			Fine
20-Dec-18	15:00	62	62	60	61			Fine
24-Dec-18	09:00	65	63	63	64			Fine
28-Dec-18	13:15	60	60	58	59			Fine
04-Feb-19	10:40	48	46	45	46			Fine
08-Feb-19	10:56	45	45	42	44			Fine
14-Feb-19	10:57	45	40	38	41			Fine
20-Feb-19	11:13	24	20	16	20			Fine
26-Feb-19	10:00	26	24	20	23			Sunny

Average	48
Max	130
Min	11

AMS 3A Wai Wah Centre

1-hour TSP (μg/m³)								
Date	Start Time	1st hr	2nd hr	3rd hr	Average	Action Level	Limit Level	Weather
04-Dec-18	15:42	39	48	45	44	350	500	Fine
10-Dec-18	15:12	57	61	68	62			Fine
14-Dec-18	15:45	91	91	132	105			Fine
20-Dec-18	14:30	91	86	86	88			Fine
24-Dec-18	14:25	55	48	46	50			Fine
28-Dec-18	15:41	75	77	77	76			Fine
04-Feb-19	15:15	42	54	67	54			Fine
08-Feb-19	15:53	66	72	72	70			Fine
14-Feb-19	11:28	56	42	46	48			Fine
20-Feb-19	10:52	82	78	71	77			Fine
26-Feb-19	15:00	59	64	70	64			Sunny

Average	67
Max	132
Min	39

AMS 4A Wai Wah Centre

1-hour TSP (μg/m³)								
Date	Start Time	1st hr	2nd hr	3rd hr	Average	Action Level	Limit Level	Weather
03-Jan-19	12:30	78	78	74	77	348	500	Cloudy
09-Jan-19	10:00	128	108	108	115			Fine
15-Jan-19	15:00	71	69	68	69			Cloudy
21-Jan-19	15:00	79	81	100	87			Fine
25-Jan-19	10:00	69	59	45	58			Fine
31-Jan-19	15:20	64	73	82	73			Fine

Average	80
Max	128
Min	45

AMS 7A Sheung Wo Che

1-hour TSP (μg/m³)								
Date	Start Time	1st hr	2nd hr	3rd hr	Average	Action Level	Limit Level	Weather
04-Dec-18	15:49	17	20	21	19	344	500	Sunny
10-Dec-18	10:24	44	33	39	39			Fine
14-Dec-18	15:56	96	106	106	103			Fine
20-Dec-18	09:30	95	96	95	95			Fine
24-Dec-18	14:08	42	52	48	47			Fine
28-Dec-18	09:00	67	62	60	63			Fine

Average	61
Max	106
Min	17

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.

AMS 9 Shatin Tsung Tsin School

1-hour TSP (μg/m³)								
Date	Start Time	1st hr	2nd hr	3rd hr	Average	Action Level	Limit Level	Weather
04-Dec-18	10:50	28	24	26	26	327	500	Sunny
10-Dec-18	10:00	27	27	29	28			Fine
14-Dec-18	15:45	89	98	98	95			Fine
20-Dec-18	10:00	60	64	64	62			Fine
24-Dec-18	13:45	33	41	43	39			Fine
28-Dec-18	10:00	57	63	65	62			Fine

Average	52
Max	98
Min	24

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
03-Jan-19	14:00	79	77	76	77	296	500	Cloudy
09-Jan-19	15:00	81	69	67	72			Fine
15-Jan-19	15:30	67	69	71	69			Cloudy
21-Jan-19	14:00	98	83	83	88			Fine
25-Jan-19	12:17	49	33	27	36			Fine
31-Jan-19	12:30	68	66	69	68			Fine

Average	68
Max	98
Min	27

AMS13 - Fung Wo Estate

1-hour TSP (μg/m³)								
Date	Start Time	1st hr	2nd hr	3rd hr	Average	Action Level	Limit Level	Weather
04-Feb-19	15:40	46	48	56	50	303	500	Fine
08-Feb-19	13:11	57	56	55	56			Fine
14-Feb-19	15:14	54	58	62	58			Fine
20-Feb-19	11:52	41	26	23	30			Fine
26-Feb-19	15:17	64	65	73	67			Sunny

Average	52
Max	73
Min	23

AMS 14 - Ha Wo Che

1-hour TSP (μg/m³)								
Date	Start Time	1st hr	2nd hr	3rd hr	Average	Action Level	Limit Level	Weather
04-Feb-19	08:45	67	71	67	69	350	500	Fine
08-Feb-19	09:30	90	71	96	86			Fine
14-Feb-19	10:00	35	26	39	34			Fine
20-Feb-19	10:00	43	44	52	46			Fine
26-Feb-19	14:00	57	69	72	66			Sunny

Average	60
Max	96
Min	26

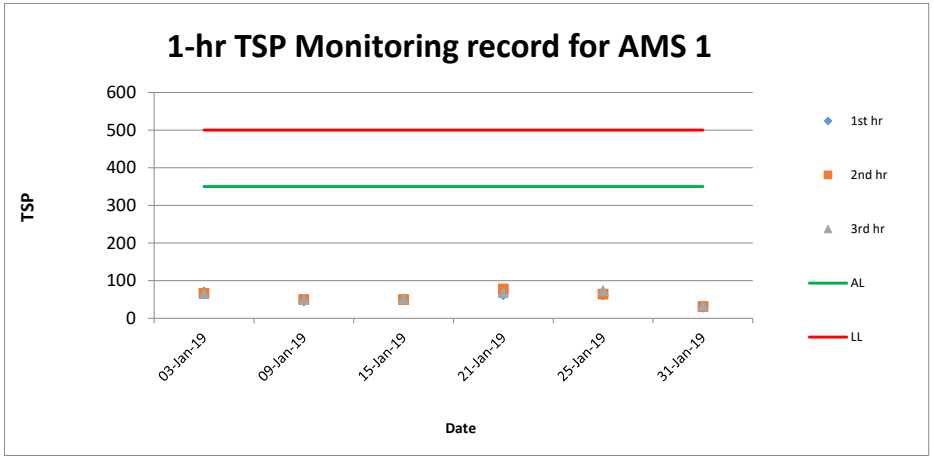
AMS 15 Ha Wo Che

1-hour TSP (μg/m³)								
Date	Start Time	1st hr	2nd hr	3rd hr	Average	Action Level	Limit Level	Weather
03-Jan-19	09:00	74	76	76	75	350	500	Cloudy
09-Jan-19	14:00	33	33	39	35			Fine
15-Jan-19	10:15	53	55	57	55			Cloudy
21-Jan-19	09:30	50	35	46	44			Fine
25-Jan-19	12:30	68	66	69	68			Fine
31-Jan-19	09:00	48	52	59	53			Fine

Average	55
Max	76
Min	33

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.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TSP
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500
400
300
200
100
0
03-Jan-19
09-Jan-19
15-Jan-19
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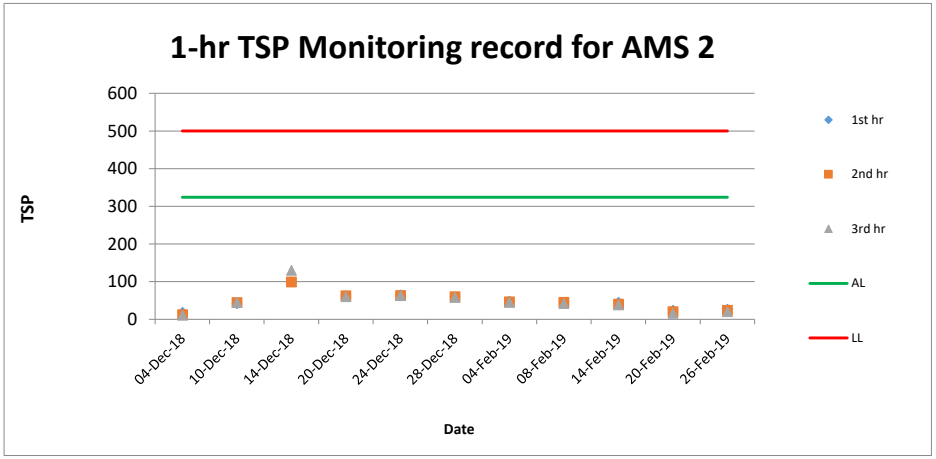
25-Jan-19
31-Jan-19
Date
1st hr
2nd hr
3rd hr
AL
LL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TSP
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100
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10-Dec-18
14-Dec-18
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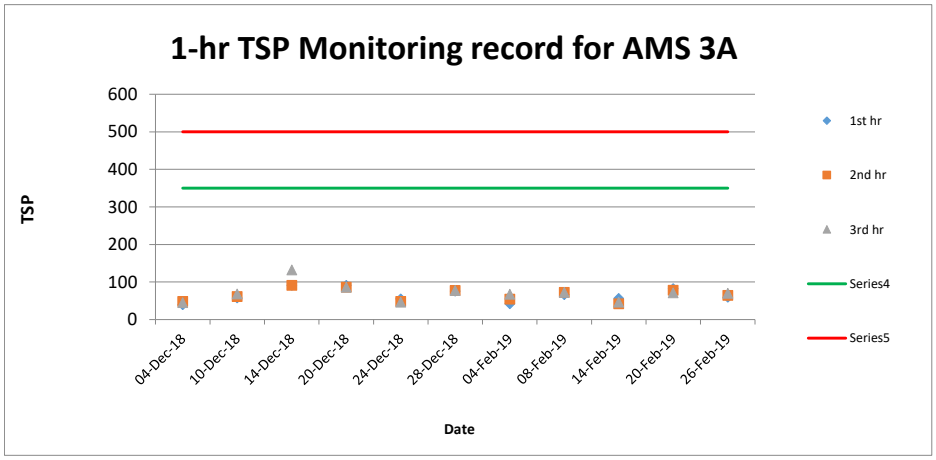
24-Dec-18
28-Dec-18
04-Feb-19
08-Feb-19
14-Feb-19
20-Feb-19
26-Feb-19
Date
1st hr
2nd hr
3rd hr
AL
LL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300
200
100
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10-Dec-18
14-Dec-18
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24-Dec-18
28-Dec-18
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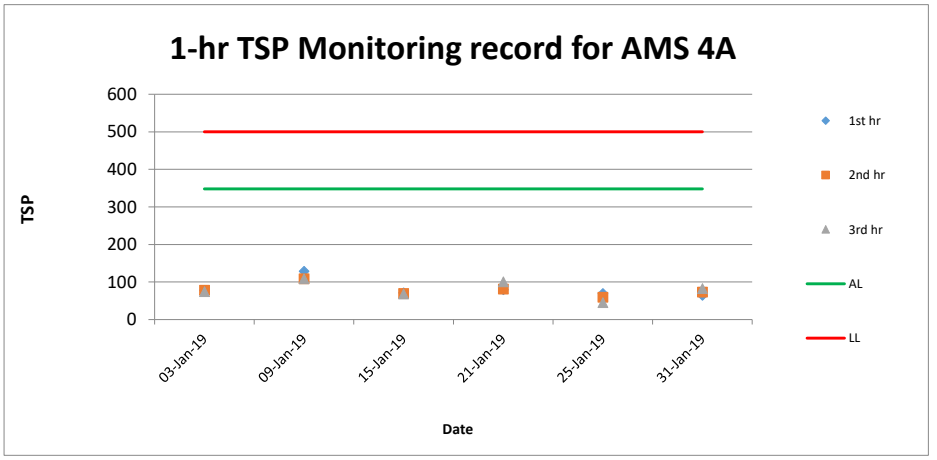
20-Feb-19
26-Feb-19
Date
1st hr
2nd hr
3rd hr
Series4
Series5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TSP
600
500
400
300
200
100
0
03-Jan-19
09-Jan-19
15-Jan-19
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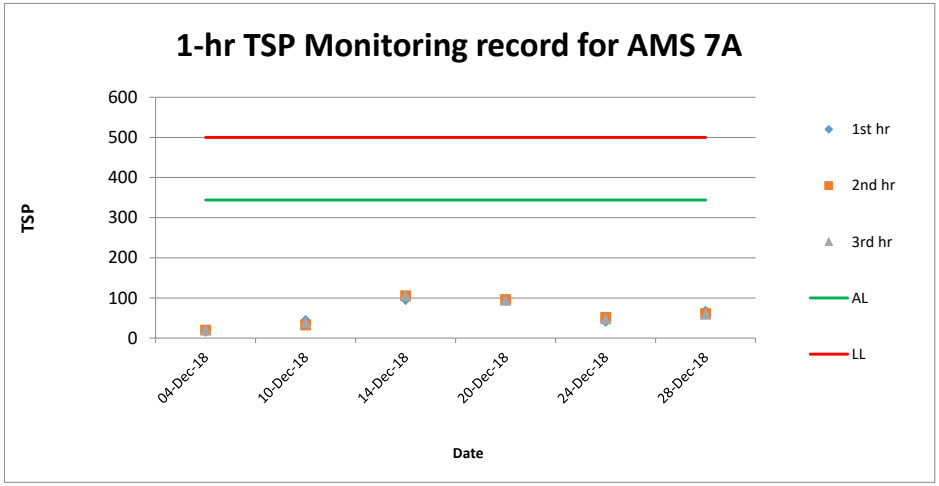
31-Jan-19
Date
1st hr
2nd hr
3rd hr
AL
LL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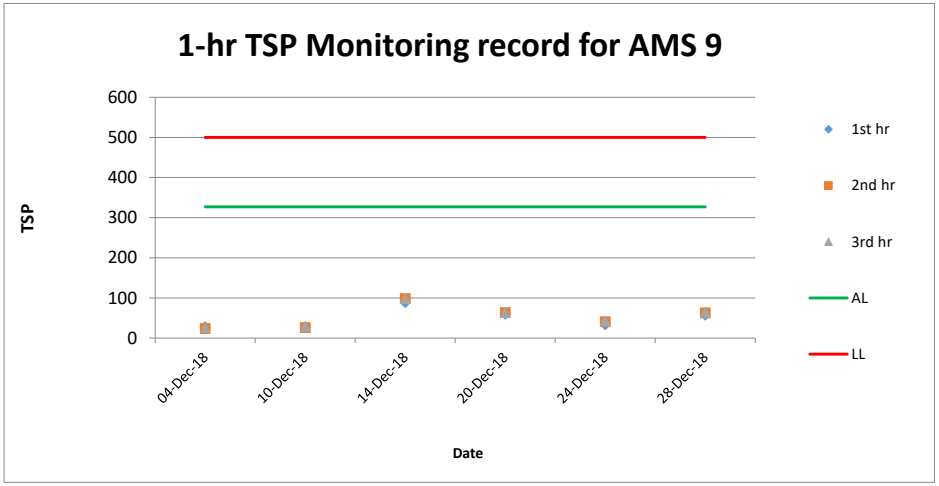
TSP
600
500
400
300
200
100
0
04-Dec-18
10-Dec-18
14-Dec-18
20-Dec-18
24-Dec-18
28-Dec-18
Date
1st hr
2nd hr
3rd hr
AL
LL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TSP
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500
400
300
200
100
0
04-Dec-18
10-Dec-18
14-Dec-18
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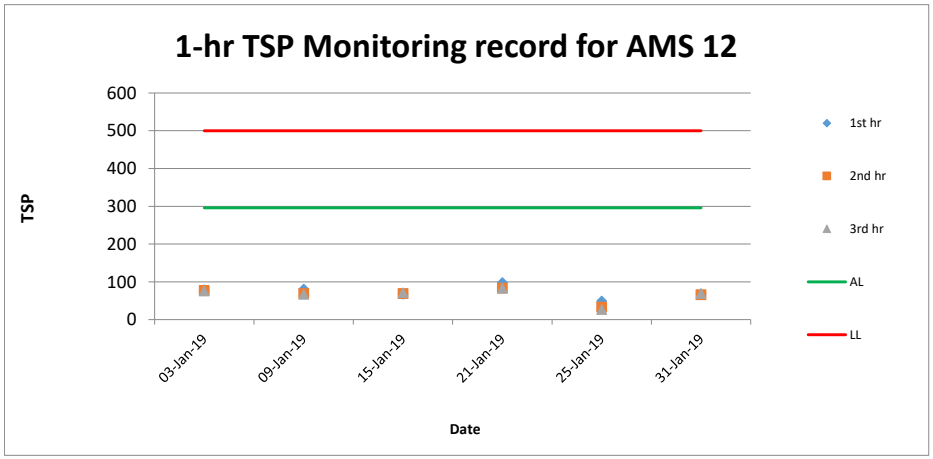
28-Dec-18
Date
1st hr
2nd hr
3rd hr
AL
LL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TSP
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500
400
300
200
100
0
03-Jan-19
09-Jan-19
15-Jan-19
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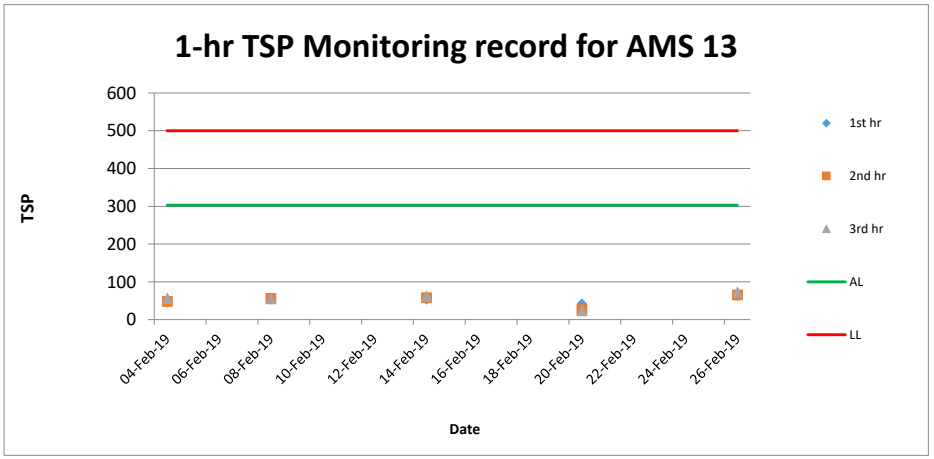
31-Jan-19
Date
1st hr
2nd hr
3rd hr
AL
LL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TSP
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500
400
300
200
100
0
04-Feb-19
06-Feb-19
08-Feb-19
10-Feb-19
12-Feb-19
14-Feb-19
16-Feb-19
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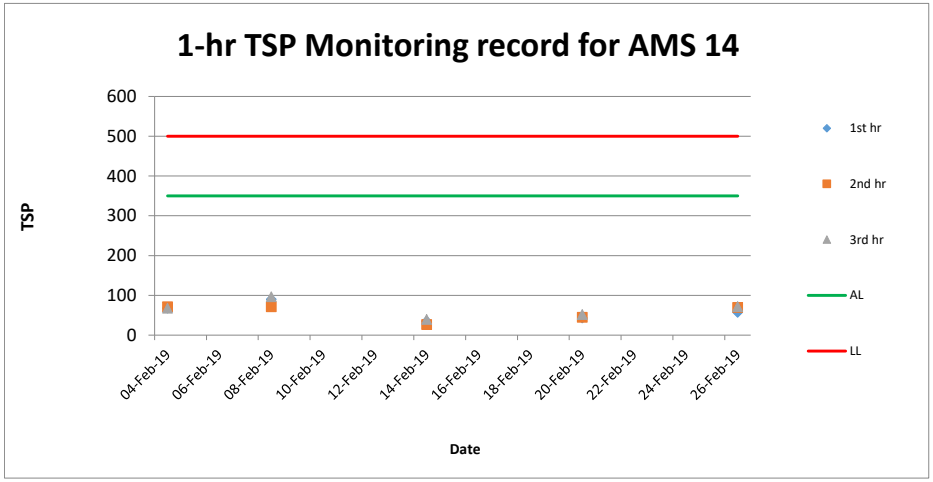
22-Feb-19
24-Feb-19
26-Feb-19
Date
1st hr
2nd hr
3rd hr
AL
LL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TSP
600
500
400
300
200
100
0
04-Feb-19
06-Feb-19
08-Feb-19
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12-Feb-19
14-Feb-19
16-Feb-19
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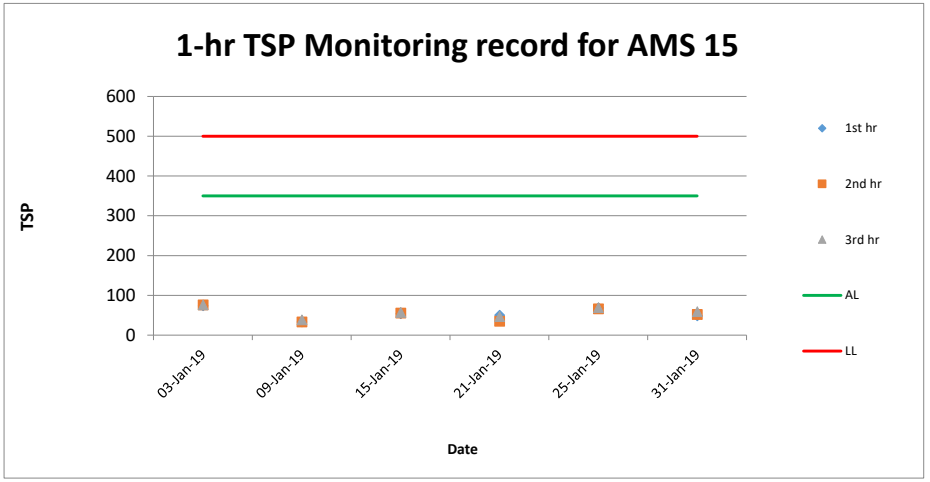
Date
1st hr
2nd hr
3rd hr
AL
LL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TSP
600
500
400
300
200
100
0
03-Jan-19
09-Jan-19
15-Jan-19
21-Jan-19
25-Jan-19
31-Jan-19
Date
1st hr
2nd hr
3rd hr
AL
LL

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

AMS 7A - Sheung Wo Che

Start Date	Weather Condition	Air Temperature (K)	Atmospheric Pressure, Pa (mmHg)	Filter Weight (g)		Particulate weight (g)	Sampling Time(hrs)	Flow Rate (m^3/min.)		Average flow (m^3/min.)	Total volume (m^3)	Conc. (ug/m^3)	Action Level (ug/m^3)	Limit Level (ug/m^3)
				Initial	Final			Initial	Final					
4-Dec-18	Sunny	298.0	762	2.7606	2.8835	0.1229	24	1.72	1.72	1.72	2479.11	50	171	260
10-Dec-18	Fine	290.2	765	2.7907	2.8715	0.0808	24	1.67	1.64	1.65	2378.54	34		
14-Dec-18	Fine	290.0	769	2.7666	2.8318	0.0652	24	1.84	1.80	1.82	2621.65	25		
20-Dec-18	Fine	294.8	762	2.7083	2.9605	0.2522	24	2.27	2.26	2.26	3259.30	77		
24-Dec-18	Fine	291.2	763	2.7659	2.8431	0.0772	24	1.66	1.64	1.65	2375.17	33		
28-Dec-18	Fine	291.3	766	2.6708	2.7859	0.1151	24	1.91	1.88	1.90	2735.74	42		
											Min	25		
											Max	77		
											Average	43		

AMS 9 - Shatin Tsung Tsin School

Start Date	Weather Condition	Air Temperature (K)	Atmospheric Pressure, Pa (mmHg)	Filter Weight (g)		Particulate weight (g)	Sampling Time(hrs)	Flow Rate (m^3/min.)		Average flow (m^3/min.)	Total volume (m^3)	Conc. (ug/m^3)	Action Level (ug/m^3)	Limit Level (ug/m^3)
				Initial	Final			Initial	Final					
4-Dec-18	Sunny	298.0	762	2.7829	2.8963	0.1134	24	1.8053	1.8027	1.80	2597.7173	44	159	260
10-Dec-18	Fine	290.2	765	2.7939	2.8529	0.0590	24	1.5818	1.5557	1.57	2259.0256	26		
14-Dec-18	Fine	290.0	769	2.7667	2.8565	0.0898	24	1.6706	1.6381	1.65	2382.2571	38		
20-Dec-18	Fine	294.8	762	2.7405	2.8057	0.0652	24	1.6498	1.6381	1.64	2367.2191	28		
24-Dec-18	Fine	291.2	763	2.7730	2.8267	0.0537	24	1.6608	1.6381	1.65	2375.1668	23		
28-Dec-18	Fine	291.3	766	2.6010	2.6724	0.0714	24	1.9147	1.8850	1.90	2735.7366	26		
											Min	23		
											Max	44		
											Average	31		

Remark 1. Actual monitoring may be subjected to change due to any safety concern or adverse weather condition.

2. The Impact Air Monitoring Stations to be monitored should be selected based on the prevailing wind direction and their proximity to the active construction works.

AMS 1 - Scenery Court

Start Date	Weather Condition	Air Temperature (K)	Atmospheric Pressure, Pa (mmHg)	Filter Weight (g)		Particulate weight (g)	Sampling Time(hrs)	Flow Rate (m^3/min.)		Average flow (m^3/min.)	Total volume (m^3)	Conc. (ug/m^3)	Action Level (ug/m^3)	Limit Level (ug/m^3)
				Initial	Final			Initial	Final					
3-Jan-19	Cloudy	289.4	768	2.7444	2.8290	0.0846	24	1.76	1.72	1.74	2502.65	34	171	260
9-Jan-19	Fine	291.0	767	2.7221	2.8049	0.0828	24	1.92	1.88	1.90	2736.92	30		
15-Jan-19	Cloudy	292.2	764	2.7175	2.7662	0.0487	24	1.91	1.88	1.90	2731.71	18		
21-Jan-19	Fine	291.0	766	2.7478	2.8647	0.1169	24	1.75	1.72	1.73	2497.61	47		
25-Jan-19	Fine	291.9	766	2.6685	2.7157	0.0472	24	1.66	1.64	1.65	2375.91	20		
31-Jan-19	Fine	294.9	764	2.7698	2.8927	0.1229	24	1.86	1.84	1.85	2665.94	46		
											Min	18		
											Max	47		
											Average	32		

AMS 15 - Ha Wo Che

Start Date	Weather Condition	Air Temperature (K)	Atmospheric Pressure, Pa (mmHg)	Filter Weight (g)		Particulate weight (g)	Sampling Time(hrs)	Flow Rate (m^3/min.)		Average flow (m^3/min.)	Total volume (m^3)	Conc. (ug/m^3)	Action Level (ug/m^3)	Limit Level (ug/m^3)
				Initial	Final			Initial	Final					
3-Jan-19	Cloudy	289.4	768	2.7579	2.8291	0.0712	24	1.6716	1.6381	1.65	2382.9194	30	172	260
9-Jan-19	Fine	291.0	767	2.7228	2.8060	0.0832	24	1.6653	1.6381	1.65	2378.4116	35		
15-Jan-19	Cloudy	292.2	764	2.7560	2.7805	0.0245	24	1.5756	1.5557	1.57	2254.5971	11		
21-Jan-19	Fine	291.0	766	2.6894	2.7492	0.0598	24	1.7485	1.7204	1.73	2497.6065	24		
25-Jan-19	Fine	291.9	766	2.6631	2.7315	0.0684	24	1.6618	1.6381	1.65	2375.9050	29		
31-Jan-19	Fine	294.9	764	2.7250	2.7849	0.0599	24	1.9004	1.8850	1.89	2725.4398	22		
											Min	11		
											Max	35		
											Average	25		

Remark 1. Actual monitoring may be subjected to change due to any safety concern or adverse weather condition.

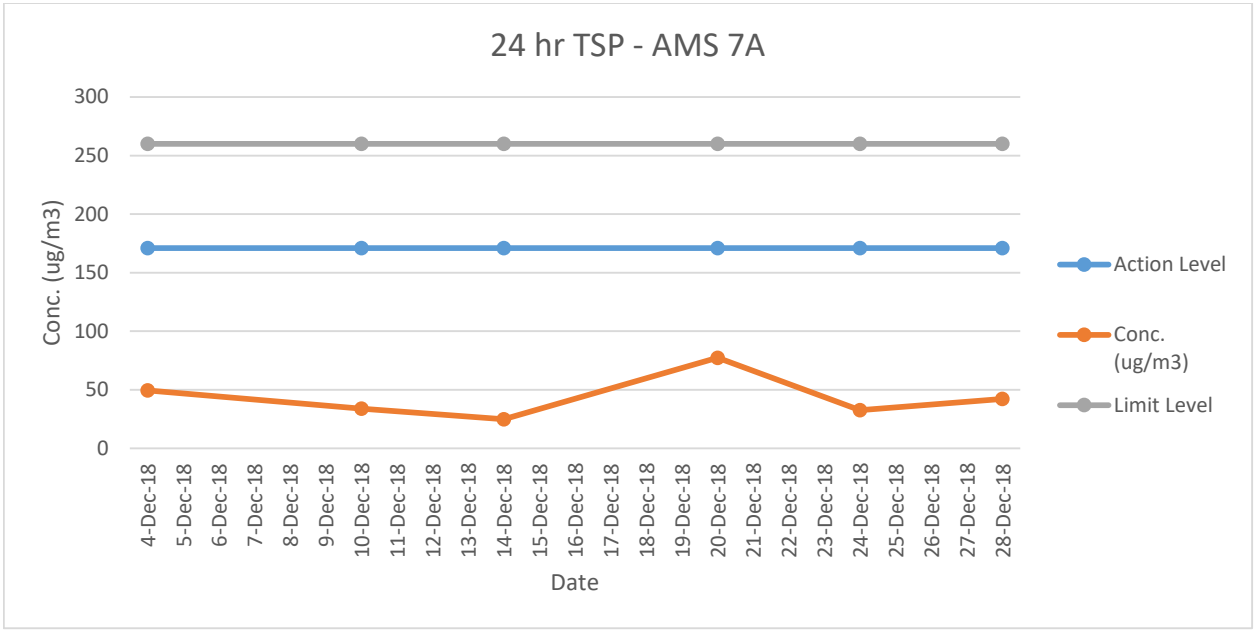
2. The Impact Air Monitoring Stations to be monitored should be selected based on the prevailing wind direction and their proximity to the active construction works.

AMS 14 - Ha Wo Che

Start Date	Weather Condition	Air Temperature (K)	Atmospheric Pressure, Pa (mmHg)	Filter Weight (g)		Particulate weight (g)	Sampling Time(hrs)	Flow Rate (m^3/min.)		Average flow (m^3/min.)	Total volume (m^3)	Conc. (ug/m^3)	Action Level	Limit Level
				Initial	Final			Initial	Final				(ug/m^3)	(ug/m^3)
4-Feb-19	Cloudy	294.9	764	2.7549	2.8377	0.0828	24	0.82	0.81	0.82	1178.14	70	174	260
8-Feb-19	Fine	294.9	762	2.6701	2.6882	0.0181	24	0.61	0.61	0.61	880.07	21		
14-Feb-19	Cloudy	293.6	766	2.6787	2.7234	0.0447	24	0.66	0.65	0.65	941.82	47		
20-Feb-19	Fine	295.8	764	2.6367	2.6633	0.0266	24	0.61	0.61	0.61	880.09	30		
26-Feb-19	Fine	291.9	763	2.6664	2.7167	0.0503	24	0.74	0.73	0.74	1061.78	47		
											Min	21		
											Max	70		
											Average	43		

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.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Conc. (ug/m3)
300
250
200
150
100
50
0
4-Dec-18
5-Dec-18
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7-Dec-18
8-Dec-18
9-Dec-18
10-Dec-18
11-Dec-18
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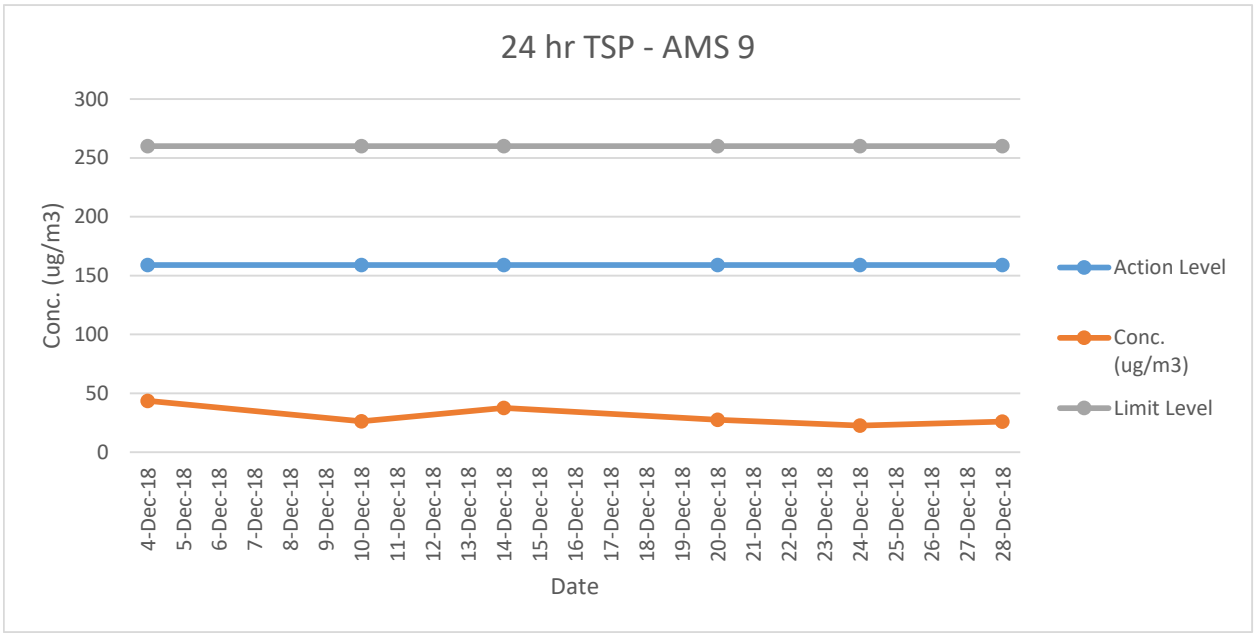
28-Dec-18
Date
Action Level
Conc. (ug/m3)
Limit Level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Conc. (ug/m3)
300
250
200
150
100
50
0
4-Dec-18
5-Dec-18
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7-Dec-18
8-Dec-18
9-Dec-18
10-Dec-18
11-Dec-18
12-Dec-18
13-Dec-18
14-Dec-18
15-Dec-18
16-Dec-18
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20-Dec-18
21-Dec-18
22-Dec-18
23-Dec-18
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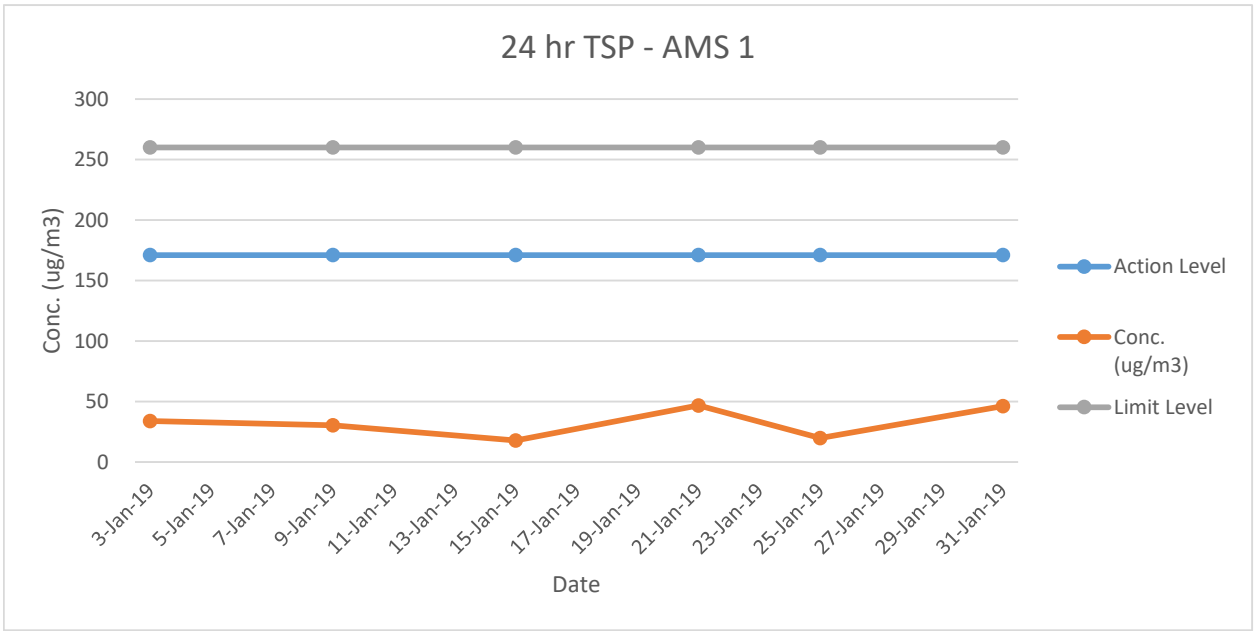
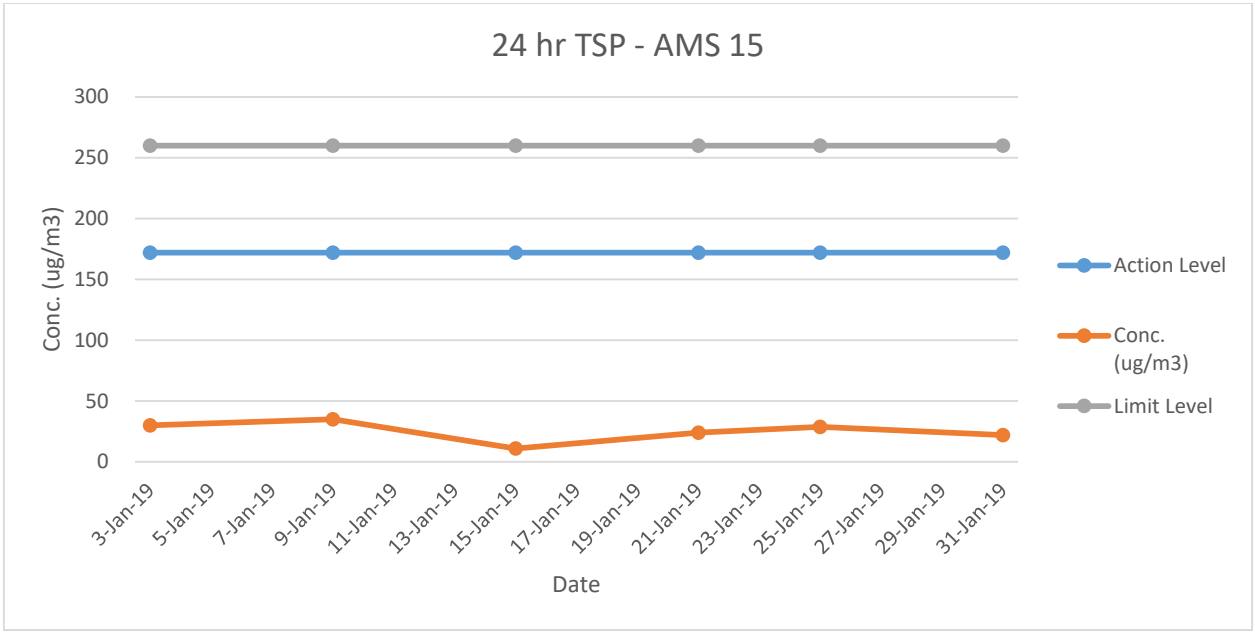
28-Dec-18
Date
Action Level
Conc. (ug/m3)
Limit Level


24 hr TSP - AMS 1
Conc. (ug/m3)
300
250
200
150
100
50
0
3-Jan-19
5-Jan-19
7-Jan-19
9-Jan-19
11-Jan-19
13-Jan-19
15-Jan-19
17-Jan-19
19-Jan-19
21-Jan-19
23-Jan-19
25-Jan-19
27-Jan-19
29-Jan-19
31-Jan-19
Date
Action Level
Conc. (ug/m3)
Limit Level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300
250
200
150
100
50
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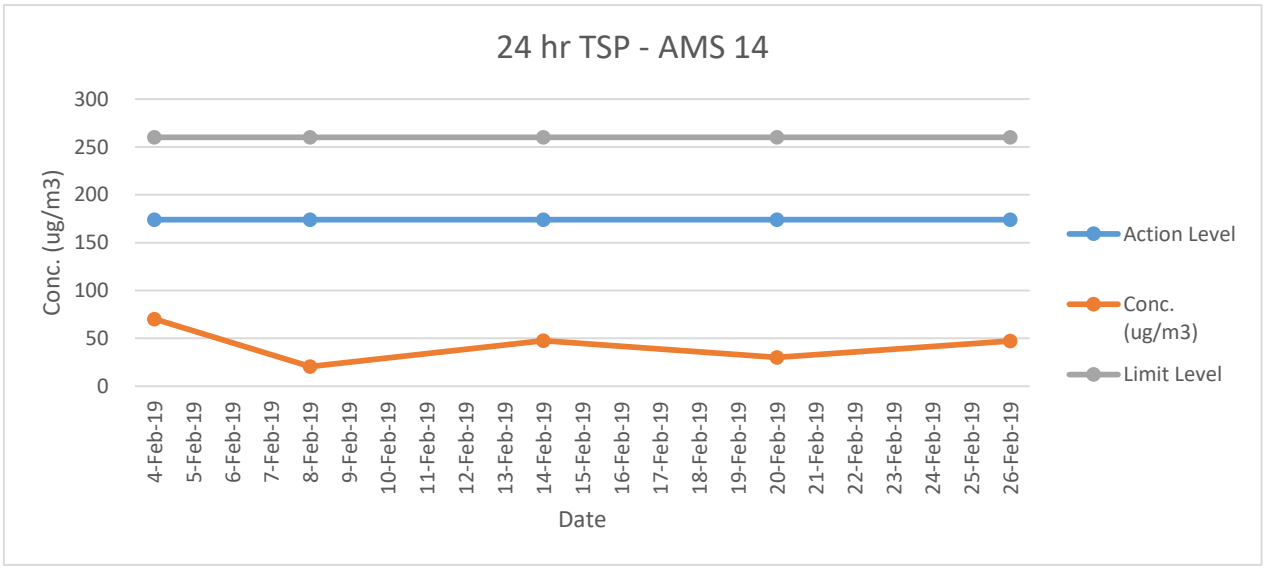
Conc. (ug/m3)
3-Jan-19
5-Jan-19
7-Jan-19
9-Jan-19
11-Jan-19
13-Jan-19
15-Jan-19
17-Jan-19
19-Jan-19
21-Jan-19
23-Jan-19
25-Jan-19
27-Jan-19
29-Jan-19
31-Jan-19
Date
Action Level
Conc. (ug/m3)
Limit Level


24 hr TSP - AMS 14
300
250
200
150
100
50
0
Conc. (ug/m3)
4-Feb-19
5-Feb-19
6-Feb-19
7-Feb-19
8-Feb-19
9-Feb-19
10-Feb-19
11-Feb-19
12-Feb-19
13-Feb-19
14-Feb-19
15-Feb-19
16-Feb-19
17-Feb-19
18-Feb-19
19-Feb-19
20-Feb-19
21-Feb-19
22-Feb-19
23-Feb-19
24-Feb-19
25-Feb-19
26-Feb-19
Date
Action Level
Conc. (ug/m3)
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)

AMS2 - Villa Le Parc

Date and Time	TSP Concentration (μg/m³)
04/12/18 13:09	18
04/12/18 14:09	12
04/12/18 15:09	11
04/12/18 16:09	12
04/12/18 17:09	12
04/12/18 18:09	19
04/12/18 19:09	23
04/12/18 20:09	25
04/12/18 21:09	23
04/12/18 22:09	21
04/12/18 23:09	23
05/12/18 00:09	18
05/12/18 01:09	18
05/12/18 02:09	19
05/12/18 03:09	19
05/12/18 04:09	19
05/12/18 05:09	19
05/12/18 06:09	21
05/12/18 07:09	26
05/12/18 08:09	39
05/12/18 09:09	37
05/12/18 10:09	36
05/12/18 11:09	36
05/12/18 12:09	35
Average	23
Action Level	166
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
10/12/18 13:13	28
10/12/18 14:13	35
10/12/18 15:13	41
10/12/18 16:13	44
10/12/18 17:13	44
10/12/18 18:13	53
10/12/18 19:13	55
10/12/18 20:13	53
10/12/18 21:13	41
10/12/18 22:13	51
10/12/18 23:13	33
11/12/18 00:13	35
11/12/18 01:13	35
11/12/18 02:13	32
11/12/18 03:13	27
11/12/18 04:13	28
11/12/18 05:13	28
11/12/18 06:13	27
11/12/18 07:13	29
11/12/18 08:13	29
11/12/18 09:13	32
11/12/18 10:13	35
11/12/18 11:13	37
11/12/18 12:13	37
Average	37
Action Level	166
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
14/12/18 09:56	62
14/12/18 10:56	70
14/12/18 11:56	72
14/12/18 12:56	39
14/12/18 13:56	26
14/12/18 14:56	90
14/12/18 15:56	99
14/12/18 16:56	99
14/12/18 17:56	130
14/12/18 18:56	134
14/12/18 19:56	115
14/12/18 20:56	90
14/12/18 21:56	72
14/12/18 22:56	76
14/12/18 23:56	72
15/12/18 00:56	67
15/12/18 01:56	72
15/12/18 02:56	78
15/12/18 03:56	63
15/12/18 04:56	56
15/12/18 05:56	72
15/12/18 06:56	70
15/12/18 07:56	76
15/12/18 08:56	62
Average	78
Action Level	166
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
20/12/18 10:00	65
20/12/18 11:00	56
20/12/18 12:00	58
20/12/18 13:00	58
20/12/18 14:00	56
20/12/18 15:00	62
20/12/18 16:00	62
20/12/18 17:00	60
20/12/18 18:00	60
20/12/18 19:00	56
20/12/18 20:00	60
20/12/18 21:00	53
20/12/18 22:00	53
20/12/18 23:00	53
21/12/18 00:00	55
21/12/18 01:00	55
21/12/18 02:00	55
21/12/18 03:00	53
21/12/18 04:00	55
21/12/18 05:00	53
21/12/18 06:00	55
21/12/18 07:00	53
21/12/18 08:00	60
21/12/18 09:00	60
Average	57
Action Level	166
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
24/12/18 09:00	65
24/12/18 10:00	63
24/12/18 11:00	63
24/12/18 12:00	56
24/12/18 13:00	56
24/12/18 14:00	55
24/12/18 15:00	55
24/12/18 16:00	55
24/12/18 17:00	53
24/12/18 18:00	53
24/12/18 19:00	55
24/12/18 20:00	53
24/12/18 21:00	55
24/12/18 22:00	56
24/12/18 23:00	55
25/12/18 00:00	53
25/12/18 01:00	53
25/12/18 02:00	53
25/12/18 03:00	55
25/12/18 04:00	56
25/12/18 05:00	60
25/12/18 06:00	60
25/12/18 07:00	62
25/12/18 08:00	60
Average	57
Action Level	166
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
28/12/18 09:15	55
28/12/18 10:15	55
28/12/18 11:15	56
28/12/18 12:15	58
28/12/18 13:15	60
28/12/18 14:15	60
28/12/18 15:15	58
28/12/18 16:15	60
28/12/18 17:15	63
28/12/18 18:15	65
28/12/18 19:15	67
28/12/18 20:15	65
28/12/18 21:15	62
28/12/18 22:15	56
28/12/18 23:15	46
29/12/18 00:15	39
29/12/18 01:15	33
29/12/18 02:15	35
29/12/18 03:15	32
29/12/18 04:15	37
29/12/18 05:15	51
29/12/18 06:15	49
29/12/18 07:15	49
29/12/18 08:15	53
Average	53
Action Level	166
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.
3. K-factor for transforming the result of portable laser particle photometer monitor to 24-hr TSP High Volume Sampler is 1.762.

AMS2 - Villa Le Parc

Date and Time	TSP Concentration (μg/m³)
04/02/19 10:40	48
04/02/19 11:40	46
04/02/19 12:40	45
04/02/19 13:40	47
04/02/19 14:40	42
04/02/19 15:40	40
04/02/19 16:40	44
04/02/19 17:40	46
04/02/19 18:40	46
04/02/19 19:40	44
04/02/19 20:40	48
04/02/19 21:40	62
04/02/19 22:40	74
04/02/19 23:40	67
05/02/19 00:40	66
05/02/19 01:40	56
05/02/19 02:40	48
05/02/19 03:40	47
05/02/19 04:40	46
05/02/19 05:40	41
05/02/19 06:40	44
05/02/19 07:40	46
05/02/19 08:40	42
05/02/19 09:40	45
Average	49
Action Level	166
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
08/02/19 09:56	42
08/02/19 10:56	45
08/02/19 11:56	45
08/02/19 12:56	42
08/02/19 13:56	38
08/02/19 14:56	38
08/02/19 15:56	32
08/02/19 16:56	30
08/02/19 17:56	30
08/02/19 18:56	34
08/02/19 19:56	32
08/02/19 20:56	40
08/02/19 21:56	55
08/02/19 22:56	68
08/02/19 23:56	72
09/02/19 00:56	79
09/02/19 01:56	62
09/02/19 02:56	40
09/02/19 03:56	49
09/02/19 04:56	51
09/02/19 05:56	64
09/02/19 06:56	64
09/02/19 07:56	60
09/02/19 08:56	53
Average	49
Action Level	166
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
14/02/19 10:57	45
14/02/19 11:57	40
14/02/19 12:57	38
14/02/19 13:57	36
14/02/19 14:57	34
14/02/19 15:57	32
14/02/19 16:57	30
14/02/19 17:57	34
14/02/19 18:57	36
14/02/19 19:57	42
14/02/19 20:57	57
14/02/19 21:57	68
14/02/19 22:57	72
14/02/19 23:57	79
15/02/19 00:57	62
15/02/19 01:57	42
15/02/19 02:57	51
15/02/19 03:57	51
15/02/19 04:57	64
15/02/19 05:57	62
15/02/19 06:57	51
15/02/19 07:57	45
15/02/19 08:57	43
15/02/19 09:57	45
Average	48
Action Level	166
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
20/02/19 11:13	24
20/02/19 12:13	20
20/02/19 13:13	16
20/02/19 14:13	15
20/02/19 15:13	14
20/02/19 16:13	15
20/02/19 17:13	14
20/02/19 18:13	16
20/02/19 19:13	19
20/02/19 20:13	25
20/02/19 21:13	39
20/02/19 22:13	57
20/02/19 23:13	54
21/02/19 00:13	42
21/02/19 01:13	30
21/02/19 02:13	35
21/02/19 03:13	27
21/02/19 04:13	16
21/02/19 05:13	15
21/02/19 06:13	14
21/02/19 07:13	17
21/02/19 08:13	19
21/02/19 09:13	20
21/02/19 10:13	22
Average	24
Action Level	166
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
26/02/19 10:00	26
26/02/19 11:00	24
26/02/19 12:00	20
26/02/19 13:00	15
26/02/19 14:00	14
26/02/19 15:00	16
26/02/19 16:00	15
26/02/19 17:00	17
26/02/19 18:00	19
26/02/19 19:00	22
26/02/19 20:00	24
26/02/19 21:00	29
26/02/19 22:00	39
26/02/19 23:00	42
27/02/19 00:00	38
27/02/19 01:00	36
27/02/19 02:00	35
27/02/19 03:00	29
27/02/19 04:00	28
27/02/19 05:00	20
27/02/19 06:00	17
27/02/19 07:00	23
27/02/19 08:00	27
27/02/19 09:00	22
Average	25
Action Level	166
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.
3. K-factor for transforming the result of portable laser particle photometer monitor to 24-hr TSP High Volume Sampler is 1.762.

AMS3A - Wai Wah Centre

Date and Time	TSP Concentration (μg/m³)
04/12/18 13:42	39
04/12/18 14:42	27
04/12/18 15:42	39
04/12/18 16:42	48
04/12/18 17:42	45
04/12/18 18:42	50
04/12/18 19:42	46
04/12/18 20:42	41
04/12/18 21:42	37
04/12/18 22:42	39
04/12/18 23:42	39
05/12/18 00:42	29
05/12/18 01:42	27
05/12/18 02:42	27
05/12/18 03:42	29
05/12/18 04:42	23
05/12/18 05:42	39
05/12/18 06:42	50
05/12/18 07:42	55
05/12/18 08:42	121
05/12/18 09:42	111
05/12/18 10:42	74
05/12/18 11:42	75
05/12/18 12:42	76
Average	49
Action Level	200
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
10/12/18 14:12	48
10/12/18 15:12	57
10/12/18 16:12	61
10/12/18 17:12	68
10/12/18 18:12	62
10/12/18 19:12	77
10/12/18 20:12	71
10/12/18 21:12	59
10/12/18 22:12	45
10/12/18 23:12	43
11/12/18 00:12	55
11/12/18 01:12	43
11/12/18 02:12	77
11/12/18 03:12	43
11/12/18 04:12	34
11/12/18 05:12	29
11/12/18 06:12	30
11/12/18 07:12	37
11/12/18 08:12	43
11/12/18 09:12	46
11/12/18 10:12	47
11/12/18 11:12	48
11/12/18 12:12	48
11/12/18 13:12	49
Average	51
Action Level	200
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
14/12/18 13:45	77
14/12/18 14:45	82
14/12/18 15:45	91
14/12/18 16:45	91
14/12/18 17:45	132
14/12/18 18:45	143
14/12/18 19:45	130
14/12/18 20:45	118
14/12/18 21:45	91
14/12/18 22:45	86
14/12/18 23:45	77
15/12/18 00:45	71
15/12/18 01:45	69
15/12/18 02:45	78
15/12/18 03:45	84
15/12/18 04:45	96
15/12/18 05:45	100
15/12/18 06:45	91
15/12/18 07:45	109
15/12/18 08:45	95
15/12/18 09:45	78
15/12/18 10:45	84
15/12/18 11:45	110
15/12/18 12:45	103
Average	95
Action Level	200
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
20/12/18 09:30	86
20/12/18 10:30	86
20/12/18 11:30	87
20/12/18 12:30	89
20/12/18 13:30	87
20/12/18 14:30	91
20/12/18 15:30	86
20/12/18 16:30	86
20/12/18 17:30	84
20/12/18 18:30	84
20/12/18 19:30	80
20/12/18 20:30	80
20/12/18 21:30	80
20/12/18 22:30	80
20/12/18 23:30	78
21/12/18 00:30	80
21/12/18 01:30	78
21/12/18 02:30	80
21/12/18 03:30	78
21/12/18 04:30	82
21/12/18 05:30	82
21/12/18 06:30	89
21/12/18 07:30	91
21/12/18 08:30	89
Average	84
Action Level	200
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
24/12/18 14:25	55
24/12/18 15:25	48
24/12/18 16:25	46
24/12/18 17:25	52
24/12/18 18:25	53
24/12/18 19:25	53
24/12/18 20:25	66
24/12/18 21:25	61
24/12/18 22:25	55
24/12/18 23:25	39
25/12/18 00:25	50
25/12/18 01:25	45
25/12/18 02:25	39
25/12/18 03:25	46
25/12/18 04:25	53
25/12/18 05:25	50
25/12/18 06:25	48
25/12/18 07:25	46
25/12/18 08:25	55
25/12/18 09:25	52
25/12/18 10:25	36
25/12/18 11:25	39
25/12/18 12:25	43
25/12/18 13:25	50
Average	49
Action Level	200
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
28/12/18 11:41	68
28/12/18 12:41	71
28/12/18 13:41	71
28/12/18 14:41	75
28/12/18 15:41	75
28/12/18 16:41	77
28/12/18 17:41	77
28/12/18 18:41	78
28/12/18 19:41	80
28/12/18 20:41	82
28/12/18 21:41	82
28/12/18 22:41	82
28/12/18 23:41	78
29/12/18 00:41	73
29/12/18 01:41	71
29/12/18 02:41	57
29/12/18 03:41	45
29/12/18 04:41	45
29/12/18 05:41	46
29/12/18 06:41	50
29/12/18 07:41	57
29/12/18 08:41	66
29/12/18 09:41	66
29/12/18 10:41	64
Average	68
Action Level	200
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.

3. K-factor for transforming the result of portable laser particle photometer monitor to 24-hr TSP High Volume Sampler is 1.782.

AMS3A - Wai Wah Centre

Date and Time	TSP Concentration (μg/m³)
04/02/19 11:15	47
04/02/19 12:15	39
04/02/19 13:15	31
04/02/19 14:15	31
04/02/19 15:15	42
04/02/19 16:15	54
04/02/19 17:15	67
04/02/19 18:15	69
04/02/19 19:15	72
04/02/19 20:15	74
04/02/19 21:15	78
04/02/19 22:15	81
04/02/19 23:15	62
05/02/19 00:15	64
05/02/19 01:15	68
05/02/19 02:15	64
05/02/19 03:15	59
05/02/19 04:15	72
05/02/19 05:15	66
05/02/19 06:15	64
05/02/19 07:15	54
05/02/19 08:15	56
05/02/19 09:15	48
05/02/19 10:15	52
Average	59
Action Level	200
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
08/02/19 12:53	59
08/02/19 13:53	69
08/02/19 14:53	62
08/02/19 15:53	66
08/02/19 16:53	72
08/02/19 17:53	72
08/02/19 18:53	80
08/02/19 19:53	77
08/02/19 20:53	77
08/02/19 21:53	69
08/02/19 22:53	63
08/02/19 23:53	66
09/02/19 00:53	53
09/02/19 01:53	52
09/02/19 02:53	44
09/02/19 03:53	45
09/02/19 04:53	45
09/02/19 05:53	45
09/02/19 06:53	52
09/02/19 07:53	56
09/02/19 08:53	58
09/02/19 09:53	63
09/02/19 10:53	65
09/02/19 11:53	60
Average	61
Action Level	200
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
14/02/19 11:28	56
14/02/19 12:28	42
14/02/19 13:28	46
14/02/19 14:28	37
14/02/19 15:28	31
14/02/19 16:28	27
14/02/19 17:28	33
14/02/19 18:28	37
14/02/19 19:28	41
14/02/19 20:28	48
14/02/19 21:28	54
14/02/19 22:28	54
14/02/19 23:28	52
15/02/19 00:28	42
15/02/19 01:28	21
15/02/19 02:28	27
15/02/19 03:28	27
15/02/19 04:28	33
15/02/19 05:28	35
15/02/19 06:28	35
15/02/19 07:28	39
15/02/19 08:28	42
15/02/19 09:28	48
15/02/19 10:28	52
Average	40
Action Level	200
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
20/02/19 10:22	82
20/02/19 11:22	78
20/02/19 12:22	71
20/02/19 13:22	65
20/02/19 14:22	57
20/02/19 15:22	50
20/02/19 16:22	47
20/02/19 17:22	43
20/02/19 18:22	46
20/02/19 19:22	47
20/02/19 20:22	48
20/02/19 21:22	60
20/02/19 22:22	75
20/02/19 23:22	66
21/02/19 00:22	55
21/02/19 01:22	45
21/02/19 02:22	46
21/02/19 03:22	33
21/02/19 04:22	25
21/02/19 05:22	38
21/02/19 06:22	61
21/02/19 07:22	67
21/02/19 08:22	75
21/02/19 09:22	79
Average	57
Action Level	200
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
26/02/19 11:00	55
26/02/19 12:00	56
26/02/19 13:00	56
26/02/19 14:00	56
26/02/19 15:00	59
26/02/19 16:00	64
26/02/19 17:00	70
26/02/19 18:00	71
26/02/19 19:00	60
26/02/19 20:00	67
26/02/19 21:00	60
26/02/19 22:00	54
26/02/19 23:00	35
27/02/19 00:00	28
27/02/19 01:00	28
27/02/19 02:00	26
27/02/19 03:00	21
27/02/19 04:00	26
27/02/19 05:00	40
27/02/19 06:00	39
27/02/19 07:00	42
27/02/19 08:00	45
27/02/19 09:00	48
27/02/19 10:00	50
Average	48
Action Level	200
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.

3. K-factor for transforming the result of portable laser particle photometer monitor to 24-hr TSP High Volume Sampler is 1.782.

AMS4A - Wai Wah Centre

Date and Time	TSP Concentration (μg/m³)
03/01/19 09:30	76
03/01/19 10:30	76
03/01/19 11:30	76
03/01/19 12:30	78
03/01/19 13:30	78
03/01/19 14:30	74
03/01/19 15:30	76
03/01/19 16:30	74
03/01/19 17:30	76
03/01/19 18:30	76
03/01/19 19:30	74
03/01/19 20:30	76
03/01/19 21:30	72
03/01/19 22:30	72
03/01/19 23:30	70
04/01/19 00:30	70
04/01/19 01:30	70
04/01/19 02:30	72
04/01/19 03:30	74
04/01/19 04:30	76
04/01/19 05:30	76
04/01/19 06:30	76
04/01/19 07:30	78
04/01/19 08:30	76
Average	75
Action Level	200
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
09/01/19 10:00	128
09/01/19 11:00	108
09/01/19 12:00	108
09/01/19 13:00	81
09/01/19 14:00	64
09/01/19 15:00	62
09/01/19 16:00	70
09/01/19 17:00	76
09/01/19 18:00	79
09/01/19 19:00	81
09/01/19 20:00	94
09/01/19 21:00	81
09/01/19 22:00	72
09/01/19 23:00	81
10/01/19 00:00	74
10/01/19 01:00	66
10/01/19 02:00	70
10/01/19 03:00	59
10/01/19 04:00	66
10/01/19 05:00	70
10/01/19 06:00	76
10/01/19 07:00	70
10/01/19 08:00	70
10/01/19 09:00	76
Average	78
Action Level	200
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
15/01/19 10:00	61
15/01/19 11:00	61
15/01/19 12:00	65
15/01/19 13:00	68
15/01/19 14:00	69
15/01/19 15:00	71
15/01/19 16:00	69
15/01/19 17:00	68
15/01/19 18:00	67
15/01/19 19:00	65
15/01/19 20:00	65
15/01/19 21:00	62
15/01/19 22:00	61
15/01/19 23:00	60
16/01/19 00:00	57
16/01/19 01:00	57
16/01/19 02:00	56
16/01/19 03:00	57
16/01/19 04:00	56
16/01/19 05:00	58
16/01/19 06:00	58
16/01/19 07:00	62
16/01/19 08:00	65
16/01/19 09:00	67
Average	63
Action Level	200
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
21/01/19 13:00	87
21/01/19 14:00	83
21/01/19 15:00	79
21/01/19 16:00	81
21/01/19 17:00	100
21/01/19 18:00	109
21/01/19 19:00	92
21/01/19 20:00	87
21/01/19 21:00	109
21/01/19 22:00	105
21/01/19 23:00	100
22/01/19 00:00	83
22/01/19 01:00	79
22/01/19 02:00	79
22/01/19 03:00	74
22/01/19 04:00	74
22/01/19 05:00	83
22/01/19 06:00	87
22/01/19 07:00	96
22/01/19 08:00	87
22/01/19 09:00	92
22/01/19 10:00	96
22/01/19 11:00	92
22/01/19 12:00	94
Average	90
Action Level	200
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
25/01/19 10:00	69
25/01/19 11:00	59
25/01/19 12:00	45
25/01/19 13:00	40
25/01/19 14:00	30
25/01/19 15:00	37
25/01/19 16:00	52
25/01/19 17:00	56
25/01/19 18:00	61
25/01/19 19:00	64
25/01/19 20:00	69
25/01/19 21:00	73
25/01/19 22:00	80
25/01/19 23:00	81
26/01/19 00:00	86
26/01/19 01:00	90
26/01/19 02:00	96
26/01/19 03:00	102
26/01/19 04:00	95
26/01/19 05:00	92
26/01/19 06:00	87
26/01/19 07:00	71
26/01/19 08:00	72
26/01/19 09:00	68
Average	70
Action Level	200
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
31/01/19 11:20	60
31/01/19 12:20	60
31/01/19 13:20	62
31/01/19 14:20	62
31/01/19 15:20	64
31/01/19 16:20	73
31/01/19 17:20	82
31/01/19 18:20	84
31/01/19 19:20	83
31/01/19 20:20	82
31/01/19 21:20	84
31/01/19 22:20	78
31/01/19 23:20	75
01/02/19 00:20	78
01/02/19 01:20	71
01/02/19 02:20	73
01/02/19 03:20	60
01/02/19 04:20	62
01/02/19 05:20	57
01/02/19 06:20	68
01/02/19 07:20	73
01/02/19 08:20	68
01/02/19 09:20	64
01/02/19 10:20	62
Average	70
Action Level	200
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.

3. K-factor for transforming the result of portable laser particle photometer monitor to 24-hr TSP High Volume Sampler is 1.772.

AMS12 - Fung Wo Estate

Date and Time	TSP Concentration (μg/m³)
03/01/19 10:00	77
03/01/19 11:00	77
03/01/19 12:00	76
03/01/19 13:00	76
03/01/19 14:00	79
03/01/19 15:00	77
03/01/19 16:00	76
03/01/19 17:00	79
03/01/19 18:00	81
03/01/19 19:00	81
03/01/19 20:00	77
03/01/19 21:00	77
03/01/19 22:00	74
03/01/19 23:00	74
04/01/19 00:00	72
04/01/19 01:00	76
04/01/19 02:00	74
04/01/19 03:00	76
04/01/19 04:00	77
04/01/19 05:00	77
04/01/19 06:00	79
04/01/19 07:00	81
04/01/19 08:00	76
04/01/19 09:00	81
Average	77
Action Level	168
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
09/01/19 11:00	57
09/01/19 12:00	63
09/01/19 13:00	67
09/01/19 14:00	78
09/01/19 15:00	81
09/01/19 16:00	69
09/01/19 17:00	67
09/01/19 18:00	76
09/01/19 19:00	96
09/01/19 20:00	104
09/01/19 21:00	76
09/01/19 22:00	74
09/01/19 23:00	70
10/01/19 00:00	61
10/01/19 01:00	65
10/01/19 02:00	80
10/01/19 03:00	83
10/01/19 04:00	94
10/01/19 05:00	81
10/01/19 06:00	78
10/01/19 07:00	70
10/01/19 08:00	69
10/01/19 09:00	65
10/01/19 10:00	69
Average	75
Action Level	168
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
15/01/19 10:30	62
15/01/19 11:30	62
15/01/19 12:30	63
15/01/19 13:30	66
15/01/19 14:30	67
15/01/19 15:30	67
15/01/19 16:30	69
15/01/19 17:30	71
15/01/19 18:30	73
15/01/19 19:30	76
15/01/19 20:30	74
15/01/19 21:30	73
15/01/19 22:30	67
15/01/19 23:30	66
16/01/19 00:30	64
16/01/19 01:30	64
16/01/19 02:30	59
16/01/19 03:30	57
16/01/19 04:30	56
16/01/19 05:30	56
16/01/19 06:30	60
16/01/19 07:30	64
16/01/19 08:30	66
16/01/19 09:30	63
Average	65
Action Level	168
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
21/01/19 11:00	72
21/01/19 12:00	72
21/01/19 13:00	83
21/01/19 14:00	98
21/01/19 15:00	83
21/01/19 16:00	83
21/01/19 17:00	94
21/01/19 18:00	104
21/01/19 19:00	91
21/01/19 20:00	83
21/01/19 21:00	85
21/01/19 22:00	79
21/01/19 23:00	76
22/01/19 00:00	72
22/01/19 01:00	68
22/01/19 02:00	68
22/01/19 03:00	64
22/01/19 04:00	65
22/01/19 05:00	75
22/01/19 06:00	79
22/01/19 07:00	83
22/01/19 08:00	83
22/01/19 09:00	79
22/01/19 10:00	76
Average	80
Action Level	168
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
25/01/19 12:17	49
25/01/19 13:17	33
25/01/19 14:17	27
25/01/19 15:17	23
25/01/19 16:17	35
25/01/19 17:17	48
25/01/19 18:17	53
25/01/19 19:17	64
25/01/19 20:17	67
25/01/19 21:17	72
25/01/19 22:17	69
25/01/19 23:17	77
26/01/19 00:17	79
26/01/19 01:17	85
26/01/19 02:17	89
26/01/19 03:17	102
26/01/19 04:17	102
26/01/19 05:17	86
26/01/19 06:17	64
26/01/19 07:17	57
26/01/19 08:17	59
26/01/19 09:17	44
26/01/19 10:17	49
26/01/19 11:17	47
Average	62
Action Level	168
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
31/01/19 09:30	57
31/01/19 10:30	62
31/01/19 11:30	65
31/01/19 12:30	68
31/01/19 13:30	66
31/01/19 14:30	69
31/01/19 15:30	62
31/01/19 16:30	63
31/01/19 17:30	69
31/01/19 18:30	71
31/01/19 19:30	65
31/01/19 20:30	64
31/01/19 21:30	62
31/01/19 22:30	58
31/01/19 23:30	53
01/02/19 00:30	52
01/02/19 01:30	50
01/02/19 02:30	52
01/02/19 03:30	49
01/02/19 04:30	51
01/02/19 05:30	57
01/02/19 06:30	59
01/02/19 07:30	56
01/02/19 08:30	58
Average	60
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.

3. K-factor for transforming the result of portable laser particle photometer monitor to 24-hr TSP High Volume Sampler is 1.793.

AMS13 - Fung Wo Estate

Date and Time	TSP Concentration (μg/m³)
04/02/19 11:40	48
04/02/19 12:40	42
04/02/19 13:40	46
04/02/19 14:40	44
04/02/19 15:40	46
04/02/19 16:40	48
04/02/19 17:40	56
04/02/19 18:40	54
04/02/19 19:40	56
04/02/19 20:40	61
04/02/19 21:40	65
04/02/19 22:40	58
04/02/19 23:40	56
05/02/19 00:40	51
05/02/19 01:40	44
05/02/19 02:40	41
05/02/19 03:40	38
05/02/19 04:40	42
05/02/19 05:40	46
05/02/19 06:40	41
05/02/19 07:40	38
05/02/19 08:40	41
05/02/19 09:40	42
05/02/19 10:40	48
Average	48
Action Level	174
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
08/02/19 10:11	49
08/02/19 11:11	52
08/02/19 12:11	53
08/02/19 13:11	57
08/02/19 14:11	56
08/02/19 15:11	55
08/02/19 16:11	49
08/02/19 17:11	56
08/02/19 18:11	54
08/02/19 19:11	52
08/02/19 20:11	56
08/02/19 21:11	51
08/02/19 22:11	58
08/02/19 23:11	58
09/02/19 00:11	55
09/02/19 01:11	50
09/02/19 02:11	48
09/02/19 03:11	46
09/02/19 04:11	46
09/02/19 05:11	44
09/02/19 06:11	46
09/02/19 07:11	45
09/02/19 08:11	45
09/02/19 09:11	44
Average	51
Action Level	174
Limit Level	260

Date and Time	TSP Concentration (μg/m³)
14/02/19 10:14	52
14/02/19 11:14	54
14/02/19 12:14	56
14/02/19 13:14	56
14/02/19 14:14	56
14/02/19 15:14	54
14/02/19 16:14	58
14/02/19 17:14	62
14/02/19 18:14	58
14/02/19 19:14	62
14/02/19 20:14	64
14/02/19 21:14	54
14/02/19 22:14	52
14/02/19 23:14	48
15/02/19 00:14	50
15/02/19 01:14	46
15/02/19 02:14	42
15/02/19 03:14	46
15/02/19 04:14	44
15/02/19 05:14	48
15/02/19 06:14	50
15/02/19 07:14	52
15/02/19 08:14	54
15/02/19 09:14	54
Average	53
Action Level	174
Limit Level	260

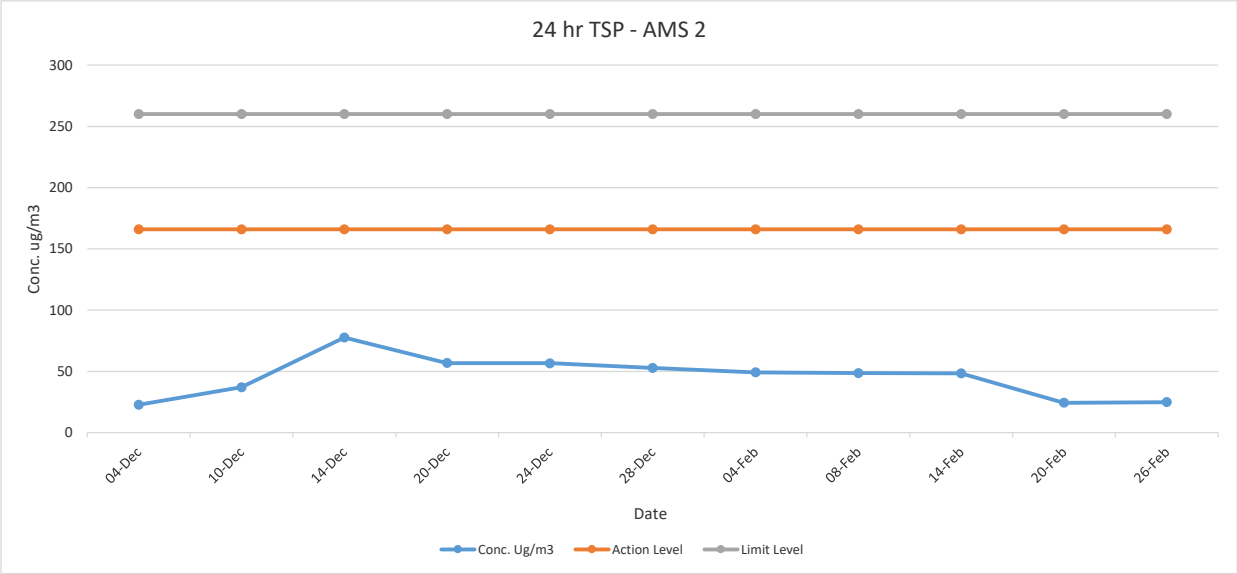
Date and Time	TSP Concentration (μg/m³)
20/02/19 11:52	41
20/02/19 12:52	26
20/02/19 13:52	23
20/02/19 14:52	23
20/02/19 15:52	24
20/02/19 16:52	25
20/02/19 17:52	36
20/02/19 18:52	44
20/02/19 19:52	52
20/02/19 20:52	65
20/02/19 21:52	85
20/02/19 22:52	78
20/02/19 23:52	58
21/02/19 00:52	54
21/02/19 01:52	45
21/02/19 02:52	40
21/02/19 03:52	33
21/02/19 04:52	31
21/02/19 05:52	26
21/02/19 06:52	27
21/02/19 07:52	39
21/02/19 08:52	40
21/02/19 09:52	42
21/02/19 10:52	41
Average	42
Action Level	174
Limit Level	260

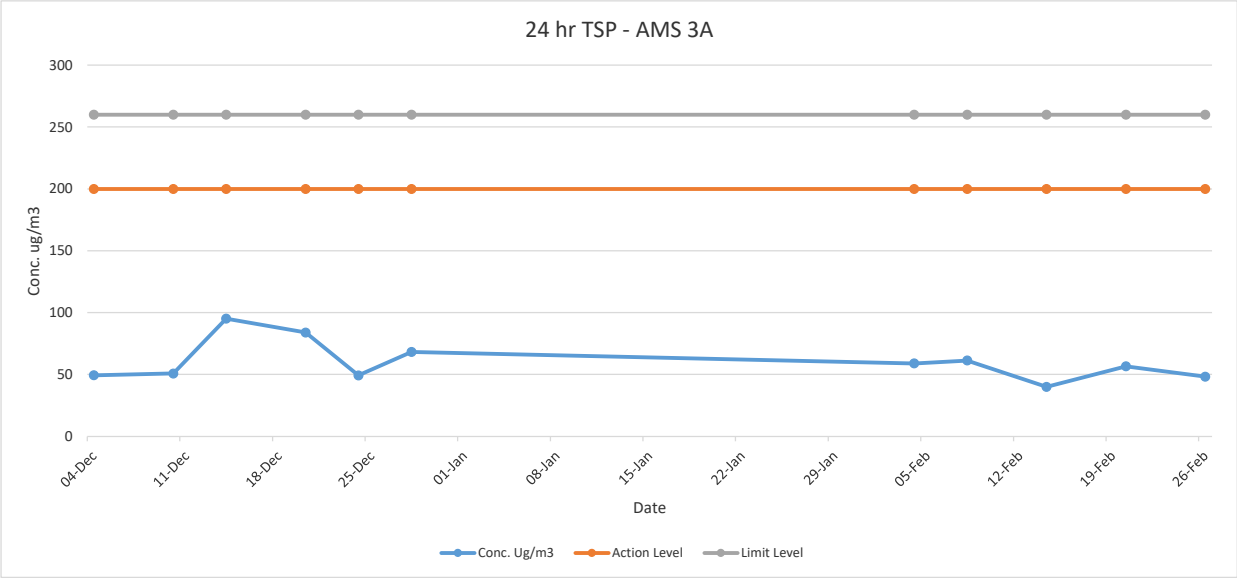
Date and Time	TSP Concentration (μg/m³)
26/02/19 12:17	66
26/02/19 13:17	57
26/02/19 14:17	59
26/02/19 15:17	64
26/02/19 16:17	65
26/02/19 17:17	73
26/02/19 18:17	78
26/02/19 19:17	86
26/02/19 20:17	84
26/02/19 21:17	79
26/02/19 22:17	84
26/02/19 23:17	77
27/02/19 00:17	53
27/02/19 01:17	50
27/02/19 02:17	48
27/02/19 03:17	47
27/02/19 04:17	42
27/02/19 05:17	49
27/02/19 06:17	44
27/02/19 07:17	48
27/02/19 08:17	53
27/02/19 09:17	56
27/02/19 10:17	60
27/02/19 11:17	62
Average	62
Action Level	174
Limit Level	260

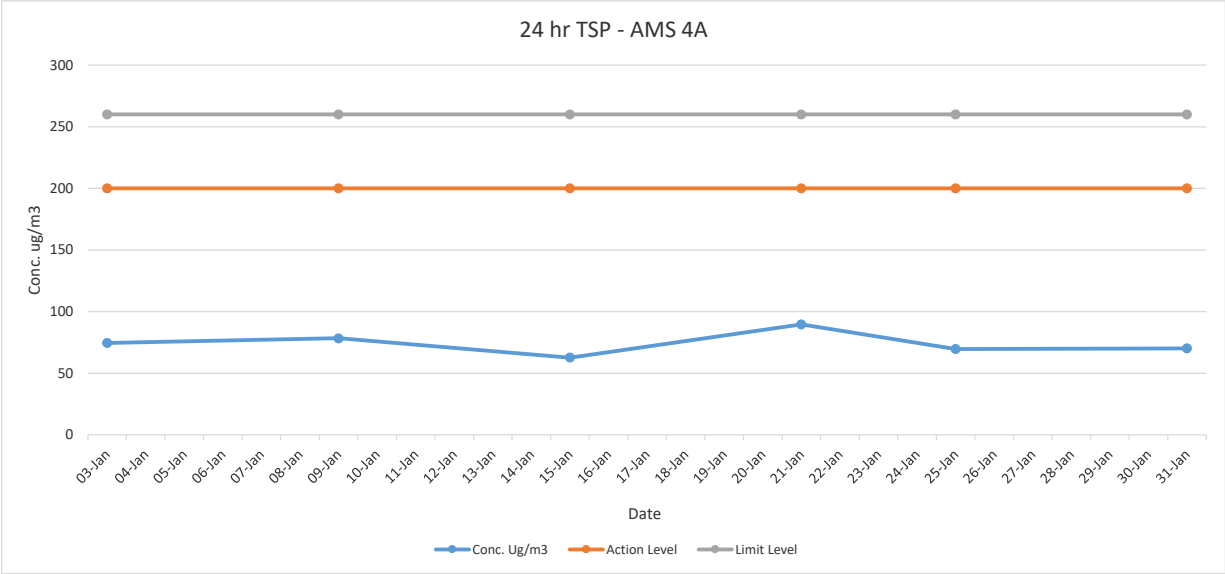
Remark 1. Actual monitoring may be subjected to change due to any safety concern or adverse weather condition.

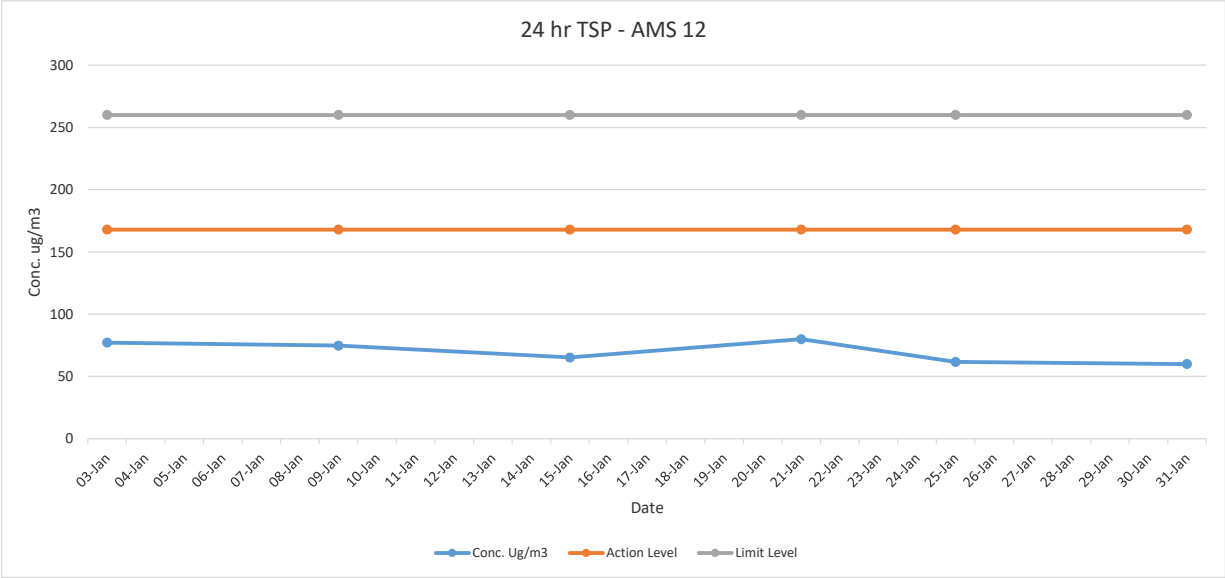
2. The Impact Air Monitoring Stations to be monitored should be selected based on the prevailing wind direction and their proximity to the active construction works.

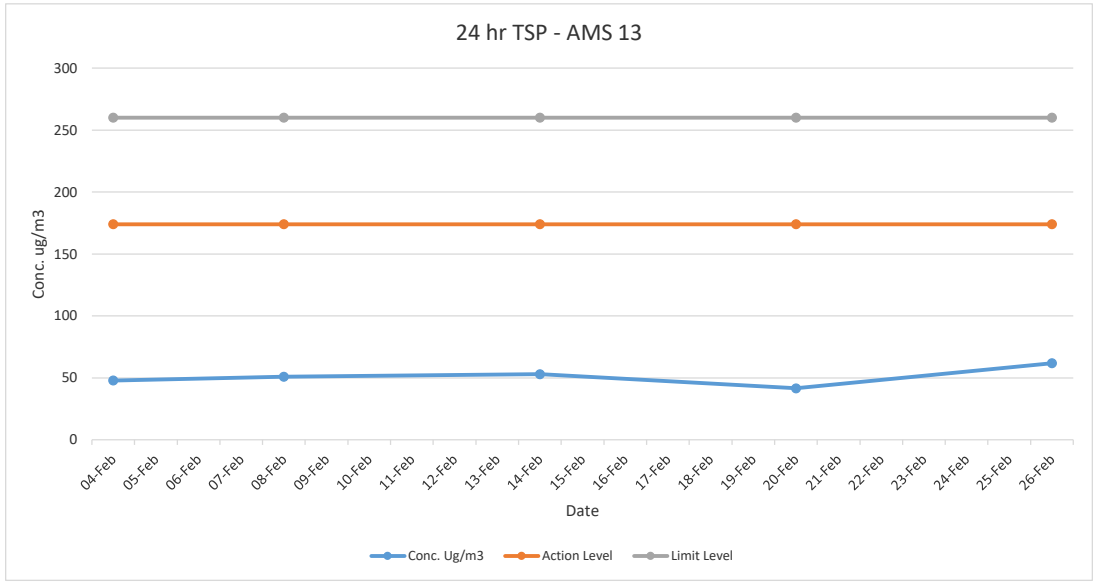
3. K-factor for transforming the result of portable laser particle photometer monitor to 24-hr TSP High Volume Sampler is 1.749.


24 hr TSP - AMS 2
300
250
200
150
100
50
0
Conc. ug/m3
04-Dec
10-Dec
14-Dec
20-Dec
24-Dec
28-Dec
04-Feb
08-Feb
14-Feb
20-Feb
26-Feb
Date
Conc. Ug/m3
Action Level
Limit Level


24 hr TSP - AMS 3A
300
250
200
150
100
50
0
Conc. ug/m3
04-Dec
11-Dec
18-Dec
25-Dec
01-Jan
08-Jan
15-Jan
22-Jan
29-Jan
05-Feb
12-Feb
19-Feb
26-Feb
Date
Conc. Ug/m3
Action Level
Limit Level


24 hr TSP - AMS 4A
300
250
200
150
100
50
0
Conc. ug/m3
03-Jan
04-Jan
05-Jan
06-Jan
07-Jan
08-Jan
09-Jan
10-Jan
11-Jan
12-Jan
13-Jan
14-Jan
15-Jan
16-Jan
17-Jan
18-Jan
19-Jan
20-Jan
21-Jan
22-Jan
23-Jan
24-Jan
25-Jan
26-Jan
27-Jan
28-Jan
29-Jan
30-Jan
31-Jan
Date
Conc. Ug/m3
Action Level
Limit Level


24 hr TSP - AMS 12
300
250
200
150
100
50
0
Conc. ug/m3
03-Jan
04-Jan
05-Jan
06-Jan
07-Jan
08-Jan
09-Jan
10-Jan
11-Jan
12-Jan
13-Jan
14-Jan
15-Jan
16-Jan
17-Jan
18-Jan
19-Jan
20-Jan
21-Jan
22-Jan
23-Jan
24-Jan
25-Jan
26-Jan
27-Jan
28-Jan
29-Jan
30-Jan
31-Jan
Date
Conc. Ug/m3
Action Level
Limit Level


24 hr TSP - AMS 13
300
250
200
150
100
50
0
Conc. ug/m3
04-Feb
05-Feb
06-Feb
07-Feb
08-Feb
09-Feb
10-Feb
11-Feb
12-Feb
13-Feb
14-Feb
15-Feb
16-Feb
17-Feb
18-Feb
19-Feb
20-Feb
21-Feb
22-Feb
23-Feb
24-Feb
25-Feb
26-Feb
Date
Conc. Ug/m3
Action Level
Limit Level

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

NMS 1 Scenery Court

Date	Start Time	Measured Noise Level			Limit Level	Construction Noise Level	Weather	Wind Speed (m/s)
		L_{eq}	L_{90}	L_{10}				
		Unit: dB(A) 30 Mins						
05-Dec-18	10:04	63.5	62.5	64.5	75	63.5	Cloudy	0.9
11-Dec-18	11:11	64.4	63.0	66.0		64.4	Fine	0.8
15-Dec-18	08:30	63.3	62.0	64.5		63.3	Fine	0.6
21-Dec-18	09:00	61.5	59.5	63.0		61.5	Fine	1.1
28-Dec-18	09:00	69.7	69.0	71.0		69.7	Fine	0.8
03-Jan-19	10:15	72.3	69.0	74.0		72.3	Fine	1.1
09-Jan-19	08:30	65.5	64.0	67.5		65.5	Fine	0.2
15-Jan-19	09:30	68.0	66.5	70.5		68.0	Cloudy	1.0
21-Jan-19	15:56	65.0	62.0	66.0		65.0	Fine	1.4
28-Jan-19	12:05	63.1	60.5	64.0		63.1	Fine	0.6
01-Feb-19	08:30	68.2	62.5	71.0		68.2	Fine	1.2
08-Feb-19	09:00	68.4	65.0	71.0		68.4	Fine	0.8
14-Feb-19	09:00	67.6	64.0	70.5		67.6	Fine	1.6
20-Feb-19	08:30	66.8	61.0	69.0		66.8	Fine	1.3
26-Feb-19	08:00	66.3	64.5	69.0		66.3	Sunny	1.7

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						
04-Dec-18	12:57	58.2	52.5	59.0	75	58.2	Sunny	1.2
10-Dec-18	11:00	55.0	52.5	57.2		55.0	Sunny	2.1
14-Dec-18	09:00	56.0	51.0	57.5		56.0	Fine	1.3
20-Dec-18	10:26	56.0	51.3	57.0		56.0	Fine	0.4
27-Dec-18	14:30	61.0	54.5	62.0		61.0	Fine	0.6
03-Jan-19	09:30	61.0	54.5	63.0		61.0	Fine	0.8
09-Jan-19	14:00	54.0	51.5	57.0		54.0	Fine	0.3
15-Jan-19	10:05	60.5	54.5	62.0		60.5	Cloudy	1.1
21-Jan-19	16:38	56.4	52.0	58.0		56.4	Fine	0.2
28-Jan-19	10:37	57.5	51.0	60.5		57.5	Fine	0.9
01-Feb-19	13:00	58.5	51.5	60.0		58.5	Fine	1.2
08-Feb-19	09:45	59.5	53.5	61.0		59.5	Fine	1.2
14-Feb-19	14:15	58.7	51.5	60.0		58.7	Fine	1.1
20-Feb-19	13:00	58.0	52.5	59.5		58.0	Fine	1.1
26-Feb-19	13:00	59.5	51.0	60.5		59.5	Sunny	1.4

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						
04-Dec-18	14:15	67.2	65.0	69.0	75	67.2	Sunny	1.0
10-Dec-18	13:00	68.0	65.5	70.0		68.0	Sunny	1.9
14-Dec-18	09:40	64.7	61.5	67.0		64.7	Fine	1.3
20-Dec-18	11:11	65.9	63.0	68.0		65.9	Fine	0.4
27-Dec-18	09:05	66.4	63.5	68.5		66.4	Fine	0.5
03-Jan-19	10:50	63.0	62.5	66.0		63.0	Fine	0.0
09-Jan-19	09:15	64.4	62.5	66.0		64.4	Fine	0.3
15-Jan-19	10:40	63.0	61.0	66.5		63.0	Cloudy	1.2
21-Jan-19	15:04	67.4	63.8	70.4		67.4	Fine	0.8
28-Jan-19	12:00	65.3	62.5	67.5		65.3	Fine	0.5
01-Feb-19	09:10	70.2	63.0	72.0		70.2	Fine	1.2
08-Feb-19	13:40	68.5	65.5	71.0		68.5	Fine	0.8
14-Feb-19	09:40	66.8	64.5	69.5		66.8	Fine	1.2
20-Feb-19	09:05	66.2	60.0	69.5		66.2	Fine	1.4
26-Feb-19	08:35	64.0	61.5	66.5		64.0	Sunny	1.2

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						
05-Dec-18	10:07	66.0	63.0	70.5	75	66.0	Cloudy	1.0
11-Dec-18	08:00	64.1	57.5	68.0		64.1	Fine	1.4
15-Dec-18	09:20	65.1	61.0	66.5		65.1	Fine	0.5
21-Dec-18	09:40	61.0	59.0	63.5		61.0	Fine	0.8
28-Dec-18	09:40	66.0	59.5	70.0		66.0	Fine	1.1
03-Jan-19	11:35	64.0	59.5	67.0		64.0	Fine	1.1
09-Jan-19	14:45	66.9	63.5	68.5		66.9	Fine	0.3
15-Jan-19	11:20	64.0	59.0	68.0		64.0	Cloudy	1.4
21-Jan-19	12:54	66.3	62.0	69.5		66.3	Fine	0.3
28-Jan-19	09:30	66.8	61.5	70.0		66.8	Fine	0.5
01-Feb-19	11:35	71.6	66.5	73.0		71.6	Fine	1.4
08-Feb-19	10:20	71.6	67.5	74.0		71.6	Fine	1.1
14-Feb-19	13:35	71.4	67.5	73.0		71.4	Fine	1.6
20-Feb-19	11:55	71.4	66.0	73.0		71.4	Fine	1.4
26-Feb-19	11:35	71.4	62.0	73.0		71.4	Sunny	1.4

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						
04-Dec-18	13:10	75.6	70.5	78.0	75	71.1*	Sunny	1.2
10-Dec-18	13:35	75.6	71.5	78.0		71.1*	Sunny	1.6
14-Dec-18	09:00	73.5	68.5	75.5		73.5	Fine	1.1
20-Dec-18	13:00	75.0	71.0	78.0		75.0	Fine	1.0
27-Dec-18	15:10	73.5	69.0	76.0		73.5	Fine	1.0
03-Jan-19	14:00	72.3	68.0	75.5		72.3	Fine	1.1
09-Jan-19	10:00	76.6	71.5	78.5		73.5*	Fine	0.2
15-Jan-19	13:00	70.5	66.5	73.0		70.5	Cloudy	1.2
21-Jan-19	13:33	75.3	69.5	78.0		70.2*	Fine	0.6
28-Jan-19	10:58	75.0	70.5	78.0		75.0	Fine	0.7
01-Feb-19	09:45	69.2	64.0	73.0		69.2	Fine	1.3
08-Feb-19	13:00	73.1	69.0	73.5		73.1	Fine	1.3
14-Feb-19	10:20	72.6	67.5	73.5		72.6	Fine	1.1
20-Feb-19	09:40	68.0	66.5	71.0		68.0	Fine	1.1
26-Feb-19	09:10	73.4	68.0	76.0		73.4	Sunny	1.4

*Note: Since the measured noise level was greater than the limit level, construction noise level (CNL) was apppliied on 4/12/2018, 10/12/2018, 9/1/2019 and 21/1/2019, where Calculated CNL = Measured Noise Level during operation – Baseline (73.7 dB(A)).

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						
04-Dec-18	13:13	74.1	70.5	76.0	75	74.1	Sunny	1.0
10-Dec-18	14:10	74.0	71.5	78.0		74.0	Sunny	1.8
14-Dec-18	09:35	71.5	66.0	72.5		71.5	Fine	1.1
20-Dec-18	13:30	74.0	70.5	77.5		74.0	Fine	1.0
27-Dec-18	15:45	73.0	69.5	75.0		73.0	Fine	1.1
03-Jan-19	14:40	71.4	67.5	74.0		71.4	Fine	1.2
09-Jan-19	10:37	73.4	69.5	75.5		73.4	Fine	0.3
15-Jan-19	13:35	72.0	69.0	74.5		72.0	Cloudy	0.0
21-Jan-19	14:15	73.0	69.0	75.5		73.0	Fine	0.8
28-Jan-19	11:49	73.3	68.5	75.5		73.3	Fine	0.7
01-Feb-19	10:20	68.5	63.0	72.0		68.5	Fine	0.8
08-Feb-19	11:35	72.4	68.0	74.5		72.4	Fine	1.2
14-Feb-19	10:55	71.2	66.5	73.0		71.2	Fine	1.4
20-Feb-19	10:15	67.4	65.5	69.5		67.4	Fine	1.4
26-Feb-19	09:45	72.5	67.5	76.0		72.5	Sunny	1.2

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						
05-Dec-18	10:38	66.3	64.0	67.5	75	66.3	Cloudy	1.2
11-Dec-18	08:10	74.0	68.0	76.0		74.0	Fine	1.4
15-Dec-18	10:00	63.8	61.5	65.0		63.8	Fine	0.4
21-Dec-18	10:15	74.1	69.0	76.0		74.1	Fine	0.5
28-Dec-18	10:15	74.0	69.0	76.5		74.0	Fine	1.2
03-Jan-19	12:10	73.0	68.5	76.0		73.0	Fine	1.2
09-Jan-19	15:25	64.1	62.5	66.5		64.1	Fine	0.2
15-Jan-19	11:55	71.0	66.5	73.0		71.0	Cloudy	1.1
21-Jan-19	12:19	64.7	62.0	66.0		64.7	Fine	0.4
28-Jan-19	09:45	65.7	62.5	66.0		65.7	Fine	0.5
01-Feb-19	11:00	74.2	69.0	77.0		74.2	Fine	1.2
08-Feb-19	10:55	73.5	68.0	76.0		73.5	Fine	1.2
14-Feb-19	13:00	74.1	69.5	77.5		74.1	Fine	1.4
20-Feb-19	11:20	73.2	69.5	77.0		73.2	Fine	1.1
26-Feb-19	11:00	74.2	65.5	78.0		74.2	Sunny	1.1

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						
05-Dec-18	11:02	67.4	66.5	68.5	75	67.4	Cloudy	1.1
11-Dec-18	15:17	65.0	63.5	67.5		65.0	Fine	1.0
15-Dec-18	12:23	65.5	63.0	68.0		65.5	Fine	1.2
21-Dec-18	10:50	69.0	66.5	72.0		69.0	Fine	0.8
28-Dec-18	10:55	73.0	71.5	73.5		73.0	Fine	0.8
04-Jan-19	08:31	69.9	67.5	73.0		69.9	Cloudy	0.9
10-Jan-19	11:45	70.2	67.8	73.4		70.2	Fine	0.8
16-Jan-19	15:13	72.0	70.5	74.0		72.0	Cloudy	1.2
22-Jan-19	14:30	67.2	64.0	70.0		67.2	Fine	1.2
29-Jan-19	09:39	65.6	64.0	67.0		65.6	Fine	0.6
04-Feb-19	09:02	65.5	63.0	67.0		65.5	Fine	0.5
11-Feb-19	09:44	65.8	64.5	67.0		65.8	Fine	0.4
18-Feb-19	08:30	68.6	64.5	71.0		68.6	Fine	1.2
25-Feb-19	09:38	64.6	63.0	66.0		64.6	Fine	0.2

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						
05-Dec-18	11:50	63.3	60.5	65.5	75	63.3	Cloudy	1.1
11-Dec-18	09:45	63.0	58.5	65.0		63.0	Fine	1.3
15-Dec-18	08:31	61.8	59.0	63.5		61.8	Fine	0.5
21-Dec-18	08:32	61.7	59.0	63.5		61.7	Fine	0.5
28-Dec-18	08:30	62.4	58.5	65.0		62.4	Fine	0.7
04-Jan-19	12:31	62.5	58.3	65.1		62.5	Cloudy	0.7
10-Jan-19	11:12	67.0	59.5	72.0		67.0	Fine	0.8
16-Jan-19	09:30	70.6	68.5	74.0		70.6	Cloudy	1.2
22-Jan-19	09:00	70.6	66.0	73.0		70.6	Fine	1.2
29-Jan-19	10:42	63.0	61.0	64.5		63.0	Fine	0.6
04-Feb-19	09:38	64.1	58.5	65.5		64.1	Fine	0.0
11-Feb-19	10:37	64.0	62.0	65.0		64.0	Fine	0.3
18-Feb-19	09:45	68.2	62.0	70.5		68.2	Fine	1.4
25-Feb-19	11:05	62.3	61.0	65.0		62.3	Fine	0.3

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						
04-Dec-18	10:16	65.7	62.5	67.0		65.7	Sunny	0.5
10-Dec-18	09:00	58.8	55.0	61.0		58.8	Sunny	2.0
14-Dec-18	14:00	64.3	62.5	65.5		64.3	Fine	1.2
20-Dec-18	09:00	64.4	62.0	66.0		64.4	Fine	1.2
27-Dec-18	15:20	63.5	58.0	67.0		63.5	Fine	0.6
04-Jan-19	08:31	65.4	62.5	67.5		65.4	Cloudy	0.1
10-Jan-19	08:32	66.8	64.0	68.5		66.8	Fine	0.5
16-Jan-19	10:05	64.7	59.0	66.0	70	64.7	Cloudy	0.8
22-Jan-19	09:35	63.8	58.0	66.0		63.8	Fine	0.8
29-Jan-19	11:40	64.1	62.0	65.5		64.1	Fine	0.5
04-Feb-19	10:12	63.8	60.0	66.5		63.8	Fine	0.0
11-Feb-19	11:14	65.2	60.5	68.0		65.2	Fine	0.4
18-Feb-19	10:20	66.4	61.0	68.5		66.4	Fine	1.4
25-Feb-19	11:50	64.9	63.0	65.0		64.9	Fine	0.3

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						
04-Dec-18	15:52	64.4	53.0	64.5		64.4	Sunny	1.2
10-Dec-18	10:06	65.0	63.0	65.5		65.0	Sunny	1.4
14-Dec-18	10:15	71.1	61.5	73.0		71.1	Fine	1.6
20-Dec-18	09:38	65.1	57.5	66.5		65.1	Fine	0.7
27-Dec-18	08:30	60.2	54.0	63.5		60.2	Fine	1.1
04-Jan-19	10:26	63.4	57.6	67.5		63.4	Cloudy	0.6
10-Jan-19	09:04	66.3	64.5	68.0		66.3	Fine	0.5
16-Jan-19	09:05	65.7	64.0	67.5	75	65.7	Cloudy	0.3
22-Jan-19	10:10	69.5	63.0	72.5		69.5	Fine	1.2
29-Jan-19	09:34	66.2	62.0	69.5		66.2	Fine	0.6
04-Feb-19	09:05	57.9	52.0	61.0		57.9	Fine	0.0
11-Feb-19	12:53	60.6	52.5	62.0		60.6	Fine	0.2
18-Feb-19	16:05	68.4	63.5	71.0		68.4	Fine	1.2
25-Feb-19	15:08	61.0	53.0	61.5		61.0	Fine	0.1

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						
04-Dec-18	10:54	66.9	60.0	69.0		66.9	Sunny	1.0
10-Dec-18	09:00	58.0	55.0	60.0		58.0	Sunny	2.0
14-Dec-18	10:15	62.3	60.0	64.0	70	62.3	Fine	0.8
20-Dec-18	09:45	63.9	60.5	65.0		63.9	Fine	1.2
27-Dec-18	10:07	61.9	53.0	63.0		61.9	Fine	0.4
04-Jan-19	09:09	64.8	62.0	66.5	65	64.8	Cloudy	0.1
10-Jan-19	09:13	65.6	61.5	68.0		65.6	Fine	0.7
16-Jan-19	10:45	63.9	57.5	66.0	70	63.9	Cloudy	1.2
22-Jan-19	10:45	64.5	59.0	66.0		64.5	Fine	1.1
29-Jan-19	13:20	61.0	58.5	62.5		61.0	Fine	0.5
04-Feb-19	10:48	62.9	59.0	65.0		62.9	Fine	0.3
11-Feb-19	13:21	59.0	56.0	61.5		59.0	Fine	0.2
18-Feb-19	10:55	64.1	58.0	65.5		64.1	Fine	1.1
25-Feb-19	12:37	62.3	59.0	63.0		62.3	Fine	0.2

Note: According to the school schedule, there was an exam period from 4/1/2019 to 9/1/2019.

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						
05-Dec-18	15:28	62.9	60.0	65.0		62.9	Cloudy	1.0
11-Dec-18	08:55	64.7	56.5	67.0		64.7	Fine	1.4
15-Dec-18	09:10	60.5	56.5	63.0		60.5	Fine	1.2
21-Dec-18	09:10	59.5	55.0	60.2		59.5	Fine	0.4
28-Dec-18	09:02	59.0	56.5	60.5		59.0	Fine	0.8
04-Jan-19	11:47	59.3	56.4	61.0		59.3	Cloudy	0.2
10-Jan-19	10:36	64.6	61.0	66.0		64.6	Fine	0.7
16-Jan-19	11:20	68.5	64.0	71.0	75	68.5	Cloudy	1.1
22-Jan-19	11:20	67.6	65.0	69.5		67.6	Fine	1.3
29-Jan-19	14:23	61.1	58.0	63.5		61.1	Fine	0.6
04-Feb-19	11:26	58.7	56.0	59.5		58.7	Fine	0.6
11-Feb-19	14:18	60.5	55.2	68.0		60.5	Fine	0.2
18-Feb-19	11:30	65.5	59.0	67.0		65.5	Fine	1.2
25-Feb-19	12:37	62.3	59.0	63.0		62.3	Fine	0.2

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						
04-Dec-18	16:26	66.8	60.0	69.0		66.8	Sunny	1.1
10-Dec-18	10:46	67.2	62.0	69.5		67.2	Sunny	1.4
14-Dec-18	09:15	70.9	67.0	73.5		70.9	Fine	1.1
20-Dec-18	10:15	63.7	58.0	66.0		63.7	Fine	0.5
27-Dec-18	09:07	63.1	57.5	67.5		63.1	Fine	0.8
04-Jan-19	11:01	60.4	53.8	62.7		60.4	Cloudy	0.6
10-Jan-19	09:40	64.0	58.0	66.0		64.0	Fine	0.7
16-Jan-19	09:40	66.5	63.5	68.0	75	66.5	Cloudy	0.0
22-Jan-19	11:55	70.5	64.5	74.0		70.5	Fine	1.1
29-Jan-19	10:22	71.4	62.5	74.5		71.4	Fine	0.5
04-Feb-19	09:40	60.1	56.0	62.0		60.1	Fine	0.0
11-Feb-19	12:18	60.4	56.5	62.0		60.4	Fine	0.2
18-Feb-19	15:30	66.7	59.0	69.0		66.7	Fine	1.1
25-Feb-19	15:51	61.0	57.0	62.5		61.0	Fine	0.0

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						
04-Dec-18	15:55	64.3	57.5	66.0		64.3	Sunny	1.0
10-Dec-18	10:40	67.7	62.5	72.0		67.7	Sunny	1.3
14-Dec-18	11:00	67.6	64.0	65.5		67.6	Fine	1.0
20-Dec-18	10:51	61.6	57.2	63.7		61.6	Fine	1.0
27-Dec-18	09:42	68.1	62.0	72.0		68.1	Fine	0.7
03-Jan-19	15:15	66.5	64.0	68.0		66.5	Fine	0.8
09-Jan-19	08:30	67.5	63.5	70.5		67.5	Fine	0.3
15-Jan-19	00:00	68.5	66.0	71.0	75	68.5	Cloudy	1.1
21-Jan-19	09:30	66.8	62.0	69.5		66.8	Fine	0.5
28-Jan-19	13:30	64.4	62.0	65.0		64.4	Fine	0.4
01-Feb-19	14:55	66.5	61.0	68.0		66.5	Fine	1.6
08-Feb-19	09:30	63.9	59.5	66.0		63.9	Fine	1.1
14-Feb-19	16:55	67.4	62.0	69.0		67.4	Fine	0.0
20-Feb-19	15:40	65.8	60.5	67.5		65.8	Fine	1.4
26-Feb-19	15:55	66.4	59.5	68.0		66.4	Sunny	1.5

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						
04-Dec-18	16:57	63.5	59.0	66.5	75	63.5	Sunny	1.0
10-Dec-18	10:42	61.2	55.0	63.0		61.2	Sunny	1.2
14-Dec-18	11:40	66.7	62.5	67.5		66.7	Fine	1.1
20-Dec-18	11:27	62.6	58.5	65.0		62.6	Fine	0.8
27-Dec-18	10:17	64.6	60.5	67.5		64.6	Fine	0.7
03-Jan-19	15:30	67.0	63.5	71.0		67.0	Fine	1.1
09-Jan-19	09:09	65.5	62.5	67.0		65.5	Fine	0.3
15-Jan-19	10:40	68.0	67.5	72.0		68.0	Cloudy	1.2
21-Jan-19	10:05	66.5	62.1	68.0		66.5	Fine	0.6
28-Jan-19	13:27	64.9	61.0	67.0		64.9	Fine	0.5
01-Feb-19	15:30	67.4	61.5	68.5		67.4	Fine	0.9
08-Feb-19	10:05	62.4	51.0	65.0		62.4	Fine	1.4
14-Feb-19	16:20	66.5	61.5	68.0		66.5	Fine	0.0
20-Feb-19	15:05	66.5	61.0	68.0		66.5	Fine	1.2
26-Feb-19	15:20	64.8	61.5	66.5		64.8	Sunny	1.6

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						
04-Dec-18	11:12	63.2	60.5	64.5	70	63.2	Sunny	1.1
10-Dec-18	09:45	69.0	67.0	70.5		69.0	Sunny	1.6
14-Dec-18	10:00	68.9	66.5	70.5		68.9	Fine	1.0
20-Dec-18	10:40	62.0	59.5	64.0		62.0	Fine	1.1
27-Dec-18	11:30	63.4	51.0	66.0		63.4	Fine	0.6
04-Jan-19	09:50	65.1	62.5	67.0		65.1	Cloudy	0.1
10-Jan-19	09:58	64.6	63.1	68.4	65	64.6	Fine	0.0
16-Jan-19	13:00	64.5	59.0	67.5		64.5	Cloudy	1.1
22-Jan-19	10:00	62.3	59.0	63.0		62.3	Fine	1.0
29-Jan-19	13:27	59.5	56.0	61.0	70	59.5	Fine	0.4
04-Feb-19	10:53	63.3	60.0	65.5		63.3	Fine	0.4
11-Feb-19	10:30	59.9	58.0	61.5		59.9	Fine	0.3
18-Feb-19	13:40	63.2	55.5	64.5		63.2	Fine	1.6
25-Feb-19	17:05	60.0	59.5	62.0		60.0	Fine	0.1

Note: According to the school schedule, there was an exam period from 9/1/2019 to 23/1/2019.

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						
05-Dec-18	14:51	60.9	56.0	63.5	75	60.9	Cloudy	1.2
11-Dec-18	12:20	69.6	64.5	71.5		69.6	Fine	1.2
15-Dec-18	11:42	58.6	53.0	60.5		58.6	Fine	0.5
21-Dec-18	11:16	57.7	53.0	60.5		57.7	Fine	0.4
28-Dec-18	11:31	57.7	53.0	59.0		57.7	Fine	0.5
03-Jan-19	16:30	64.5	62.0	67.5		64.5	Fine	1.3
09-Jan-19	09:47	66.5	63.5	69.5		66.5	Fine	0.0
15-Jan-19	11:15	70.5	67.0	73.0		70.5	Cloudy	1.3
21-Jan-19	10:51	62.4	55.5	65.5		62.4	Fine	0.3
28-Jan-19	14:21	64.4	61.5	66.0		64.4	Fine	0.6
01-Feb-19	17:00	72.5	68.5	75.0		72.5	Fine	1.4
08-Feb-19	10:40	60.0	52.5	62.0		60.0	Fine	1.1
14-Feb-19	15:45	72.6	68.5	75.0		72.6	Fine	1.2
20-Feb-19	14:30	73.2	69.0	77.5		73.2	Fine	1.7
26-Feb-19	14:45	65.4	58.5	68.5		65.4	Sunny	1.1

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						
05-Dec-18	13:41	65.9	62.5	67.5	75	65.9	Cloudy	1.0
11-Dec-18	11:05	72.1	69.0	73.5		72.1	Fine	1.2
15-Dec-18	09:50	65.6	61.5	67.5		65.6	Fine	0.8
21-Dec-18	09:52	63.7	61.5	65.5		63.7	Fine	0.7
28-Dec-18	09:41	67.1	63.5	69.0		67.1	Fine	1.0
04-Jan-19	10:28	67.7	65.0	69.5		67.7	Cloudy	0.2
10-Jan-19	10:51	71.2	67.0	74.0		71.2	Fine	1.1
16-Jan-19	13:40	70.5	66.0	73.5		70.5	Cloudy	1.2
22-Jan-19	10:40	68.9	65.0	70.0		68.9	Fine	1.2
29-Jan-19	14:07	69.0	63.0	71.5		69.0	Fine	0.6
04-Feb-19	11:31	65.8	62.0	68.0		65.8	Fine	0.0
11-Feb-19	11:05	67.7	64.5	69.5		67.7	Fine	0.5
18-Feb-19	14:15	66.0	64.0	68.5		66.0	Fine	1.2
25-Feb-19	17:39	66.4	63.5	69.0		66.4	Fine	0.2

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						
05-Dec-18	12:08	64.3	59.5	66.5	75	64.3	Cloudy	0.9
11-Dec-18	10:30	69.7	67.0	71.5		69.7	Fine	1.6
15-Dec-18	10:26	59.6	57.0	61.5		59.6	Fine	0.6
21-Dec-18	10:28	58.7	56.5	60.0		58.7	Fine	0.4
28-Dec-18	10:16	58.7	56.5	60.5		58.7	Fine	1.1
04-Jan-19	11:04	63.3	58.5	65.5		63.3	Cloudy	0.3
10-Jan-19	11:28	65.8	58.5	70.0		65.8	Fine	0.8
16-Jan-19	14:15	71.6	68.0	73.0		71.6	Cloudy	1.3
22-Jan-19	11:15	61.3	57.5	63.0		61.3	Fine	0.8
29-Jan-19	15:09	64.6	59.0	66.0		64.6	Fine	0.6
04-Feb-19	12:05	58.8	55.0	61.0		58.8	Fine	0.0
11-Feb-19	11:42	60.1	57.5	62.0		60.1	Fine	0.3
18-Feb-19	14:50	67.5	65.0	70.0		67.5	Fine	0.9
25-Feb-19	18:13	60.9	58.0	63.0		60.9	Fine	0.3

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						
05-Dec-18	11:15	63.9	60.5	66.5	75	63.9	Cloudy	0.9
11-Dec-18	11:00	64.8	60.0	67.0		64.8	Fine	1.5
15-Dec-18	10:47	68.5	64.0	70.5		68.5	Fine	0.6
21-Dec-18	11:30	71.0	66.0	72.5		71.0	Fine	0.8
28-Dec-18	11:30	69.5	67.0	72.0		69.5	Fine	1.1
03-Jan-19	13:30	63.5	57.5	66.0		63.5	Fine	1.1
09-Jan-19	12:00	61.9	59.5	64.0		61.9	Fine	0.0
15-Jan-19	13:00	65.6	57.0	68.0		65.6	Cloudy	0.0
21-Jan-19	11:41	63.2	60.5	64.5		63.2	Fine	0.1
28-Jan-19	15:14	63.5	58.0	65.5		63.5	Fine	0.4
01-Feb-19	13:40	68.6	64.5	71.0		68.6	Fine	1.4
08-Feb-19	14:20	62.5	54.0	64.0		62.5	Fine	1.4
14-Feb-19	11:40	64.5	58.5	66.0		64.5	Fine	0.8
20-Feb-19	10:45	66.5	62.0	69.0		66.5	Fine	1.6
26-Feb-19	10:25	68.5	60.0	72.0		68.5	Sunny	1.2

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						
04-Dec-18	13:57	63.3	61.5	65.0		63.3	Sunny	1.2
10-Dec-18	14:57	63.5	60.5	64.5		63.5	Sunny	1.0
14-Dec-18	12:20	64.4	60.5	66.5		64.4	Fine	1.2
20-Dec-18	12:04	63.0	61.0	64.5		63.0	Fine	0.7
27-Dec-18	13:30	65.9	62.5	68.5		65.9	Fine	0.5
04-Jan-19	09:07	68.7	67.0	70.0		68.7	Cloudy	0.8
10-Jan-19	12:20	67.4	64.8	69.7		67.4	Fine	0.8
16-Jan-19	14:55	69.0	65.5	73.5	75	69.0	Cloudy	1.2
22-Jan-19	15:05	69.0	65.0	72.5		69.0	Fine	1.1
29-Jan-19	09:00	63.1	61.0	64.0		63.1	Fine	0.6
04-Feb-19	08:30	62.7	60.5	63.5		62.7	Fine	0.4
11-Feb-19	14:17	63.6	61.5	65.0		63.6	Fine	0.1
18-Feb-19	09:05	67.5	62.0	70.5		67.5	Fine	1.2
25-Feb-19	10:21	63.8	62.0	65.0		63.8	Fine	0.3

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						
04-Dec-18	14:44	68.5	58.0	73.0		68.5	Sunny	1.0
10-Dec-18	10:06	65.3	63.5	66.5		65.3	Sunny	1.2
14-Dec-18	10:43	73.6	65.0	80.0		73.6	Fine	1.1
20-Dec-18	09:01	66.3	59.0	70.5		66.3	Fine	0.6
27-Dec-18	14:38	70.5	64.5	73.0		70.5	Fine	0.7
04-Jan-19	09:51	66.7	59.2	70.6		66.7	Cloudy	0.5
10-Jan-19	08:31	69.0	57.5	73.0		69.0	Fine	0.5
16-Jan-19	08:30	66.5	50.5	70.5	75	66.5	Cloudy	0.2
22-Jan-19	11:50	70.4	67.0	72.0		70.4	Fine	1.3
29-Jan-19	08:40	71.4	60.0	76.5		71.4	Fine	0.7
04-Feb-19	08:30	62.1	60.4	63.8		62.1	Fine	0.0
11-Feb-19	14:58	70.2	67.0	71.5		70.2	Fine	0.4
18-Feb-19	16:40	72.1	68.5	74.0		72.1	Fine	1.5
25-Feb-19	14:23	66.0	60.0	69.0		66.0	Fine	0.1

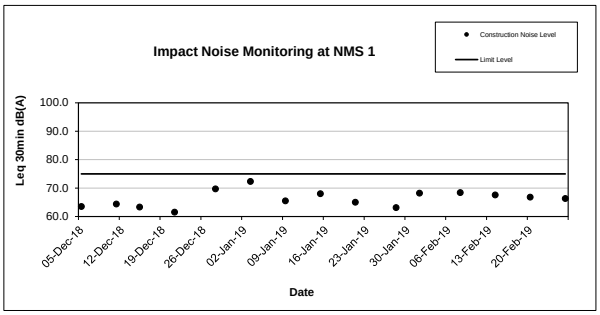
NMS 26 Wo Che Estate

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						
05-Dec-18	14:18	72.6	68.5	75.0		72.6	Cloudy	1.0
11-Dec-18	11:40	74.4	71.5	76.0		74.4	Fine	1.3
15-Dec-18	11:02	68.2	65.0	70.5		68.2	Fine	0.7
21-Dec-18	10:40	68.6	66.0	70.5		68.6	Fine	0.7
28-Dec-18	10:54	69.6	67.0	71.5		69.6	Fine	0.7
04-Jan-19	11:37	68.4	61.5	73.0		68.4	Cloudy	0.9
10-Jan-19	10:15	72.5	68.0	75.0		72.5	Fine	0.7
16-Jan-19	10:20	70.4	68.0	73.0	75	70.4	Cloudy	0.2
22-Jan-19	13:50	71.2	67.0	73.5		71.2	Fine	1.1
29-Jan-19	11:03	71.6	67.5	74.5		71.6	Fine	0.4
04-Feb-19	10:16	70.0	66.5	72.0		70.0	Fine	0.0
11-Feb-19	15:49	68.3	66.0	70.0		68.3	Fine	0.5
18-Feb-19	13:00	74.6	64.5	77.0		74.6	Fine	1.3
25-Feb-19	16:30	68.0	65.5	70.0		68.0	Fine	0.3

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						
05-Dec-18	12:55	69.9	68.0	73.0		69.9	Cloudy	0.8
11-Dec-18	14:32	69.6	65.0	71.5		69.6	Fine	1.0
15-Dec-18	12:30	64.6	62.0	66.5	70	64.6	Fine	0.4
21-Dec-18	12:35	68.0	66.0	69.5		68.0	Fine	1.2
28-Dec-18	12:37	65.0	64.0	66.5		65.0	Fine	1.0
03-Jan-19	12:50	64.6	57.5	67.0		64.6	Fine	1.3
09-Jan-19	14:00	64.8	62.5	66.5	65	64.8	Fine	0.0
15-Jan-19	13:45	64.5	60.0	66.5		64.5	Cloudy	0.8
21-Jan-19	17:37	64.0	60.8	68.3		64.0	Fine	0.0
28-Jan-19	15:02	69.6	65.5	71.0		69.6	Fine	0.9
01-Feb-19	16:15	63.6	58.5	64.5		63.6	Fine	1.2
08-Feb-19	15:00	63.5	56.5	65.0	70	63.5	Fine	1.2
14-Feb-19	15:05	63.8	58.0	64.5		63.8	Fine	1.4
20-Feb-19	13:50	63.5	58.0	65.5		63.5	Fine	1.4
26-Feb-19	13:50	64.2	58.5	65.5		64.2	Sunny	1.2

Note: According to the school schedule, there was an exam period from 2/1/2019 to 18/1/2019.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60.0
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19-Dec-18
26-Dec-18
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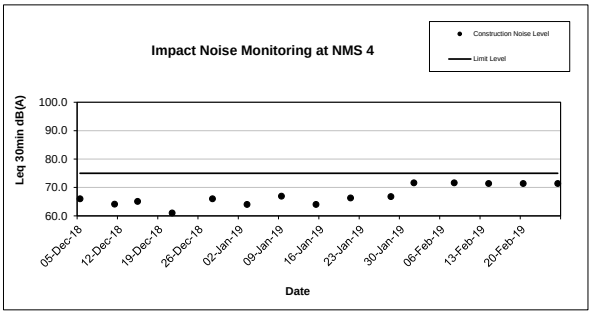
23-Jan-19
30-Jan-19
06-Feb-19
13-Feb-19
20-Feb-19
Date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Construction Noise Level
Limit Level
Leq 30min dB(A)
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26-Dec-18
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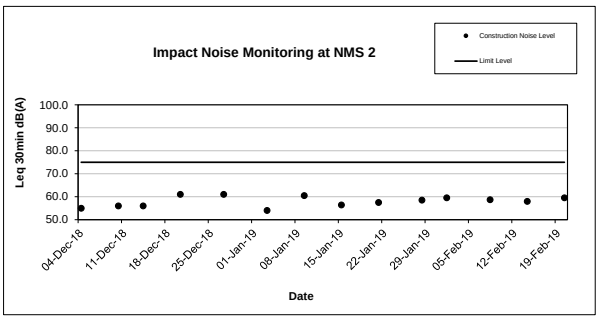
06-Feb-19
13-Feb-19
20-Feb-19
Date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Limit Level
Leq 30min dB(A)
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80.0
70.0
60.0
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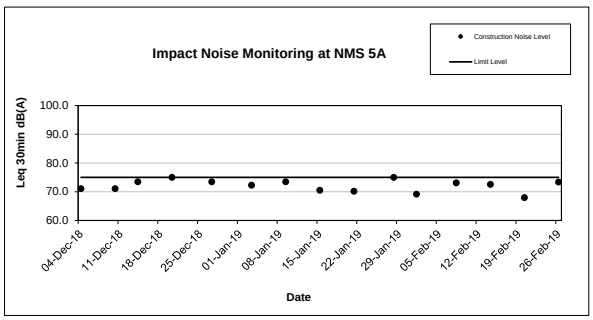
18-Dec-18
25-Dec-18
01-Jan-19
08-Jan-19
15-Jan-19
22-Jan-19
29-Jan-19
05-Feb-19
12-Feb-19
19-Feb-19
Date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Construction Noise Level
Limit Level
Leq 30min dB(A)
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90.0
80.0
70.0
60.0
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11-Dec-18
18-Dec-18
25-Dec-18
01-Jan-19
08-Jan-19
15-Jan-19
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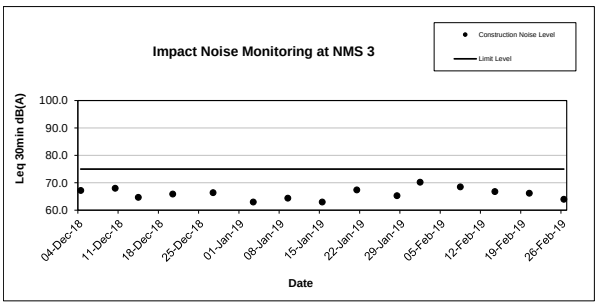
29-Jan-19
05-Feb-19
12-Feb-19
19-Feb-19
26-Feb-19
Date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Construction Noise Level
Limit Level
Leq 30min dB(A)
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90.0
80.0
70.0
60.0
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11-Dec-18
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25-Dec-18
01-Jan-19
08-Jan-19
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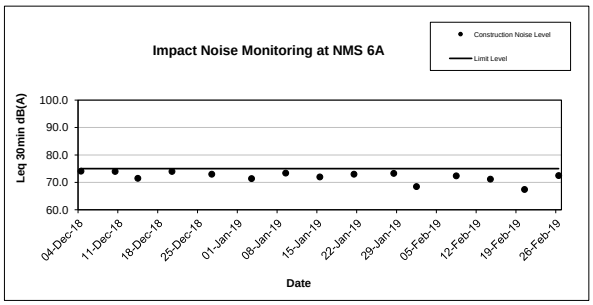
29-Jan-19
05-Feb-19
12-Feb-19
19-Feb-19
26-Feb-19
Date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Limit Level
Leq 30min dB(A)
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90.0
80.0
70.0
60.0
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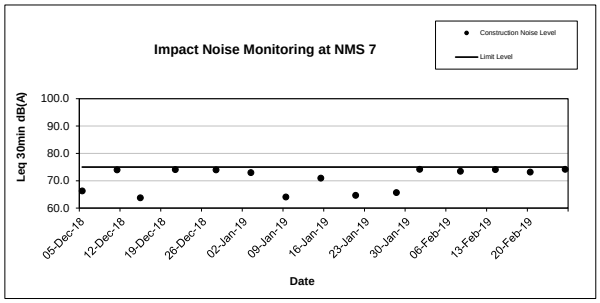
11-Dec-18
18-Dec-18
25-Dec-18
01-Jan-19
08-Jan-19
15-Jan-19
22-Jan-19
29-Jan-19
05-Feb-19
12-Feb-19
19-Feb-19
26-Feb-19
Date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Construction Noise Level
Limit Level
Leq 30min dB(A)
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90.0
80.0
70.0
60.0
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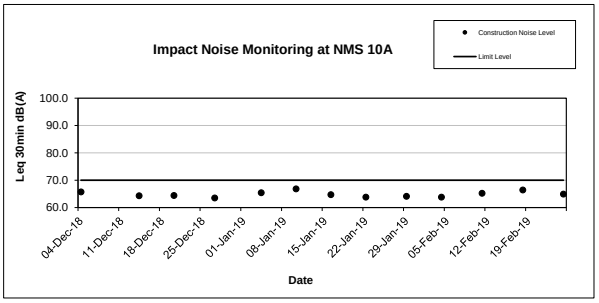
12-Dec-18
19-Dec-18
26-Dec-18
02-Jan-19
09-Jan-19
16-Jan-19
23-Jan-19
30-Jan-19
06-Feb-19
13-Feb-19
20-Feb-19
Date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Construction Noise Level
Limit Level
Leq 30min dB(A)
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90.0
80.0
70.0
60.0
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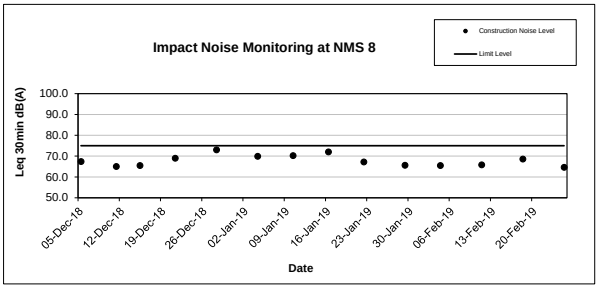
11-Dec-18
18-Dec-18
25-Dec-18
01-Jan-19
08-Jan-19
15-Jan-19
22-Jan-19
29-Jan-19
05-Feb-19
12-Feb-19
19-Feb-19
Date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Construction Noise Level
Limit Level
Leq 30min dB(A)
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90.0
80.0
70.0
60.0
50.0
05-Dec-18
12-Dec-18
19-Dec-18
26-Dec-18
02-Jan-19
09-Jan-19
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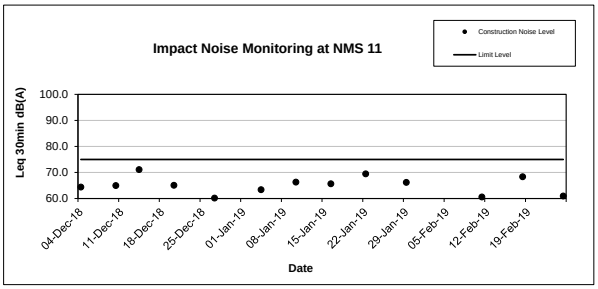
06-Feb-19
13-Feb-19
20-Feb-19
Date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Construction Noise Level
Limit Level
Leq 30min dB(A)
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90.0
80.0
70.0
60.0
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25-Dec-18
01-Jan-19
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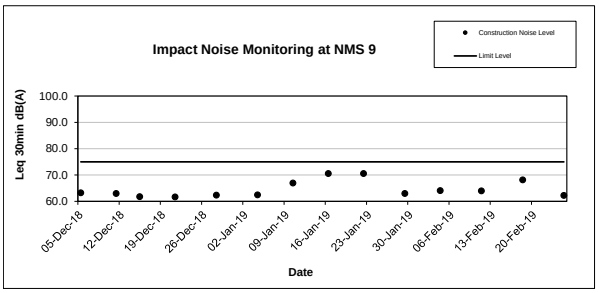
29-Jan-19
05-Feb-19
12-Feb-19
19-Feb-19
Date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Construction Noise Level
Limit Level
Leq 30min dB(A)
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90.0
80.0
70.0
60.0
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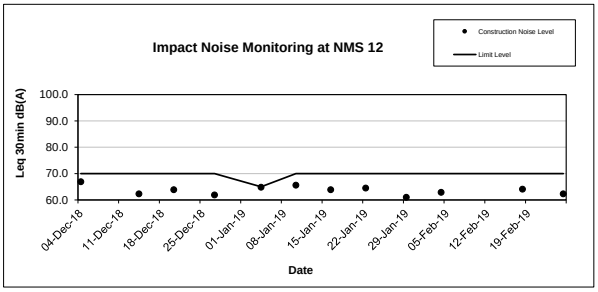
12-Dec-18
19-Dec-18
26-Dec-18
02-Jan-19
09-Jan-19
16-Jan-19
23-Jan-19
30-Jan-19
06-Feb-19
13-Feb-19
20-Feb-19
Date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Limit Level
Leq 30min dB(A)
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90.0
80.0
70.0
60.0
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25-Dec-18
01-Jan-19
08-Jan-19
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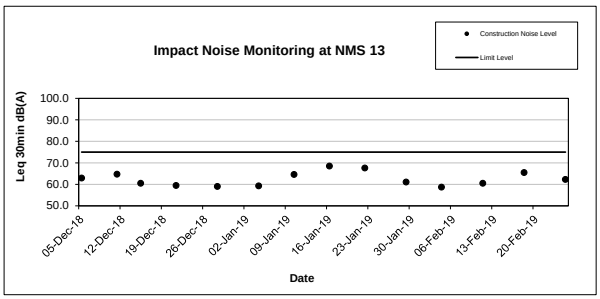
29-Jan-19
05-Feb-19
12-Feb-19
19-Feb-19
Date


Impact Noise Monitoring at NMS 13
Construction Noise Level
Limit Level
Leq 30min dB(A)
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90.0
80.0
70.0
60.0
50.0
05-Dec-18
12-Dec-18
19-Dec-18
26-Dec-18
02-Jan-19
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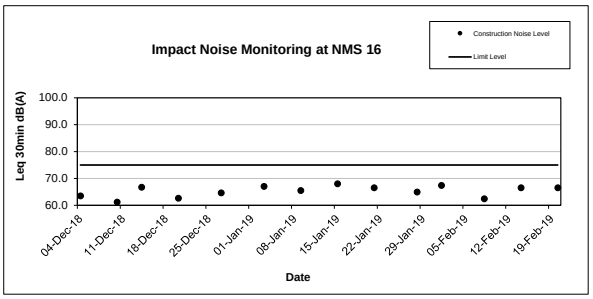
16-Jan-19
23-Jan-19
30-Jan-19
06-Feb-19
13-Feb-19
20-Feb-19
Date


Impact Noise Monitoring at NMS 16
Construction Noise Level
Limit Level
Leq 30min dB(A)
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90.0
80.0
70.0
60.0
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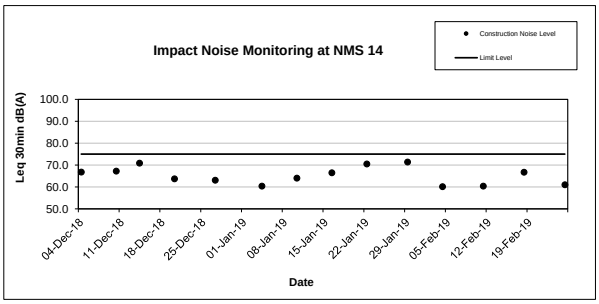
11-Dec-18
18-Dec-18
25-Dec-18
01-Jan-19
08-Jan-19
15-Jan-19
22-Jan-19
29-Jan-19
05-Feb-19
12-Feb-19
19-Feb-19
Date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Limit Level
Leq 30min dB(A)
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70.0
60.0
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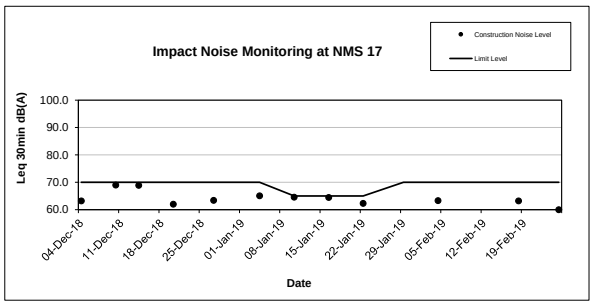
25-Dec-18
01-Jan-19
08-Jan-19
15-Jan-19
22-Jan-19
29-Jan-19
05-Feb-19
12-Feb-19
19-Feb-19
Date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Construction Noise Level
Limit Level
Leq 30min dB(A)
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60.0
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25-Dec-18
01-Jan-19
08-Jan-19
15-Jan-19
22-Jan-19
29-Jan-19
05-Feb-19
12-Feb-19
19-Feb-19
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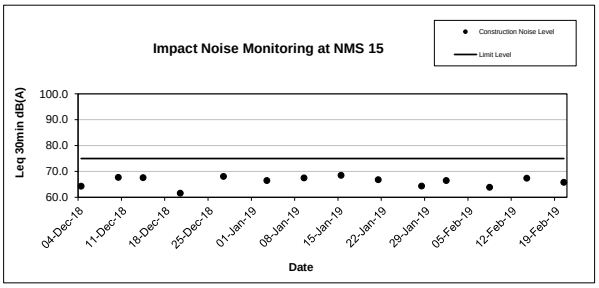
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Construction Noise Level
Limit Level
Leq 30min dB(A)
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25-Dec-18
01-Jan-19
08-Jan-19
15-Jan-19
22-Jan-19
29-Jan-19
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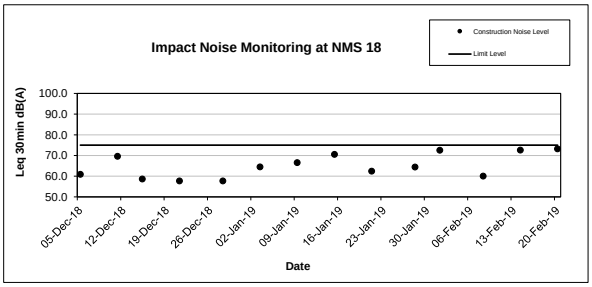
12-Feb-19
19-Feb-19
Date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Limit Level
Leq 30min dB(A)
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50.0
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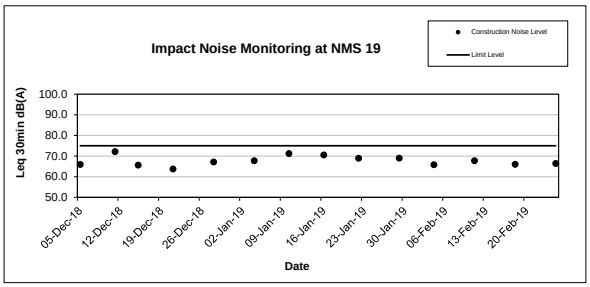
12-Dec-18
19-Dec-18
26-Dec-18
02-Jan-19
09-Jan-19
16-Jan-19
23-Jan-19
30-Jan-19
06-Feb-19
13-Feb-19
20-Feb-19
Date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Limit Level
Leq 30min dB(A)
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70.0
60.0
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26-Dec-18
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16-Jan-19
23-Jan-19
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13-Feb-19
20-Feb-19
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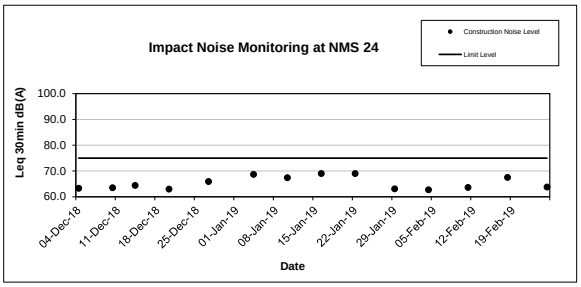
Impact Noise Monitoring at NMS 24
Construction Noise Level
Limit Level
Leq 30min dB(A)
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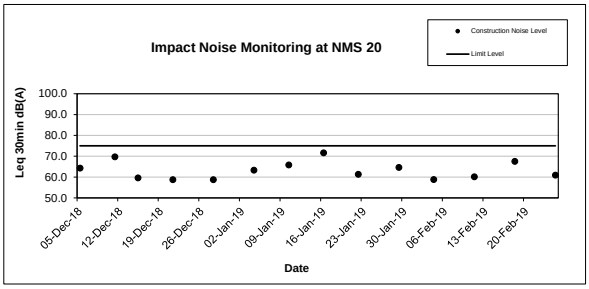
80.0
70.0
60.0
04-Dec-18
11-Dec-18
18-Dec-18
25-Dec-18
01-Jan-19
08-Jan-19
15-Jan-19
22-Jan-19
29-Jan-19
05-Feb-19
12-Feb-19
19-Feb-19
Date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Construction Noise Level
Limit Level
Leq 30min dB(A)
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80.0
70.0
60.0
50.0
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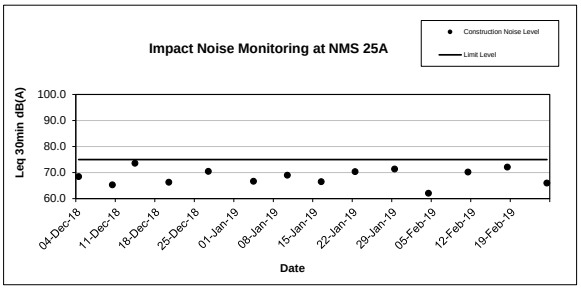
19-Dec-18
26-Dec-18
02-Jan-19
09-Jan-19
16-Jan-19
23-Jan-19
30-Jan-19
06-Feb-19
13-Feb-19
20-Feb-19
Date


Impact Noise Monitoring at NMS 25A
Construction Noise Level
Limit Level
Leq 30min dB(A)
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80.0
70.0
60.0
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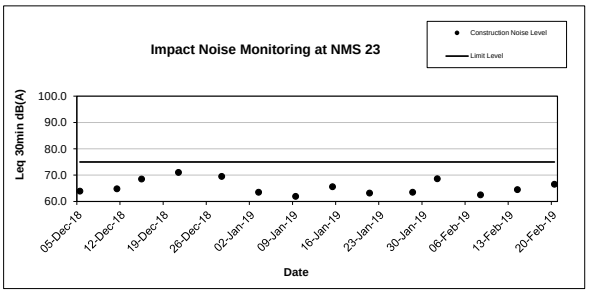
25-Dec-18
01-Jan-19
08-Jan-19
15-Jan-19
22-Jan-19
29-Jan-19
05-Feb-19
12-Feb-19
19-Feb-19
Date


Impact Noise Monitoring at NMS 23
Construction Noise Level
Limit Level
Leq 30min dB(A)
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80.0
70.0
60.0
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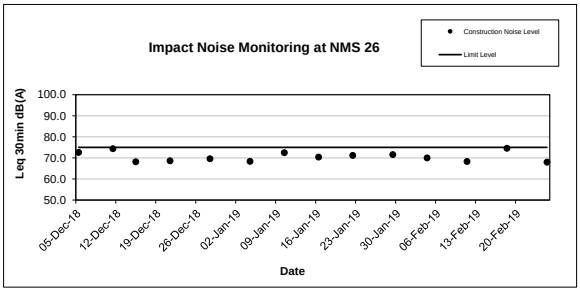
26-Dec-18
02-Jan-19
09-Jan-19
16-Jan-19
23-Jan-19
30-Jan-19
06-Feb-19
13-Feb-19
20-Feb-19
Date


Impact Noise Monitoring at NMS 26
Construction Noise Level
Limit Level
Leq 30min dB(A)
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26-Dec-18
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20-Feb-19
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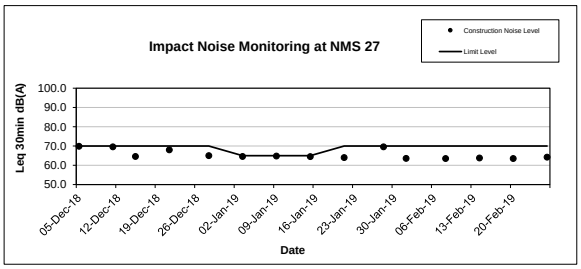
Impact Noise Monitoring at NMS 27
Construction Noise Level
Limit Level
Leq 30min dB(A)
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19-Dec-18
26-Dec-18
02-Jan-19
09-Jan-19
16-Jan-19
23-Jan-19
30-Jan-19
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20-Feb-19
Date

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Appendix E

Waste Flow Table

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Waste Flow Table for Year 2018

Months	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 '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
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

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.

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Waste Flow Table for Year 2019

Months	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 '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
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											
2019 Apr											
2019 May											
2019 Jun											
Sub-Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.070
2019 Jul											
2019 Aug											
2019 Sep											
2019 Oct											
2019 Nov											
2019 Dec											
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.070

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.

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Appendix F

Environmental Mitigation Implementation Schedule (EMIS)

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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	Not Observed
		• 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	Implemented
		• 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	Not Applicable
		• The use of 3m high moveable barriers with skid footing and a small cantilevered upper portion	Contractor	Not Applicable

EIA Review Ref	Location	Environmental Protection Measures/	Implementation Agent	Implementation Status in Construction Phase
		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.		
		• These temporary noise barriers should be located immediately adjacent to working area.	Contractor	Not Applicable
		• 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	Implemented
		• The Contractor shall apply for a license or permit under the requirements of the relevant	Contractor	Implemented

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EIA Review Ref	Location	Environmental Protection Measures/	Implementation Agent	Implementation Status in Construction Phase
		legislation (e.g. Air Pollution Control Ordinance and its subsidiary regulations) wherever applicable.		
		• 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 complete coverage of active construction area eight times a day.	Contractor	Implemented
		• 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	Not Applicable
		• 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 Observed

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

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		(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.		
		• 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	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	Not Applicable
		• The efficiency of the interceptor channels, traps and sedimentation chambers should be maintained 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.	Contractor	Not Applicable
		• 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	Not Applicable

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		• 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. 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.	Contractor	Not Applicable
		• Run off from roofed surfaces of site facilities should be collected and diverted to a storm water drain. Passage through a silt trap is only required if the water is diverted via open .channels which might accumulate solids during non-rainy periods or which intercept surface run off from unpaved areas.	Contractor	Not Applicable

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		• 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	Not Applicable
		(ii) The functioning of interception channels at the boundary of the works areas	Contractor	Not Applicable
		(iii) The covering of stockpiles of fill and construction materials and the routing of any run off through the sediment traps.	Contractor	Not Applicable
		(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	Not Applicable
		(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
		• 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	Contractor	Implemented

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		to minimize any adverse visual impact on adjacent VSRs.		
		• 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 sites.	• 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	Contractor	Implemented

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		disposal of different 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	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	Partially Implemented
		• The effectiveness of the environmental measures on nuisance abatement and waste management implemented on the site, and any complaints received; and	Contractor	Partially Implemented
		• The promptness of rectification or improvement actions of the Contractor on the defects and deficiencies identified during inspections of the site.	Contractor	Partially 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	Contractor	Implemented

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		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 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	Partially 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	Not Applicable
		• 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

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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
		• 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	Contractor	Partially Implemented

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		odour, pest and litter impacts. The burning of refuse on construction sites is prohibited by law.		
		• Separate labelled bins should be provided if feasible.	Contractor	Implemented
		• Office waste can be reduced through recycling of paper if volume is large enough to warrant collection. Participation in a local collection scheme should be considered if one is available.	Contractor	Not Observed
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
		• 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 / Partially Implemented / Not Implemented / Not Observed / Not Applicable