MTR Corporation Limited

Northern Link

Contract 1635 NOL Works Package 1

Baseline Monitoring Report

September 2025

Certified by:	Kenneth Chow	Kenneth Chow
Position:	Environmental Team Leader	
Date:	29 September 2025	

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September 2025

Verified by:	Adi Lee 
Position:	Independent Environmental Checker
Date:	29 September 2025

JOB NO.: TCS01402/25

CONTRACT 1635 –
NORTHERN LINK WORKS PACKAGE 1

BASELINE MONITORING REPORT

PREPARED FOR

CHINA ROAD & BRIDGE CORPORATION

Date	Reference No.	Checked By
18 September 2025	TCS01402/25/600/R0011v2	Contractor's Environmental Team Leader

Ver.	Date	Remarks
1	8 July 2025	First Submission
2	18 September 2025	Amended according to EPD's comments on 10 September 2025

EXECUTIVE SUMMARY

ES.01 The Northern Link (NOL) (hereinafter referred to as "the Project") is one of the seven railway schemes recommended to be taken under in the Railway Development Strategy 2014 ("RDS-2014"). The Project will be a heavy underground railway line with a route length of about 10.7km between Kam Sheung Road (KSR) Station on the Tuen Ma Line (TML) and Kwu Tung (KTU) Station on the Lok Ma Chau Spur Line (LMCSL) of East Rail Line (EAL).

ES.02 In June 2025, China Road and Bridge Corporation (CRBC) was awarded Contract 1635 – NOL Works Package 1 (hereinafter referred to as "this Works Contract"). The major construction works of this Works Contract will commence in October 2025 and be completed in December 2027 tentatively.

ES.03 Action-United Environmental Services and Consulting (AUES) has been commissioned by CRBC as the independent ET to implement the relevant Environmental Monitoring & Audit (EM&A) programme of this Works Contract in accordance with the Project EM&A Manual, to ensure compliance with the Project's environmental performance requirements during construction.

ES.04 In accordance with Condition 3.3 of the Environmental Permit (EP-638/2024), Baseline Monitoring Report should be deposited to the Director at least 2 weeks before the commencement of construction of corresponding parts of the Project. As the construction of NOL is conducted in phases, this Baseline Monitoring Report only covers the Works under this Works Contract. The remaining parts of the Project will be submitted in separate documents in the future.

ES.05 This Baseline Monitoring Report presents the background information about the air quality and noise, and determines a set of Action and Limit Levels (A/L Levels) for the construction phase of this Works Contract.

Air Quality

ES.06 The requirement of baseline air quality monitoring has not been mentioned in the Project EM&A Manual, and thus is considered not required. According to the Project EM&A Manual Section 2.5.1, the air quality criteria for the impact monitoring should refer to the relevant Air Quality Objectives (AQOs). The A/L levels is shown in below table.

ES 1-1 Action and Limit Levels for Impact Dust Monitoring

Monitoring Station No.	A/L Levels	Parameter	Criteria
SMA_AM01	Action Level	1-hour RSP level	150 μg/m^3
SMA_AM02	Limit Level	24-hour RSP level (Rolling average)	100 μg/m^3
		24-hour FSP level (Rolling average)	50 μg/m^3

Airborne Noise

ES.07 According to the Project EM&A Manual Section 3.2.9, the Action and Limit Levels of construction noise monitoring are not based on the baseline noise environment and thus baseline monitoring is considered not necessary. The impact airborne construction noise monitoring results would be compared with noise criteria, namely A/L Levels as shown below table.

ES 1-2 Action and Limit Levels for Airborne Construction Noise Impact Monitoring

Monitoring Station ID	Time Period	Action Level	Limit Level
NM2	0700 - 1900 hours on normal weekdays (1)	When one documented complaint is received	75 dB(A)
	Notes: *1. If works are to be carried out during restricted hours, the conditions stipulated in the construction noise permit issued by the Noise Control Authority have to be followed.*		

ES.08 In cases where the Action and Limit Levels criteria are exceeded, specific actions should be undertaken in accordance with the Event and Action Plan, as shown in the Project EM&A Manual.

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1 INTRODUCTION

1.1 PROJECT DESCRIPTION

1.1.1 The Northern Link (NOL) (hereinafter referred to as "the Project") is one of the seven railway schemes recommended to be taken under in the Railway Development Strategy 2014 ("RDS-2014"). The Project will be a heavy underground railway line with a route length of about 10.7km between Kam Sheung Road (KSR) Station on the Tuen Ma Line (TML) and Kwu Tung (KTU) Station on the Lok Ma Chau Spur Line (LMCSL) of East Rail Line (EAL).

1.1.2 The key elements of the Project as assessed in Environmental Impact Assessment (EIA) Report are listed below:

- Construction and operation of 10.7km underground railway line between KSR(NOL) Station and KTU(NOL) Station;
- Construction and operation of five new stations, namely KSR(NOL) Station, Au Tau (AUT) Station, Ngau Tam Mei (NTM) Station, San Tin (SAT) Station and KTU(NOL) Station;
- Construction and operation of associated railway facilities, including ancillary buildings such ventilation shafts/buildings, Emergency Access Point (EAP) and Emergency Egress Point (EEP);
- Construction and operation of a depot at NTM area; and
- Enabling works to the south of KSR Station for potential southern extension, to the north of SAT Station for potential bifurcation to Lok Ma Chau Loop and Huanggang Port and to the east of KTU(NOL) Station for potential extension to Ping Che areas.

1.1.3 A temporary explosive magazine site for overnight storage of explosives that will be used for the construction of tunnel/adits/railway facilities is proposed at Tai Shu Ha in Yuen Long. This magazine site was formerly used for the construction of the High Speed Rail (Hong Kong Section) (HSR) (formerly named as "the Hong Kong Section of the Guangzhou-Shenzhen-Hong Kong Express Rail Link (XRL)") and the Liantang/Heung Yuen Wai Boundary Control Point (BCP) project. This site will be decommissioned upon completion of the construction works of the Project.

1.1.4 In June 2025, China Road and Bridge Corporation (CRBC) was awarded Contract 1635 – NOL Works Package 1 (hereinafter referred to as "this Works Contract"). The details of this Works Contract are presented in ***Section 1.2***.

1.1.5 Action-United Environmental Services and Consulting (AUES) has been commissioned by CRBC as the independent Environmental Team (ET) to implement the relevant EM&A programme of this Works Contract in accordance with the Project Environmental Monitoring & Audit (EM&A) Manual to ensure compliance with the Project's environmental performance requirements during construction.

1.1.6 In accordance with Condition 3.3 of the Environmental Permit (EP-638/2024), Baseline Monitoring Report should be deposited to the Director at least 2 weeks before the commencement of construction of corresponding parts of the Project. As the construction of NOL is conducted in phases, this Baseline Monitoring Report only covers the Works under this Works Contract. The remaining parts of the Project will be submitted in separate documents in the future.

1.2 DESCRIPTION OF THE WORKS UNDER CONTRACT 1635

1.2.1 To facilitate the future construction of the NOL Main Line, this Works Contract is required to be carried out in advance, which includes the following elements:

- Site clearance / formation;
- Construction of diaphragm wall at Shui Mei Road; and
- Construction of San Tam Road Temporary CLP 132kV Power Substation.

1.2.2 The works activities involve site clearance/formation, erection of hoarding and fencing, diaphragm wall construction, construction of the capping beam, drainage and sewerage works, foundation and superstructure, Architectural Builder's Works and Finishes (ABWF) and Building Service Works (BS).

1.2.3 The layout plan of Contract 1635 is shown in ***Appendix A***. The major construction works of this Works Contract will commence in October 2025 and be completed in December 2027 tentatively.

1.3 ENVIRONMENTAL MONITORING REQUIREMENT

1.3.1 According to the Project's EM&A Manual, the monitoring requirements for this Works Contact are summarized as below:

(a) Baseline monitoring for air quality and airborne noise is not required. The environmental performance criteria i.e., Action/Limit Levels, would be adopted in accordance with the Project's EM&A Manual; and

(b) Upon commencement of construction for the Contract, impact environmental monitoring for dust and airborne noise will be implemented to assess any environmental impacts arising from the Contract and verify the effectiveness of the environmental mitigation measures.

1.4 PURPOSE OF THE REPORT

1.4.1 This Baseline Monitoring Report presents the background information about the air quality and noise, and determines a set of Action and Limit Levels (A/L Levels) for the construction phase of the Project.

2 AIR QUALITY

2.1 INTRODUCTION

2.1.1 Potential air quality impacts arising from the construction phase of the Project were assessed in the EIA Report. The major dusty construction activities of the Project would mainly be related to construction dust from site clearance, site formation, demolition works, excavation works, backfilling, spoil handling, vehicle movement, haul roads within works sites/works areas, and wind erosion of the exposed site area.

2.2 EXISTING ENVIRONMENTAL

2.2.1 This Works Contract is located on Shui Mei Road and San Tam Road. The work site on Shui Mei Road is at immediately south of Park Yoho, with the Agriculture, Fisheries and Conservation Department (AFCD) Au Tau Fisheries Office situated to the west. The work site on San Tam Road is located to the west of San Tam Road and to the east of the Tsing Long Highway. The existing environment in the vicinity of this Works Contract consists of villages, residential areas, open storage, and Government, Institution or Community (G/IC).

2.2.2 The closest EPD's air quality monitoring station (AQMS) to this Works Contract is the Yuen Long AQMS at Yuen Long District Office Building, as published in *Air Quality in Hong Kong*. According to air quality monitoring data recorded at EPD's Yuen Long Station, it is observed that daily and annual averages of RSP and FSP concentration at EPD's Yuen Long complied with prevailing Air Quality Objectives (AQOs) during Year 2020 to 2024. The air quality monitoring data recorded by EPD at Yuen Long during Year 2020 to 2024 are shown in ***Table 2-1***.

Table 2-1 The Air Quality Monitoring Data Recorded at EPD's Yuen Long in Year 2020 - 2024

Pollutant	Averaging Time	AQO [1]	Data Summary	Year [2]				
				2020	2021	2022	2023	2024
Fine Suspended Particulates (FSP)	24-hr	50 (35)	Max.	44	**75**	**64**	**57**	**56**
			36th Max.	28	31	30	30	30
			No. of Exceedance(s)	0	3	5	1	2
	Annual	25	-	16	17	16	16	17
Respirable Suspended Particulates (RSP)	24-hr	100 (9)	Max.	97	**109**	81	85	81
			10th Max.	77	73	56	59	60
			No. of Exceedance(s)	0	1	0	0	0
	Annual	50	-	30	30	25	26	25

Notes:
[1] Values in ( ) mean the number of exceedances allowed per year.
[2] Bolded values mean exceedance of the AQO limit values.
[3] All concentration units are in microgram per cubic metre (μg/m^3).

2.3 MONITORING PARAMETERS

2.3.1 For regulatory purposes, the Respirable Suspended Particulates (RSP) and Fine Suspended Particulates (FSP) levels should be measured by the mean of air sensors such that variations in dust impact on a real-time basis can be observed and any dusty activities occurring in the concerned area can be identified.

2.3.2 In accordance with Section 2.2.1 of the approved EM&A Manual, a weather station will

be installed with the air sensor. Weather data, including temperature, relative humidity, pressure, wind speed, and wind direction should also be monitored simultaneously with the air sensor.

2.3.3 The requirement of baseline air quality monitoring has not been mentioned in the Project EM&A Manual and thus is considered not required. According to Section 2.5.1 of the Project EM&A Manual, the air quality criteria for the impact monitoring should refer to the relevant AQOs.

2.4 DUST MONITORING STATION

2.4.1 A total of 37 dust monitoring stations are recommended in the Project EM&A Manual, of which 2 are related to Contract 1635. The locations of the dust monitoring stations related to Contract 1635 are listed in ***Table 2-2*** and illustrated in ***Appendix B.***

Table 2-2 Dust Monitoring Stations for Contract 1635

Monitoring Station No.	ASR ID in EIA Report	ASR Description
SMA_AM01	SMA-A02	Park Yoho
SMA_AM02	SMA-A04	Au Tau Fisheries Office, Agriculture, Fisheries and Conservation Department (AFCD)

2.5 ACTION AND LIMIT LEVELS

2.5.1 The air quality criteria for impact monitoring should refer to the relevant AQOs. The ET should compare the impact monitoring results with the air quality criteria set for 1-hour RSP, 24-hour RSP and FSP. The air quality criteria, namely A/L levels, may be subject to changes based on the prevailing AQOs implemented at the time of the impact monitoring.

2.5.2 A preliminary study of the ambient air quality data from the nearby air quality monitoring station (i.e., Yuen Long) was conducted. The results indicate that pollutant levels of RSP and FSP frequently approach or exceed the thresholds set by the updated AQOs, even during periods before the commencement of NOL construction. In addition, an analysis of data of 2026 and 2027 was conducted using the PATH model for the grid corresponding to the Park Yoho works site / area. The results indicate that pollutant levels of RSP and FSP persistently approach or exceed the thresholds set by the updated AQOs. Applying the updated AQOs would result in frequent exceedance notifications that may not accurately reflect the actual impact of the project. Therefore, it is proposed to retain the original A/L levels in accordance with the NOL EM&A Manual. The A/L levels for impact air quality monitoring are shown in ***Table 2-3***.

Table 2-3 Action and Limit Levels for Impact Dust Monitoring

Monitoring Station No.	A/L Levels	Parameter	Criteria
SMA_AM01	Action Level	1-hour RSP level	150 μg/m^3
SMA_AM02	Limit Level	24-hour RSP level (Rolling average)	100 μg/m^3
		24-hour FSP level (Rolling average)	50 μg/m^3

2.5.3 The Event and Action Plan prescribes procedures and actions associated with the outcome of the comparison of air quality monitoring data recorded and the agreed A/L

levels. In cases where exceedances of these A/L levels occur, the ET, the Independent Environmental Checker (IEC), the Engineer Representative (ER), and the Contractor should strictly observe the relevant actions of the respective Event and Action Plan listed in ***Table 2-4***.

Table 2-4 Event and Action Plan for Construction Dust Monitoring

EVENT	ACTION			
	ET	**IEC**	**The Engineers**	**The Contractor**
ACTION LEVEL				
Exceedance one 1-hour RSP concentration	1. Notify IEC and the Engineers; 2. Check the monitoring data and error messages to confirm if the performance of the monitoring equipment is normal; 3. If exceedance is confirmed, identify source(s), investigate the causes of exceedance and propose remedial measures; and 4. Assess effectiveness of Contractor's remedial measures and keep IEC, and the Engineers informed of the results until exceedance stops.	1. Check monitoring data submitted by the ET; 2. Check Contractor's working method; 3. Discuss with ET, the Engineers and Contractor on possible remedial measures; 4. Advise the ET and the Engineers on the effectiveness of the proposed remedial measures; and 5. Supervise implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consultation with ET and IEC, agree with the Contractor on the remedial measures to be implemented; and 4. Ensure the proposal for remedial measures are properly implemented.	1. Identify source(s) of exceedance, and discuss with the Engineers, ET and IEC on possible remedial measures; 2. Implement remedial measures; and 3. Amend working methods if appropriate.
Exceedance for two or more consecutive 1-hour RSP concentration	1. Notify IEC and the Engineers; 2. Check the monitoring data and the performance of monitoring equipment (refer to Appendix C of Project EM&A Manual) to confirm if the performance of the monitoring equipment is normal; 3. If exceedance is confirmed, identify source(s), investigate the causes of exceedance and propose remedial measures; 4. Discuss with IEC, the Engineers and Contractor on possible remedial measures required; 5. Assess effectiveness of Contractor's remedial measures and keep IEC, and the Engineers informed of the results until exceedance stops; and	1. Check monitoring data submitted by the ET; 2. Check Contractor's working method and verify the performance of the monitoring equipment to be checked by ET (refer to Appendix C of Project EM&A Manual); 3. Discuss with ET, the Engineers and Contractor on possible remedial measures; 4. Review and advise the ET and ER on the effectiveness of the proposed remedial measures; and 5. Supervise Implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consultation with the ET and IEC, agree with the Contractor on the proposal for remedial measures to be implemented; and 4. Ensure the proposal for remedial measures are properly implemented.	1. Identify source(s) of exceedance and discuss with the Engineers, ET and IEC on possible remedial measures; 2. Submit a proposal for remedial measures to the Engineers, IEC and ET within two working days of notification of exceedance for agreement; 3. Implement the agreed proposals; and 4. Amend proposal as appropriate.

EVENT	ACTION			
	ET	**IEC**	**The Engineers**	**The Contractor**
	6. Notify EPD if the exceedance is confirmed to be related to the Project.			
LIMIT LEVEL				
Exceedance for one 24-hour rolling average RSP concentration record and/or one 24-hour rolling FSP concentration record	1. Notify IEC, the Engineers and Contractor and EPD; 2. Check the monitoring data and the performance of the monitoring equipment (refer to Appendix C of Project EM&A Manual); 3. If exceedance is confirmed, identify source(s), investigate the causes of exceedance and propose remedial measures; 4. Discuss with IEC, the Engineers and Contractor on possible remedial measures required; and 5. Assess effectiveness of Contractor's remedial measures and keep IEC, the Engineers and EPD informed of the results until exceedance stops. 6. Notify EPD if the exceedance is confirmed to be related to the Project.	1. Check monitoring data submitted by the ET; 2. Check Contractor's working method; and verify the performance of the monitoring equipment to be checked by ET (refer to Appendix C of Project EM&A Manual); 3. Discuss with the ET, the Engineers and Contractor on possible remedial measures; 4. Advise the ET and the Engineers on the effectiveness of the proposed remedial measures; 5. Review Contractors' remedial measures whenever necessary to assure their effectiveness and advise ET and the Engineers accordingly; and 6. Supervise implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consultation with the ET and IEC, agree with the Contractor on the proposal for remedial measures to be implemented; 4. Ensure the proposal for remedial measures properly implemented. 5. If exceedance continues, identify what portion of the work is responsible and instruct the Contractor to stop that portion of work until exceedance is abated.	1. Identify source(s) and discuss with the Engineers, ET and IEC on possible remedial measures; 2. Take immediate action to avoid further exceedance; 3. Submit a proposal for remedial measures to the Engineers, ET and IEC within two working days of notification for agreement; 4. Implement the agreed proposals; 5. Review and resubmit proposals if the problem is still not under control. 6. Stop the relevant portion of works as determined by the Engineers until exceedance is abated.

3 AIRBORNE NOISE

3.1 INTRODUCTION

3.1.1 The potential sources of airborne noise impact during the construction phase of the Project would mainly be the use of Powered Mechanical Equipment (PME) for various construction activities.

3.2 EXISTING ENVIRONMENTAL

3.2.1 This Works Contract is located on Shui Mei Road and San Tam Road. The existing environment of Shui Mei Road is comprised of low-rise residential developments and scattered rural industrial operations, such as open storage, warehouses and container backup areas. The loading and unloading activities near private storage area also contribute to the overall ambient noise levels. Whilst the work site on San Tam Road is located to the west of San Tam Road and to the east of the Tsing Long Highway, and the existing environment of San Tam Road is dominated by road traffic noise.

Prevailing Background Noise Measurement Results

3.2.2 During the EIA, background noise measurements were conducted at various locations in the vicinity of the Project to obtain prevailing background noise levels during weekdays and weekends. The closest measurement location to this Works Contract was Location M03, situated near Keen Garden Phase 1, which represents the NSRs including Park Yoho. The location of M03 is shown in ***Appendix C*** for reference. Recent site visits revealed that the existing noise environment in the vicinity of this Works Contract has not significantly changed since the EIA stage. Therefore, the prevailing noise measurements of Location M03 recorded during the EIA are considered valid and comparable to the current background conditions.

3.2.3 According to the EIA Report Section 4.3, sound level meters in compliance with International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1) specifications were used for carrying out the noise measurements. Immediately prior to and following each noise measurement, the accuracy of the sound level meter was checked using an acoustic calibrator generating 94dB at 1000 Hz. Measurements were considered valid with the calibration level from before and after the noise measurement within 1.0 dB(A).

3.2.4 Prevailing background noise was measured in L_{90} (1hr). During the noise measurement, the following procedures were followed:

- Parameters such as frequency weighting, the time weighting and the duration of measurement were set as follows:
  - Frequency weighting: A
  - Time weighting: Fast
  - Duration of measurement: at least 24 hours continuously to cover both daytime and night-time periods (with data being logged at every one second)
- Noise measurements were conducted in accordance with standard acoustic principles and practices in the relation to weather conditions.

3.2.5 For the measurement conducted under free-field condition at Location M03, a façade correction of +3dB(A) was added to the measurement result to account for the façade

reflection effect. The prevailing noise measurement results at Location M03, extracted from the EIA report are shown in ***Table 3-1***.

Table 3-1 Prevailing Background Noise Measurement Result at Location M03

Location ID	Measurement Location	Dominant Noise Source	Measurement Condition (Free-field / Façade)	Measured Noise Level, L90 (1hr), dB(A)			
				Daytime and Evening (0700 to 2300 hours)		Night-time (2300 to 0700 hours)	
				Weekday	Weekend	Weekday	Weekend
M03	Near In Keen Garden Phase 1	Loading and unloading activities near private storage area	Free-field	47	49	42	43

3.3 MONITORING PARAMETERS

3.3.1 The construction noise level should be measured in terms of the A-weighted equivalent continuous sound pressure level (Leq). $L_{eq\ 30min}$ should be used as the monitoring parameter for the time period between 0700 and 1900 hours on normal weekdays.

3.3.2 According to the EM&A Manual Section 3.2.9, given that there would be various concurrent projects along the NOL alignment, baseline monitoring in the absence of construction activities would not be feasible. In addition, the Action and Limit Levels of construction noise monitoring are not based on the baseline noise environment and thus baseline monitoring is considered not necessary.

3.4 NOISE MONITORING LOCATION

3.4.1 Based on the findings of the EIA Report, a total of 9 designated noise monitoring stations, including 6 existing and 3 planned NSR monitoring stations, are recommended in the Project EM&A Manual. Construction noise impact monitoring should be conducted at the monitoring stations when there are Project-related construction activities being undertaken within a radius of 300m from the monitoring stations. Regarding all NSR locations, there is one noise monitoring station related to Contract 1635. It is listed in ***Table 3-2*** and illustrated in ***Appendix B.***

Table 3-2 Noise Monitoring Station during Construction Phase for Contract 1635

Monitoring Station ID	Noise Assessment Point (NAP ID) in EIA Report	NSR Description	Construction Activity under Contract 1635
NM2	SMR-E1	Tower 8B, Park Yoho	• site clearance / formation; • erection of hoarding and fencing; • diaphragm wall construction; • construction of capping beam; • drainage and sewerage works; • foundation and superstructure; • ABWF; and • BS.

3.4.2 In addition, according to EIA Report Figure C1603/C/NOL/ACM/M52/333, there is a proposed school site in the Park Yoho Phase 3 Development (planned NSR PN13b), which is located adjacent to the Shui Mei Road work site. A recent site inspection revealed that this proposed school has not yet been established, and the Contractor has been reminded to remain aware of its status.

3.5 ACTION AND LIMIT LEVELS

3.5.1 The ET should compare the airborne construction noise monitoring results with noise criteria. **Table 3-3** shows the noise criteria, namely the A/L Levels to be used.

Table 3-3 Action and Limit Levels for Airborne Construction Noise Impact Monitoring

Monitoring Station ID	Time Period	Action Level	Limit Level
NM2	0700 - 1900 hours on normal weekdays (1)	When one documented complaint is received	75 dB(A)

Notes:
1. *If works are to be carried out during restricted hours, the conditions stipulated in the construction noise permit issued by the Noise Control Authority have to be followed.*

3.5.2 In the event of exceedances or Project-related complaints, the Contractor should review the effectiveness of the mitigation measures and propose, design and implement alternative or additional measures as appropriate. The Contractor should liaise with the ET and ER on alternative or additional remedial measures, if necessary, and the proposal of these measures should be submitted to the ER and IEC for agreement. The Contractor should implement the agreed remedial measures properly.

3.5.3 Should non-compliance with the noise criteria occur, actions in accordance with the Event and Action Plan in **Table 3-4** should be carried out.

Table 3-4 Event and Action Plan for Construction Noise Monitoring

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action level being exceeded	1. Notify IEC, ER and Contractor; 2. Identify source and carry out investigation; 3. Discuss with the Contractor and formulate remedial measures; and 4. Increase monitoring frequency to check mitigation effectiveness if the exceedance is relevant to the Project-related construction activities.	1. Review the analysed results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; and 3. Ensure remedial measures properly implemented.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; and 4. Ensure remedial measures are properly implemented.	1. Identify source, and carry out investigation and report the investigation to the ET, IEC and ER; 2. Submit noise mitigation proposals to IEC and ER; and 3. Implement noise mitigation proposals.
Limit level	1. Notify IEC, ER, EPD and	1. Check monitoring	1. Confirm receipt of notification of	1. Identify source and carry out

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
being exceeded	Contractor; 2. Identify source and carry out investigation; 3. Repeat measurements to confirm findings; 4. Increase monitoring frequency if the exceedance is relevant to the Project-related construction activities; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Inform IEC, ER and EPD the causes and actions taken for the exceedances; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; and 8. If exceedance stops, cease additional monitoring.	results and discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and 3. Ensure remedial measures properly implemented.	failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures properly implemented; and 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	investigation and report the investigation to the ET, IEC and ER; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial actions to ER, ET and IEC within 3 working days of notification; 4. Implement the agreed proposals; 5. Resubmit proposals if problem still not under control; and 6. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

4 CONCLUSIONS

4.1 CONCLUSIONS

4.1.1 The requirement of baseline air quality monitoring has not been mentioned in the Project EM&A Manual and is therefore considered not required. In addition, according to the Project EM&A Manual Section 3.2.9, the Action and Limit Levels of construction noise monitoring are not based on the baseline noise environment, and thus baseline monitoring is considered not necessary.

4.1.2 This Baseline Monitoring Report presents the background information about the air quality and noise, and determines a set of Action and Limit Levels (A/L Levels) for the construction phase of this Works Contract. As the construction of NOL is conducted in phases, this Baseline Monitoring Report only covers the Works under this Works Contract. The remaining parts of the Project will be submitted in separate documents in the future.

4.1.3 The recommended environmental performance criteria for air quality and construction noise are summarized as follows:

Recommended Action and Limit Levels for Impact Dust Monitoring

Monitoring Station No.	A/L Levels	Parameter	Criteria
SMA_AM01	Action Level	1-hour RSP level	150 μg/m^3
SMA_AM02	Limit Level	24-hour RSP level (Rolling average)	100 μg/m^3
		24-hour FSP level (Rolling average)	50 μg/m^3

Recommended Action and Limit Levels for Airborne Construction Noise Impact Monitoring

Monitoring Station	Time Period	Action Level	Limit Level
NM2	0700 - 1900 hours on normal weekdays (1)	When one documented complaint is received	75 dB(A)
	Notes: *1. If works are to be carried out during restricted hours, the conditions stipulated in the construction noise permit issued by the Noise Control Authority have to be followed.*		

4.1.4 In cases where the Action and Limit Levels criteria are exceeded, specific actions should be undertaken in accordance with the Event and Action Plan as shown in the Project EM&A Manual.

Appendix A

Layout Plan of Contract 1635

MATCH LINE
FOR CONTINUATION
SEE DWG.1635/T/000/PLD/P07/002

SHA PO TSUEN ROAD

CASTLE PEAK ROAD - TAM MI

SHUI MEI ROAD

Park Yoho

Park Yoho Venezia

Park Yoho Genova

Park Yoho Napoli

Park Vista 1A

1635.W1
1635.W2A
1635.W2B
1635.W3A
1635.W3B
1635.W4
1635.W5

AFCD Au Tau Fisheries Office

長春新村
CHEUNG CHUN SAN TSUEN

南生圍
NAM SAN WAI

錦田
KAM TIN

元朗
YUEN LONG

002
001

KEY LOCATION PLAN
NOT TO SCALE

LEGEND:

WORKS SITE/
WORKS AREA BOUNDARY

PUBLIC ROAD / FOOTPATH

BOUNDARY OF THE SCHEME

0 10 20 30 40 50
METRES
1 : 1000

MTR

NORTHERN LINK

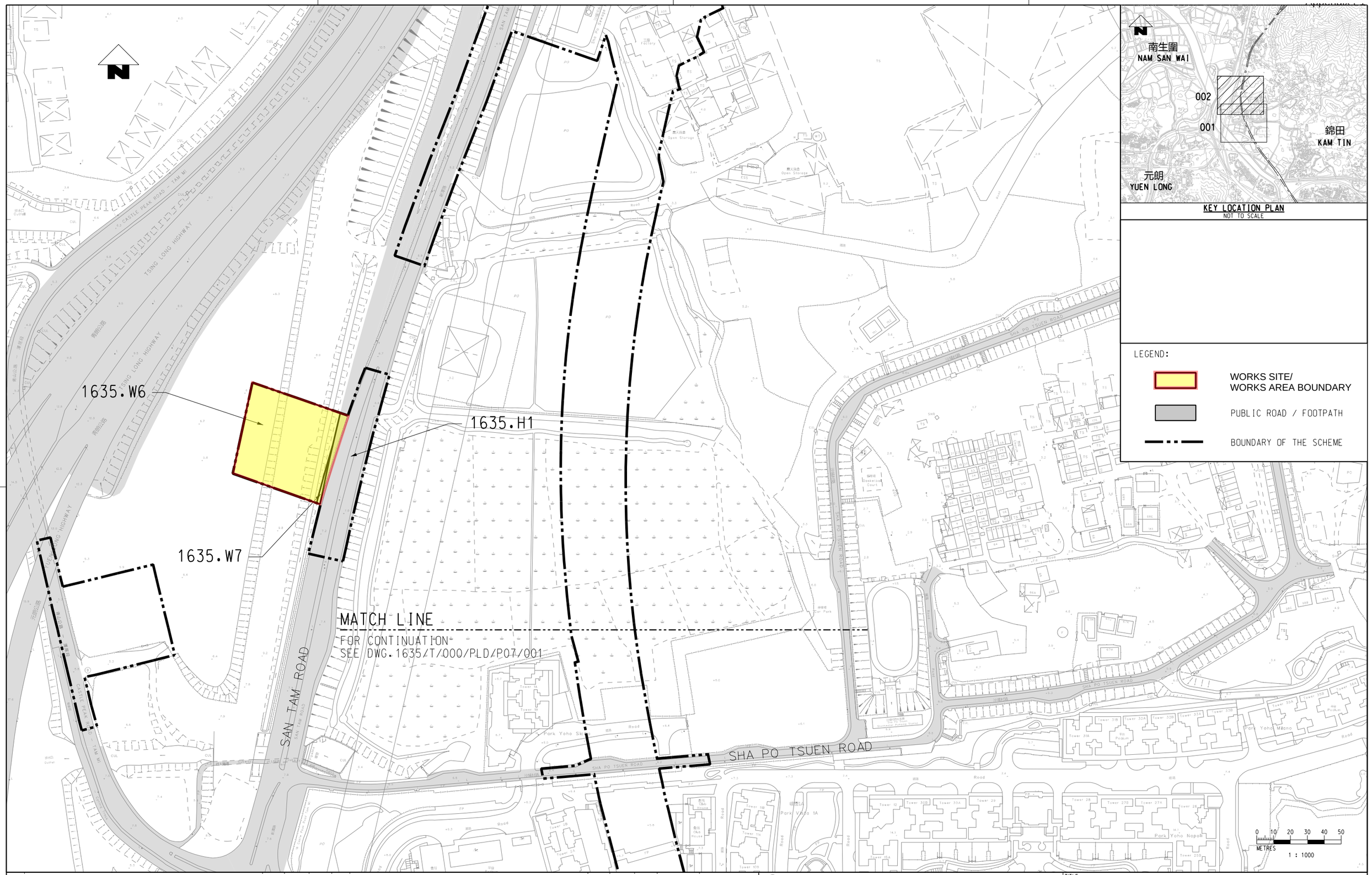
ORIGINATOR

中國路橋工程有限責任公司
CHINA ROAD AND BRIDGE CORPORATION

TITLE

CONTRACT 1635
KEY PLAN OF WORKS SITE/ WORKS AREA
SHEET 1 OF 2

SCALE
1 : 1000 (A1)



MTR

NORTHERN LINK

ORIGINATOR

中國路橋工程有限責任公司
CHINA ROAD AND BRIDGE CORPORATION

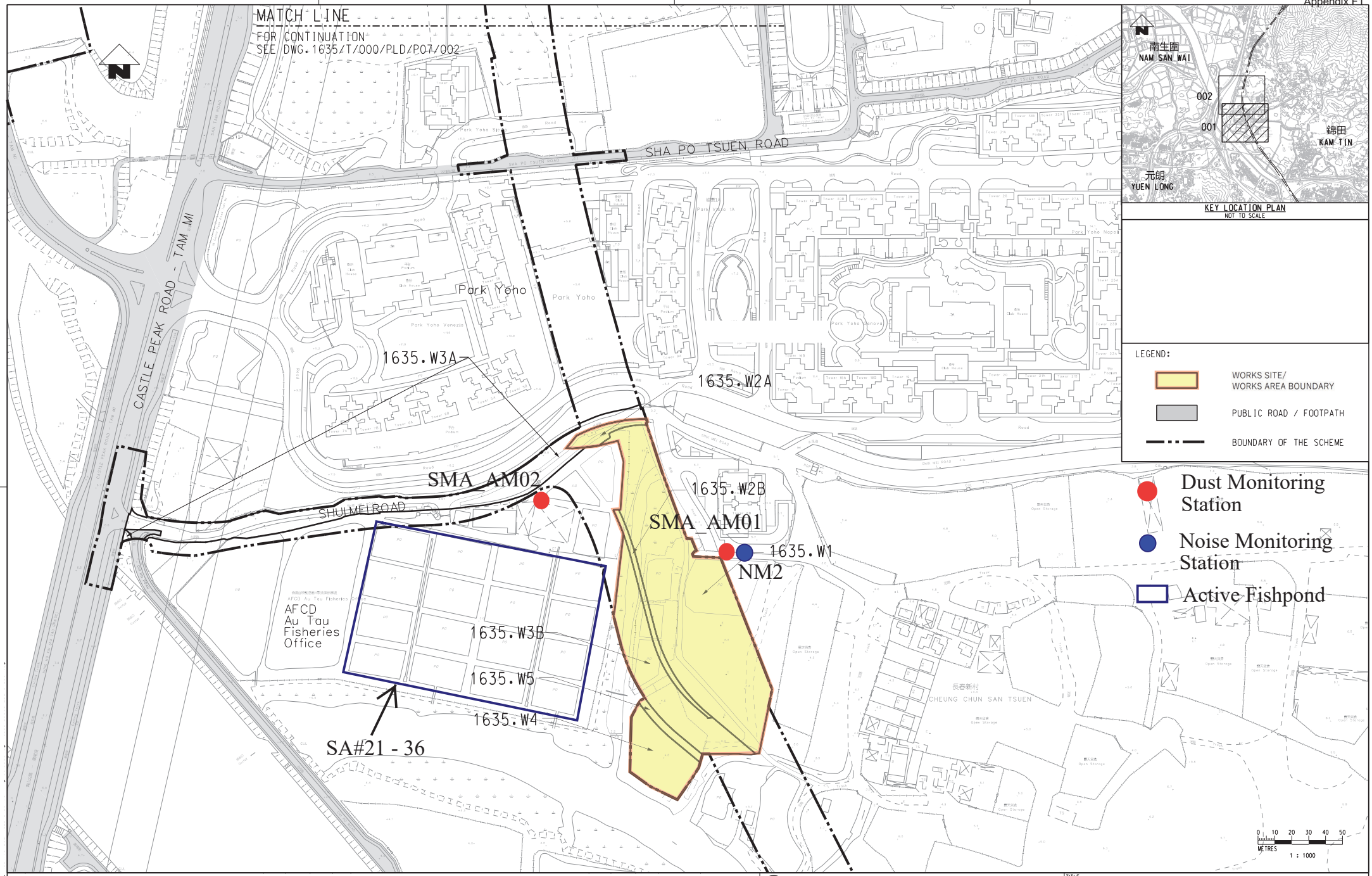
TITLE

CONTRACT 1635
KEY PLAN OF WORKS SITE/ WORKS AREA
SHEET 2 OF 2

SCALE
1 : 1000 (A1)

Appendix B

Locations of Environmental Monitoring Stations



MTR

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ORIGINATOR

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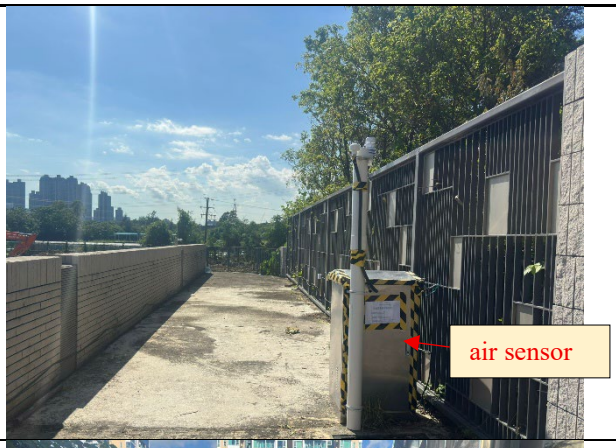
CHINA ROAD AND BRIDGE CORPORATION

TITLE

CONTRACT 1635

LOCATION PLAN OF MONITORING STATION

Photo Record of Environmental Monitoring Station

Monitoring Station ID	ASR Description	Photo
SMA_AM01	Park Yoho	
SMA_AM02	Au Tau Fisheries Office, Agriculture, Fisheries and Conservation Department (AFCD)	

Monitoring Station ID	NSR Description	Photo
NM2	Tower 8B, Park Yoho	 Remark: The location of NM2 in the photo is indicative only.

Appendix C

Location of Prevailing Background Noise Measurement

LOK MA CHAU LOOP

SHEUNG SHUI

FANLING

FAIRVIEW PARK

KAI KUNG LENG

YUEN LONG

后海灣
(深圳灣)
DEEP BAY
(SHENZHEN BAY)

820000 E
825000 E
830000 E
840000 N
835000 N
830000 N

LMC

PAK SHEK AU ANCILLARY BUILDING (EAP/EEP)

KWU TUNG ROAD ANCILLARY BUILDING (EAP/EEP/VB)

SAN TIN ANCILLARY BUILDING (EEP/VB)

KA LUNG ROAD ANCILLARY BUILDING (EAP/EEP)

NGAU TAM MEI DEPOT

LONG HA TSUEN ANCILLARY BUILDING (EAP/EEP)

POK WAI ANCILLARY BUILDING (EAP/EEP/VB)

SHUI MEI ROAD ANCILLARY BUILDING (EAP/EEP/VB)

KTU
SAT
NTM
AUT
KSR

M01
M03
M04
M05
M06
M07
M08
M09
M11a
M12

C1603/C/NOL/ACM/M52/302


Photo of M03

LEGEND:

- PROPOSED NOL ALIGNMENT
- 300m ASSESSMENT AREA
- PROPOSED RAILWAY STATION OR OTHER RAILWAY FACILITIES
- PROPOSED UNDERGROUND RAILWAY STATION / OTHER RAILWAY FACILITIES / WORKS SITE
- PREVAILING BACKGROUND NOISE MEASUREMENT POINT

REMARKS:
EAP - EMERGENCY ACCESS POINT
EEP - EMERGENCY EGRESS POINT
VB - VENTILATION BUILDING

0 250 500 750 1000 1250m
METRES
A3 1 : 50000

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REV	DESCRIPTION	BY	DATE	APPROVED	REV	DESCRIPTION	BY	DATE	APPROVED

DRAWN	YFB
DESIGNED	---
CHECKED	---
APPROVED	---
DATE	15/OCT/2022

MTR
NORTHERN LINK
ORIGINATOR
AECOM
CADD REF. C1603_C_NOL_ACM_M52_301.dgn

TITLE
C1603
ENVIRONMENTAL IMPACT ASSESSMENT STUDY FOR NORTHERN LINK
LOCATIONS OF PREVAILING BACKGROUND NOISE MEASUREMENT

SCALE 1 : 50000 (A3)
DRAWING NO. C1603/C/NOL/ACM/M52/301
REV. -