


MTR Corporation Limited

Tung Chung Line Extension

Construction Noise Management Plan
(for Works Contract No. 1202)
(Condition 2.13 of EP-614/2022)

Certified by: _____ Edan Li  _____

Position: Environmental Team Leader

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MTR Corporation Limited



Tung Chung Line Extension

Contract 1202

**Tung Chung East Station and Associated Enabling Works for Track
Diversions**

Contract Specific Construction Noise Management Plan

November 2023

	Name	Post	Signature
Prepared by	Joe Ho	Environmental Team Consultant	
Certified by	F. C. Tsang	Contractor's Environmental Team Leader	

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1. Introduction

1.1 Project Background

- 1.1.1 The Railway Development Strategy 2014 (RDS-2014) announced by the Government of the Hong Kong Special Administrative Region included the conceptual scheme of Tung Chung West (TCW) Extension and a possible Tung Chung East (TCE) Station.
- 1.1.2 The potential environmental impact of this new railway system has been assessed and included in the approved Schedule 3 Environmental Impact Assessment (EIA) for Tung Chung New Town Extension (TCNTE), which has included the new stations at TCE area and TCW area and the associated trackwork and tunnel. However, a separate Schedule 2 EIA study for this railway system is conducted to address the associated environmental impacts, taking into account of the latest design.
- 1.1.3 The at-grade TCE Station will be located approximately 2 km east of the existing Tung Chung Station (TUC) at the south of the future TCNTE new reclamation area. The station is bounded by the future roads in the reclamation area and the existing TCL and Airport Express Line (AEL).
- 1.1.4 The EIA Report for Tung Chung Line Extension (AEIAR-235/2022) was approved on 12 July 2022 and the Environmental Permit (EP) (No. EP-614/2022) was then issued on 9 August 2022.
- 1.1.5 Under Contract 1202, the scope of work includes:
- Construction of a new TCE Station between Sunny Bay Station and Tung Chung Station.
 - Construction of two footbridges connecting TCE and Area 113 development.
 - Cable containment and associated enabling works for track diversions.
 - Construction of station associated building services and Architectural Builders Works and Finishes (ABWF).

1.2 Purpose of the Plan

- 1.2.1 Two Construction Noise Management Plans (CNMP) are submitted under EP (EP-614/2022). One CNMP is submitted for Contract 1201 (Tung Chung West Station, tunnels and barging facilities), another CNMP is submitted for Contract 1202 (Tung Chung East Station and Associated Enabling Works for Track Diversions). Only works and associated construction noise mitigation measures under Contract 1202 is reviewed and discussed in this CNMP. This CNMP covers the construction works from November 2023 until the completion of construction works in February 2028 only.
- 1.2.2 With reference to Clause 2.13 of the EP (EP-614/2022), the purposes of this CNMP are to:
- Identify the noise source inventory and assess the effectiveness of construction noise mitigation measures, including the use of quieter powered mechanical equipment, noise barriers and noise enclosures as recommended in the Environmental Impact Assessment (EIA) Report (EIA Ordinance Register No. AEIAR-235/2022).

- Review the practicality of the use of quieter construction equipment/methods; and
- Propose implementation schedule in table form to clearly list out the mitigation measures to be implemented, and the implementation party, location, timing, and environmental performance required for implementation of the mitigation measures.

1.2.3 As stipulated in Clause 2.13 of the EP (EP-614/2022), all mitigation measures recommended and requirements specified in the CNMP shall be fully implemented.

2. Description of Construction Works in the Study Area

2.1 Legislation and Standards

2.1.1 The main piece of legislation controlling environmental noise impact is the Noise Control Ordinance (NCO). The NCO enables regulations and Technical Memoranda (TM) to be made, which introduce detailed control criteria, measurement procedures and other technical matters.

2.1.2 Construction noise is governed under the following TMs:

- Technical Memorandum on Noise from Percussive Piling (PP-TM);
- Technical Memorandum on Noise from Construction Work other than Percussive Piling (GW-TM); and
- Technical Memorandum on Noise from Construction Work in Designated Areas (DA-TM).

2.1.3 In addition, the construction contractor shall comply with the following requirements under the NCO:

- Hand-held breakers having a mass of above 10 kg and any air compressor capable of supplying compressed air at 500 kPa or above must be fitted with a Noise Emission Label issued under the Noise Control (Hand Held Percussive Breakers) Regulation and Noise Control (Air Compressors) Regulation of NCO.
- The construction contractor must apply for and receive a Construction Noise Permit (CNP) from the Environmental Protection Department (EPD) for percussive piling (at any time) or any other construction activities conducted within the Restricted Hours. (Should an application for a CNP be deemed necessary, the Noise Control Authority will process CNP application based on the NCO, the relevant technical memoranda under the NCO, and the contemporary conditions disregard of the assessment results in this CNMP. To minimize the construction noise impact, alternative construction methods to replace percussive piling shall be proposed as far as practicable.)

2.1.4 For noise arising from construction activities during non-restricted hours (i.e. 7 am to 7 pm from Monday to Saturday, not including public holidays), the noise impact is assessed against the noise standards stipulated in Table 1B of Annex 5 in the Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM).

2.1.5 It is anticipated that construction works will be carried out between 7 a.m. and 7 p.m. on working days except Sundays and public holidays. The construction noise impacts are assessed with reference to the EIAO-TM as shown in **Table 2.1**.

Table 2.1 Construction Noise Criteria for Non-Restricted Hours

Uses	Noise Standard (dB(A))
Domestic Premises, Hotels and Hostels	75
Educational Institutions (normal periods)	70
Educational Institutions (during examination periods)	65

Notes:

[1] The above standards apply to uses which rely on openable windows for ventilation.

[2] The above standards shall be viewed as the maximum permissible noise levels assessed at 1 m from the external façade.

2.1.6 The Noise Control Authority will consider a well-justified CNP application for construction works within restricted hours (i.e. 7 pm to 7 am and any time on a general holiday, including Sunday) as guided by the relevant Technical Memorandum issued under the NCO. The Noise Control Authority will take into account adjoining land uses and any previous complaints against construction activities at the site before making a decision. The Noise Control Authority may include any conditions in a CNP that it considers appropriate. Failure to comply with any such conditions may lead to cancellation of the CNP and prosecution action under the NCO.

2.2 Airborne Construction Noise Impact Assessment Methodology

2.2.1 With reference to Section 4.4.1.2 of the approved EIA report (Register No. AEIAR-235/2022), the construction noise impact assessment was conducted as the following procedure:

- Determine 300 m from the boundary of the Project and from any works of the Project;
- Identify and locate representative NSRs that may be affected by the works;
- Obtain the construction method and work sequence for the construction period;
- Obtain the construction plant inventory for each corresponding construction work sequence;
- Determine the Sound Power Levels (SWLs) of the plant items according to the information stated in the GW-TM or other recognised sources of reference, where appropriate;
- Calculate the correction factors based on the distance between the Noise Sensitive Receivers (NSRs) and the notional noise source positions of the work sites;
- Apply corrections for façade, distance, barrier attenuation, acoustic reflection where applicable;
- Predict construction noise levels at the NSRs;
- Quantify the level of impact at the NSRs, in accordance with GW-TM;
- Predict the cumulative noise impacts for any concurrent construction works (e.g. Tung Chung New Town Extension (TCNTE)) in the vicinity of the proposed work;

- For any exceedance of noise criteria, all practical mitigation measures such as alternative quieter construction methodology, quiet plant, silencer, enclosure, etc, shall be examined to alleviate the predicted noise impacts as much as practicable; and
- Consideration of noise mitigation measures will follow Annex 13 of Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM) and EIAO Guidance Note “Preparation of Construction Noise Impact Assessment under the Environmental Impact Assessment Ordinance” [GN 9/2010].

2.3 Identification of Assessment Area and Noise Sensitive Receivers

2.3.1 The assessment area for airborne construction area includes the area within 300 m outside boundary of the Project site. With reference to the Noise Sensitive Receivers (NSRs) identified in the approved EIA report (Register No. AEIAR-235/2022) where to be affected by the airborne construction noise induced by the Project, seven (7) representative NSRs, including three (3) existing NSRs and four (4) planned NSRs which would be affected by the construction noise of Contract 1202 are summarized in **Table 2.2** and their corresponding Noise Assessment Points (NAPs) is presented in **Appendix 2.1**.

Table 2.2 Representative NSRs for Construction Noise Assessment

ID No. ^[1]	NSRs ^[2]	Land Use	No. of Storey	NAP ^[5]	Population Intake Year
Existing NSRs					
E1	Ying Tung Estate	Residential Premises	35 – 40	YTT-02f	NA ^[4]
E20	Ho Yu College and Primary School	Educational Institutions	7	EHYC-01a	NA ^[4]
E21	Lantau North (Extension) Country Park	Others	NA ^[4]	LNCP-01	NA ^[4]
Planned NSRs					
P1 ^[3]	Residential Premises in Tung Chung East – Area 100	Residential Premises	40 ^[3]	A100-02j	2025 ^[6]
	Residential Premises in Tung Chung East – Area 116	Residential Premises	32 ^[3]	A116-01c	2029
	Residential Premises in Tung Chung East – Area 133a	Residential Premises	32 ^[3]	A133a-01b	2030
P4 ^[3]	Tung Chung Area 113	Residential Premises	31 – 58 ^[3]	A113-01e, A113-12e	2027

Note:

[1] The assessment will only include the NSRs which rely on opened windows for ventilation.

[2] Only the first tier of NSRs has been selected for assessment.

[3] Referring to the updated information concluded in the previously submitted CNMP prepared by Ove Arup & Partners Hong Kong Limited.

[4] NA – Not applicable.

[5] NAP – Noise Assessment Point

[6] The population intake year for Area 100 has been reviewed and updated according to information provided by the Housing Department on 25 May 2023.

2.3.2 The existing NSRs has been revisited in May 2023. No change of the NSRs was observed. Thus, no update is made for the existing NSRs listed in **Table 2.2**.

2.3.3 In view of no change or update for the NSRs identified in the EIA Report (Register No. AEIAR-235/2022), the above-mentioned NSRs are still considered valid for the assessment work.

2.4 Inventory of Noise Sources

2.4.1 With reference to the tentative construction programme given in **Appendix 2.2**, which has been agreed and confirmed by the project engineer from Main Contractor, the key airborne construction activities to be undertaken in this Project are summarized below:

- Construction of the above-ground TCE Station;
- Realignment of ballast tracks to the TCE Station;
- Works such as site clearance, site formation and reinstatement, etc.

2.4.2 No change of key airborne construction activities was observed between the key airborne construction activities summarized in Section 4.4.2.2 of the approved EIA Report (EIA Ordinance Register No. AEIAR-235/2022) and the latest construction programme. Thus, the key airborne construction activities identified in the approved EIA Report (EIA Ordinance Register No. AEIAR-235/2022) are still considered valid.

2.4.3 The list of Power Mechanical Equipment (PME) to be used for carrying out the construction work of TCE station and associated enabling works for track diversions has been confirmed by the project engineers from the Main Contractor and summarized in **Table 2.3**. The list of PME is extracted from the approved EIA Report (EIA Ordinance Register No. AEIAR-235/2022) and no major change of PME model and relevant Sound Power Levels (SWLs) was made on the list. SWLs established according to GW-TM for each PME to be used for the Project are also presented in **Table 2.3**.

2.4.4 No update was made on the concurrent projects and workfronts. As the construction programme and plant inventories under Contract 1202 have been updated, the cumulative noise levels of each NAPs listed in **Table 2.6** is different from the levels documented in both approved EIA Report (EIA Ordinance Register No. AEIAR-235/2022) and the previously approved CNMP. The updated construction programme and plant inventories have been reviewed and confirmed as workable and practicable by the project engineers from the Main Contractor.

Table 2.3 Sound Power Levels of Powered Mechanical Equipment

PME	Unmitigated SWLs			PME			Mitigated Scenario	
	Identification Code	Description	PME SWL, dB(A)	ID Code ^{[1][2]}	Model / Size	PME SWL, dB(A)	Barrier, dB(A) ^[6]	PME SWL, dB(A)
Air Compressor	CNP003	Air compressor, air flow > 30m ³ /min	104	EPD-09708 ^[3]	AIRMAN, PDS185S-5C5	94	-10	84
Bar Bender and Cutter	CNP021	Bar bender and cutter (electric)	90	–	–	–	-10	80
Hand-Held Breaker	CNP026	Breaker, hand-held, mass > 35kg	114	EPD-13019 ^[4]	Hilti, TE 800-AVR	101	-5	96
Breaker, Excavator Mounted	CNP028	Breaker, excavator mounted (hydraulic)	122	–	–	–	-10	112
Cherry Picker	CPME#	Aerial work platform, working height ≤ 13m	95	–	–	–	-5	90
Concrete Lorry Mixer/ Concrete Truck	CNP044	Concrete lorry mixer	109	–	–	–	-5	104
Concrete Mixer/ Bentonite Mixer/ Grout Mixer	CNP045	Concrete mixer (electric)	96	–	–	–	-10	86
Concrete Pump/ Electric Bentonite Circulation Pump	CNP047	Concrete pump, stationary / lorry mounted	109	–	–	–	-10	99
Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	CNP048	Crane, mobile / barge mounted (diesel)	112	EPD-09130	Kobelco, CKS900	101	-5	96
Electric drill	CNP064	Drill, percussive, hand-held (electric)	103	EPD-08781	Hilti, TE 1000-AVR	99	-5	94
Grinder	CNP065	Drill/grinder, hand-held (electric)	98	–	–	–	-5	93
Dump Truck	CPME#	Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne	105	–	–	–	-5	100
Drill Rig, DTH Drilling Machine	CPME#	Drill rig, rotary type (diesel)	110	–	–	–	-10	100
Excavator	CNP081	Excavator / loader, wheeled / tracked	112	EPD-07150	YANMAR, SV08-1A	90	-5	85
Generator	CNP103	Generator, super silenced, 70 dB(A) at	95	EPD-	DENYO, DCA-45LSK	87	-5	82

PME	Unmitigated SWLs			PME			Mitigated Scenario	
	Identification Code	Description	PME SWL, dB(A)	ID Code ^{[1][2]}	Model / Size	PME SWL, dB(A)	Barrier, dB(A) ^[6]	PME SWL, dB(A)
		7 m		10735 ^[5]				
Grout Pump	CPME#	Grout pump	105	–	–	–	-10	95
Lorry	CNP141	Lorry	112	CPME#	Lorry, 5.5 tonnes < gross vehicle weight ≤38 tonnes	105	-5	100
Lorry, with crane/grab	CPME#	Lorry, 5.5 tonne < gross vehicle weight ≤38 tonne	105	–	–	–	-5	100
Piling, Large Dia Bored, Oscillator	CNP165	Piling, large diameter bored, oscillator	115	–	–	–	-10	105
Vibratory Poker	CNP170	Poker, vibratory, hand-held	113	CPME#	Poker, vibratory, hand-held (electric)	102	-10	92
Rock Drill	CNP182	Rock drill, crawler mounted (hydraulic)	123	–	–	–	-10	113
Roller, Vibratory	CNP186	Roller, vibratory	108	EPD-06997	SAKAI, SW502S-1	94	-5	89
Saw, Circular, Wood	CNP201	Saw, circular, wood	108	–	–	–	-10	98
Saw/groover, Concrete	CNP203	Saw/groover, concrete (petrol)	115	–	Quieter Type Wire Saw	106 ^[8]	-10	96
Ampd Enertainer	–	Energy Storage System	89 ^[7]	–	–	–	-10	79

Notes:

- [1] PME with ID code “EPD-XXXXX” are registered Quality Powered Mechanical Equipment (QPME) with SWLs extracted from EPD’s QPME inventory:
<https://www.epd.gov.hk/epd/qpme/eng/index.html>
- [2] The SWL of PME with code “CPME#” are based on “Sound power levels of other commonly used PME” from
https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf
- [3] EPD-09608 has been replaced by EPD-09708. The model, size and SWL remain unchanged.
- [4] EPD-03948 has been replaced by EPD-13019. The model, size and SWL remain unchanged.
- [5] EPD-03845 has been replaced by EPD-10735. The model, size and SWL remain unchanged.
- [6] Estimation made in the approved EIA report Section 4.4.4.8 with at least 5 dB(A) reduction for movable plant and 10 dB(A) for stationary plant.
- [7] The SWL of Ampd Enertainer is based on the SWL at full load listed on the catalogue given in **Appendix 2.3**.
- [8] The SWL of Quieter Type Wire Saw is based on the sound pressure level at 7m at EPD’s webpage of “Quieter Construction Methods” from:
https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods/item/93-concrete-removal/133-quieter-type-wire-saw.html

2.5 Prediction and Evaluation of Construction Noise Impact

- 2.5.1 The key airborne construction work under Contract 1202 mainly includes construction of the above-ground TCE Station, realignment of ballast tracks to the TCE Station and site clearance, site formation and reinstatement works. As per the discussion made in **Section 2.3.3** and **Section 2.4.2** of this CNMP, no major change was observed in identified NSRs when compared to the approved EIA Report (EIA Ordinance Register No. AEIAR-235/2022).
- 2.5.2 Referring to the approved EIA Report, the airborne construction activities mainly comprise the construction works stated in **Section 2.4.1** of this CNMP. The SWLs of PMEs to be used for the airborne construction activities has been presented in **Table 2.3**. The plant inventory of PMEs to be deployed at each workfront is given in **Appendix 2.4**. The location of each workfront is given in **Appendix 2.5**.
- 2.5.3 The predicted construction noise impacts at each representative NSRs under unmitigated scenario are summarized in **Table 2.4**. The predication is made with reference to the updated construction programme and plant inventories confirmed by the project engineers from the Main Contractor.

Table 2.4 Summary of Predicted Construction Noise Impact at Representative NSRs under Unmitigated Scenario

ID No. ^[1]	NSR	NAP ^{[2][3][5]}	Uses	Criterion ^[6] (L_{eq} (30min), dB(A))	Maximum Noise Level due to the Project ^[7] (L_{eq} (30min), dB(A))	Exceedance (L_{eq} (30min), dB(A))
Existing NSRs						
E1	Ying Tung Estate	YTT-02f	Residential Premises	75	79	4
E20	Ho Yu College and Primary School	EHYC-01a	Educational Institutions	70 (65)	70	- (5)
E21	Lantau North (Extension) Country Park	LNCP-01	Others	NA ^[4]	77	-
Planned NSRs						
P1	Residential Premises in Tung Chung East	A100-02j	Residential Premises	75	77	2
		A116-01c	Residential Premises	75	_[8]	_[8]
		A133a-01b	Residential Premises	75	_[8]	_[8]
P4	Tung Chung Area 113	A113-01e	Residential Premises	75	78	3
		A113-12e	Residential Premises	75	78	3

Note:

- [1] The assessment will only include the NSRs which rely on opened windows for ventilation.
 [2] Only the first tier of NSRs has been selected for assessment.
 [3] Referring to the updated information concluded in the previously submitted CNMP prepared by Ove Arup & Partners Hong Kong Limited.
 [4] NA – Not applicable.
 [5] NAP – Noise Assessment Point.
 [6] 65 dB(A) is adopted as the limit level during the examination period.
 [7] The noise level at NSRs is calculated with general acoustic principle using the equation = $10 \times \log_{10}[10^{(W1/10)} + 10^{(W2/10)} + 10^{(W3/10)} \dots + 10^{(Wn/10)}]$, where W1, W2, W3 and Wn are the respective noise levels at the NSRs due to individual noise sources of simultaneous construction works.
 [8] Since the population intake year is later than the completion date of construction work under Contract 1202, construction noise impact is not anticipated at the NSRs.

2.6 Mitigation Measures for Airborne Construction Noise

2.6.1 To mitigate the adverse airborne noise impact induced by the construction works, a list of mitigation measures was suggested, including:

- Good site practices to limit noise emissions at the source;
- Use of QPME;
- Use of temporary noise barriers to screen noise from relatively static PMEs; and
- Alternative use of quieter construction methods/ quieter plant items within worksite, wherever practicable.

Good Site Management Practices

2.6.2 Referring the approved EIA Report (Register No. AEIAR-235/2022), good site practice and noise management techniques could considerably reduce the noise impact from construction site activities on nearby NSRs. The following measures should be practised during each phase of construction:

- Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme;
- Machine and plants (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum;
- Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs;
- Silencers or mufflers which are available on construction equipment should be properly fitted and maintained during the construction works;
- Spoil transportation routes should be directed away from NSRs as far as practicable;
- Mobile plant should be sited as far away from NSRs as possible and practicable;
- Material stockpiles, site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities; and
- Noise monitoring at selected NSRs should be conducted as far as practicable.

Use of QPME

2.6.3 Quiet plant associated with the construction works with reference to the PME listed in the TM, or the QPME or other commonly used PME listed in the EPD web pages that include the SWLs for specific quiet PME, should be adopted as far as possible.

Use of Movable Noise Barrier for Movable Plant and Stationary Plant Sources

- 2.6.4 Movable temporary noise barriers can be deployed adjacent to noisy plant and be moved concurrently with the plant along a worksite, this practice could be the effective way for screening noise from the NSRs.
- 2.6.5 As suggested in the approved EIA Report (EIA Ordinance Register No. AEIAR-235/2022), the typical noise barrier shall be with a small-cantilevered upper portion of superficial density not less than 7 kg/m² on a skid footing with 25 mm thick internal sound absorptive lining. This measure is particularly effective for low level zone of NSRs. A cantilevered top cover would be required to achieve screening benefits at upper floors of NSRs.
- 2.6.6 Movable temporary noise barriers could be used for some PMEs. It is anticipated that suitably designed barriers could achieve at least 5 dB(A) reduction for movable plant and 10 dB(A) for stationary plant.
- 2.6.7 The attenuation effect from noise barrier towards the noise emitted from the various PMEs is summarized in **Table 2.5**. The sectional drawing of typical temporary noise barrier to be adopted is illustrated in **Appendix 2.6**.

Table 2.5 Summary of barrier adopted for PMEs

PME	Attenuation effect, dB(A)
Air Compressor	-10
Bar Bender and Cutter	-10
Breaker, excavator mounted	-10 ^[1]
Hand-Held Breaker	-5
Cherry Picker	-5
Concrete Lorry Mixer	-5
Concrete Mixer	-10
Concrete Pump	-10
Mobile Crane/ Service Crane/ Lifting Crane	-5
Electric drill	-5
Grinder	-5
Dump Truck	-5
Drill Rig	-10
Excavator	-5
Generator	-5
Grout Pump	-10
Lorry	-5
Lorry, with crane/grab	-5
Piling, Large Diameter Bored, Oscillator	-10
Vibratory Poker	-10
Rock Drill	-10
Roller, Vibratory	-5
Saw, Circular, Wood	-10

PME	Attenuation effect, dB(A)
Saw/groover, Concrete	-10
Ampd Enertainer	-10

Notes:

- [1] With reference to Chapter 6 of *Best Practice Guide for Environmental Protection on Construction Sites*, noise reduction up to 10 dB(A) can be achieved with the installation of hammer bracket. The relevant section is extracted and presented in **Appendix 2.7**.

Use of Quieter Construction Method

2.6.8 Various quieter construction methods are reviewed, and their applicability is assessed for different construction activities. The applicable quieter construction methods are summarized below. Other applicable quieter construction methods will be used as far as practicable.

a. Use of quieter type saw

Saw cutting will be adopted as the alternative method for the demolition works of the concrete footing for existing noise barriers along Tung Chung Line at workfronts W1 to W4. The traditional method for demolition works with excavator mounted breaker would be avoided as far as practicable. The operation time of excavator mounted breaker for demolition works would therefore be minimized.

b. Use of non-percussive pile types

Pre-bored socketed steel H-pile will be adopted for foundation construction of TCE station and Integrated Entrance. No percussive piling will be adopted for the construction works under Contract 1202. Since percussive piling will not be adopted to construction works, the adverse construction noise impact generated from piling works to nearby NSRs would be alleviated.

c. Use of Self-compacting concrete

Self-compacting concrete will be used for road works. With the advantage of the nature of self-compacting concrete, the use of vibratory poker would be avoided.

Use of Energy Storage System

2.6.9 An advanced energy storage system “Ampd Enertainer” will be deployed at construction site for the alternative energy supply with quieter operation noise compared with diesel-powered generator. The introduction of energy storage system can minimize the operation time of diesel-powered generator.

2.7 Prediction of Noise Impact with Implementation of Noise Mitigation Measures

2.7.1 The predicted construction noise impact at each representative NSRs as listed in **Table 2.2** is given in **Appendix 2.8**. The concurrent effect of nearby construction projects has been taken into consideration, including Tung Chung New Town Development Extension (TCNTE), Reprovisioning, Remedial and Improvement Works (RRIW) and Additional Sewerage Rising Main and Rehabilitation of the Existing Sewage Rising Main between Tung Chung and Siu Ho Wan. The predicted construction noise impacts at each representative NSRs under mitigated scenario is summarized in **Table 2.6**.

2.7.2 The implementation schedule of the noise mitigation measures is given in **Appendix 2.9**.

Table 2.6 Summary of Predicted Construction Noise Impact and Exceedance Representative NSRs under Mitigated Scenario

ID No. ^[1]	NSR	NAP ^{[2][3][5]}	Uses	Criterion ^[6] (L _{eq} (30min), dB(A))	Mitigated Scenario			
					Maximum Cumulative Noise Level ^[7] (L _{eq} (30min), dB(A))	Exceedance (L _{eq} (30min), dB(A))	Maximum Noise Level due to the Project ^[7] (L _{eq} (30min), dB(A))	Exceedance (L _{eq} (30min), dB(A))
Existing NSRs								
E1	Ying Tung Estate	YTT-02f	Residential Premises	75	69	-	67	-
E20	Ho Yu College and Primary School	EHYC-01a	Educational Institutions	70 (65)	61	-	58	-
E21	Lantau North (Extension) Country Park	LNCP-01	Others	NA ^[4]	67	NA ^[4]	66	NA ^[4]
Planned NSRs								
P1	Residential Premises in Tung Chung East	A100-02j	Residential Premises	75	71	-	65	-
		A116-01c	Residential Premises	75	_[8]	_[8]	_[8]	_[8]
		A133a-01b	Residential Premises	75	_[8]	_[8]	_[8]	_[8]
P4	Tung Chung Area 113	A113-01e	Residential Premises	75	69	-	66	-
		A113-12e	Residential Premises	75	74	-	67	-

Notes:

- [1] The assessment will only include the NSRs which rely on opened windows for ventilation.
- [2] Only the first tier of NSRs has been selected for assessment.
- [3] Referring to the updated information concluded in the previously submitted CNMP prepared by Ove Arup & Partners Hong Kong Limited.
- [4] NA – Not applicable.
- [5] NAP – Noise Assessment Point.
- [6] 65 dB(A) is adopted as the limit level during the examination period.
- [7] The noise level at NSRs is calculated with general acoustic principle using the equation = $10 \times \log_{10}[10^{(W1/10)} + 10^{(W2/10)} + 10^{(W3/10)} \dots + 10^{(Wn/10)}]$, where W1, W2, W3 and Wn are the respective noise level at the NSRs due to individual noise sources of simultaneous construction works.
- [8] Since the population intake year is later than the completion date of construction work under Contract 1202, construction noise impact is not anticipated at the NSRs.

3. Conclusion

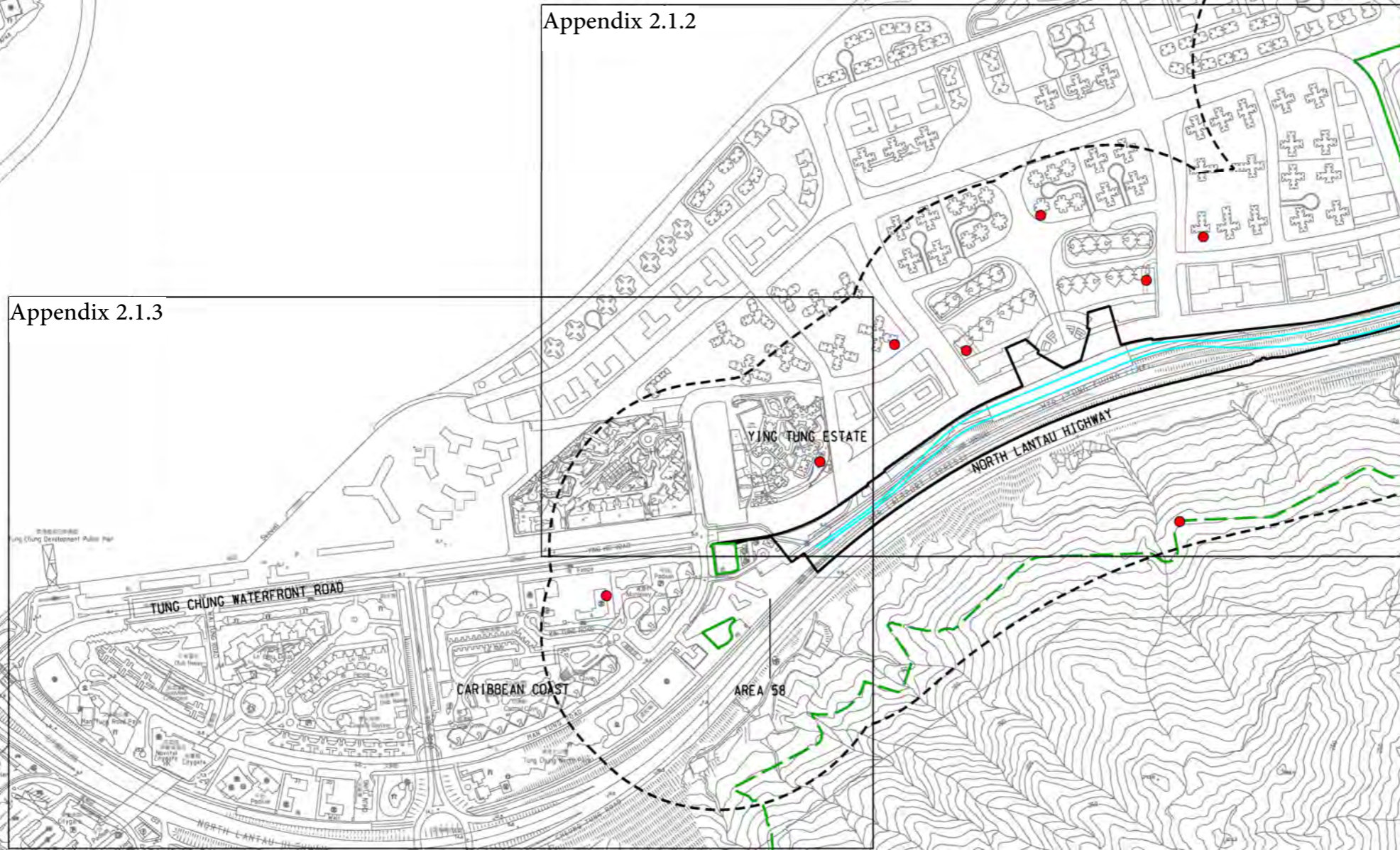
- 3.1.1 In this CNMP, the representative NSRs to be affected by the Project have been identified with reference to the approved EIA Report (EIA Ordinance Register No. AEIAR-235/2022). Update was made on the plant inventory and construction programme compared with the approved EIA Report and the previously approved CNMP. Thus, the cumulative noise level towards NSRs has been updated.
- 3.1.2 It is expected the construction noise impact would comply with the relevant noise criteria stipulated under the EIAO-TM with proper implementation of recommended mitigation measures.

Appendix 2.1 Location Plan of Representative NSRs



Appendix 2.1.2

Appendix 2.1.3



LEGEND

- TCL REALIGNMENT - AT GRADE
- LATEST WORKS AREA
- LATEST WORKS SITE
- 300m ASSESSMENT AREA
- COUNTRY PARK
- REPRESENTATIVE NOISE ASSESSMENT POINT (AIRBORNE CONSTRUCTION NOISE)

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APPROVED	FC
DATE	07/02/2023

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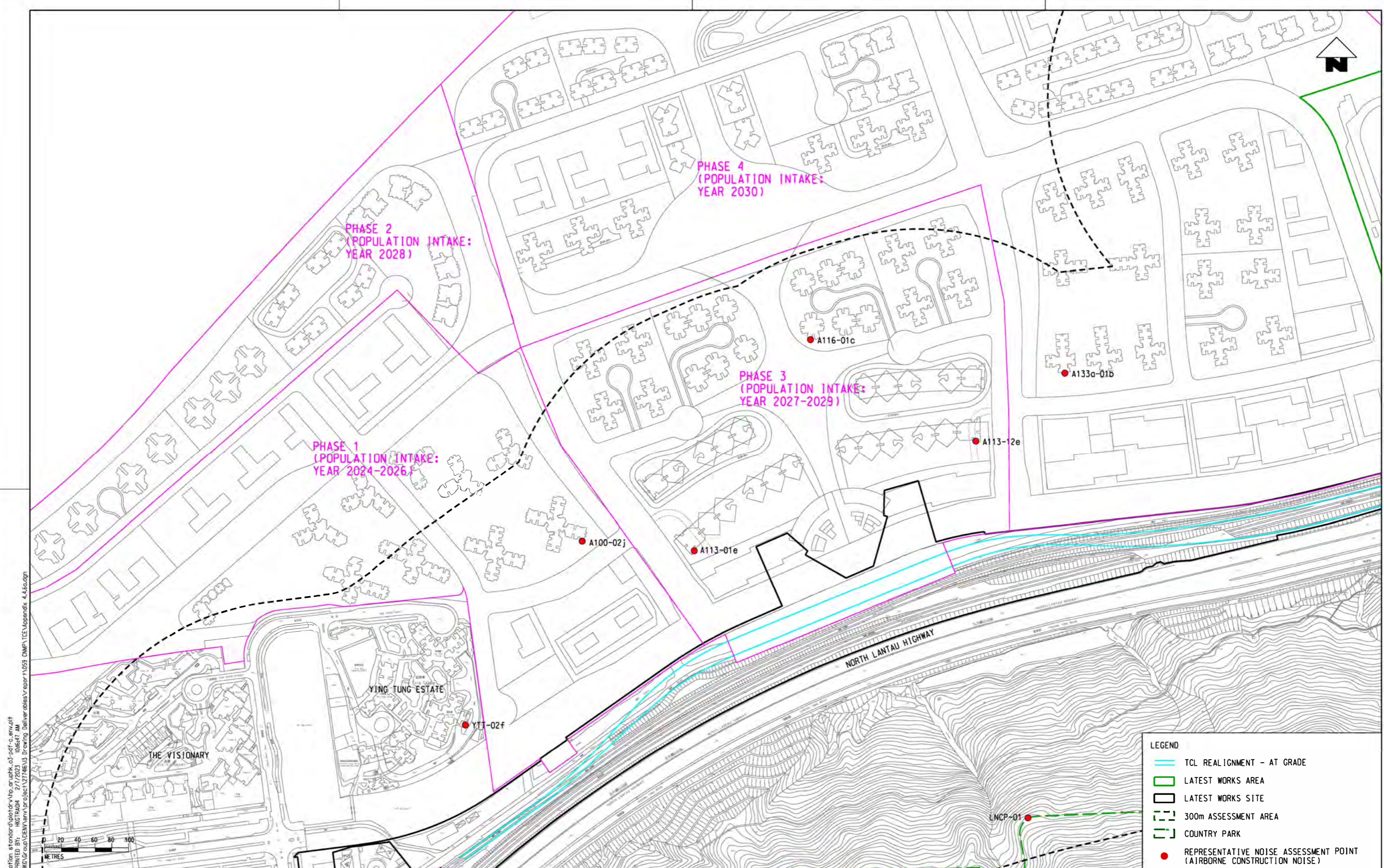
ORIGINATOR

ARUP Ove Arup & Partners
Hong Kong Limited

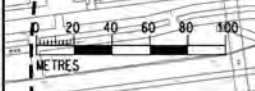
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SCALE	DRAWING NO.	REV.	
1:10000 (A3)	Appendix 2.1.1	A	

REV	DESCRIPTION	BY	DATE	APPROVED	REV	DESCRIPTION	BY	DATE	APPROVED
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 CADD REF.

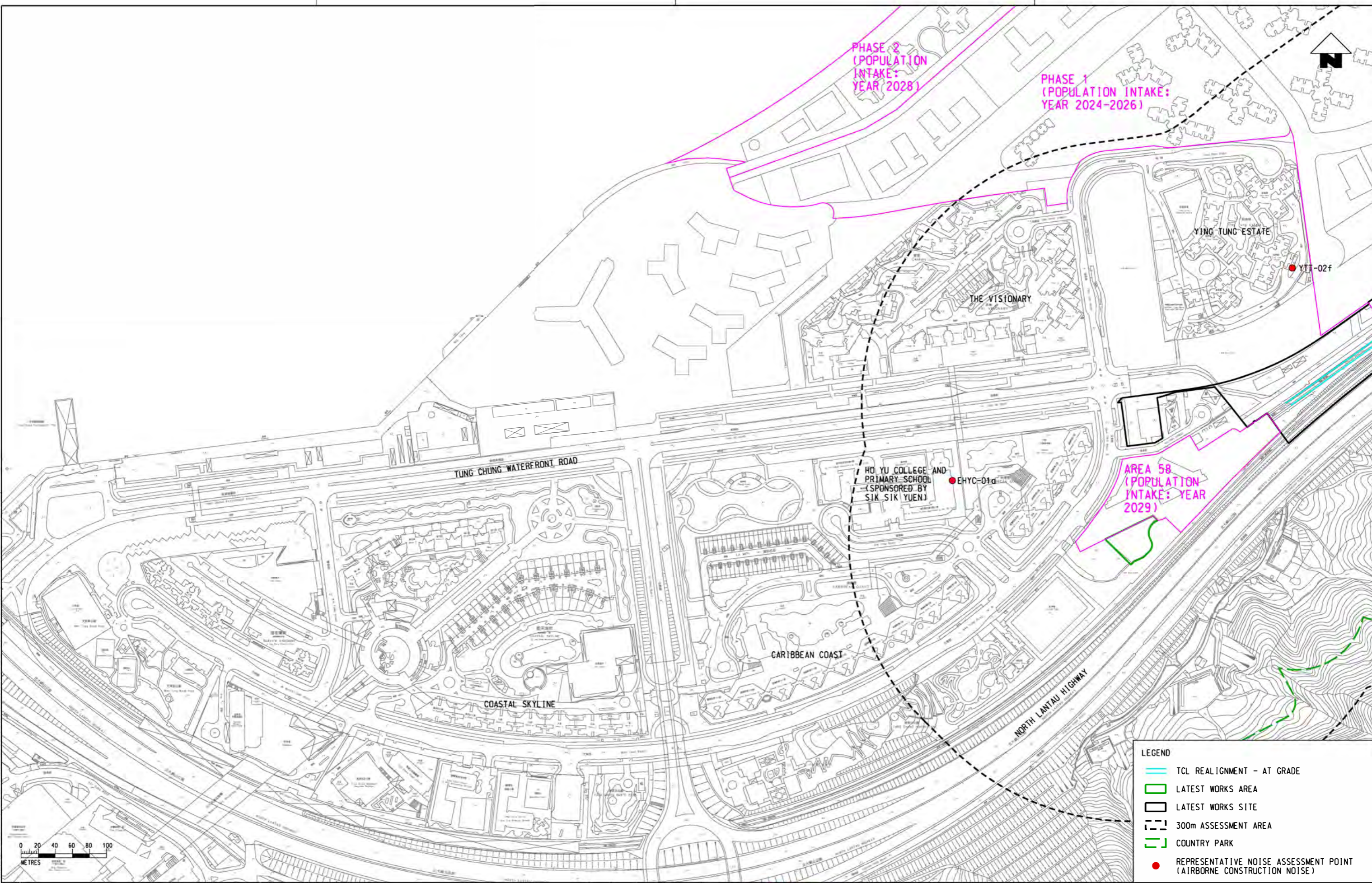
LEGEND

- TCL REALIGNMENT - AT GRADE
- LATEST WORKS AREA
- LATEST WORKS SITE
- 300m ASSESSMENT AREA
- COUNTRY PARK
- REPRESENTATIVE NOISE ASSESSMENT POINT (AIRBORNE CONSTRUCTION NOISE)

TITLE
 PREDICTED NOISE LEVELS OF REPRESENTATIVE NOISE ASSESSMENT POINTS (AIRBORNE CONSTRUCTION NOISE)

SCALE: 1 : 4000 (A3) DRAWING NO.: Appendix 2.1.2 REV: A

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REV	DESCRIPTION	BY	DATE	APPROVED	REV	DESCRIPTION	BY	DATE	APPROVED
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APPROVED	FC
DATE	07/02/2023



 C1202 - EIA for Tung Chung Line Extension


 Ove Arup & Partners
 Hong Kong Limited

ORIGINATOR
 CADD REF.

TITLE PREDICTED NOISE LEVELS OF REPRESENTATIVE NOISE ASSESSMENT POINTS (AIRBORNE CONSTRUCTION NOISE)	
SCALE	DRAWING NO.
1 : 4000 (A3)	Appendix 2.1.3
REV.	A

Appendix 2.2 Tentative Construction Programme

Appendix 2.3 Catalogue of Ampd Enertainer

Ampd Enertainer

Up to 85%
reduction
in CO₂ &
OPEX

The Ampd Enertainer is an advanced energy storage system which provides diesel-free power for the next-generation of construction projects. Available in various configurations, the Ampd Enertainer is designed for the tough, dynamic and space-constrained needs of construction sites, without compromise.



Significant Cost Savings

Up to 75% lower all-inclusive OPEX¹ & lower total cost of ownership



Ultra Low Noise Footprint

32 times quieter¹, enabling use during noise sensitive hours



Minimise Carbon Footprint

Up to 85% carbon reduction¹ & zero direct NO_x, PM & SO₂ fumes



Enhance On-Site Safety

Eliminate diesel fire hazards & reduce on-site diesel storage quantity



Maximise Productivity

Zero recharging downtime and near-zero annual maintenance downtime



Internet Connected, 24x7

Connect to the Enertainer's IoT platform, anywhere & any time

¹Compared to generators of a similar capacity

Using energy storage technologies which are tested and certified to international standards (UL, UN, CE, IEC, IEEE and ENA standards), the Ampd Enertainer is designed to:

- be rugged, robust and built to last (up to 10+ years expected operating life);
- deliver extremely high levels of reliability through a redundancy, modular design and
- operate safely, even in tough environments.

The Ampd Enertainer M and Enertainer L are on the **Construction Innovation Technology Fund (CITF) Pre-Approved List**. Please refer to www.citf.cic.hk for more details.



For more information or a no-obligations consultation on how the Enertainer could benefit your project, **please contact us at +852 3705 9441 or at sales@ampd.energy**



Ampd Enertainer

Key Specifications¹



Parameter		Specification		
Model		Enertainer F	Enertainer M	Enertainer L
On CITF Pre Approved List		Yes (PA20-045)		
Maximum output current per phase	Peak (<1 minute)	340 A	455 A	795 A
	Continuous	285 A	380 A	665 A
Energy storage subsystem chemistry		Lithium-ion NMC		
Example applications		Tower cranes, material hoist, passenger hoists, welders, bar benders, grouting station		
Power conversion subsystem	Type	Heavy-duty, modular power conversion system		
	Input voltage range	320 – 440 VAC (3Ph + N + PE)		
	Maximum input current	80 A (standard)		
		50 A (with optional input leakage current reduction system)		
	Output voltage	380 – 415 VAC ± 1% (3Ph + N + PE)		
Output frequency range	50/60 Hz ± 0.5 Hz			
Thermal management subsystem	Type	Industrial, wall-mounted recirculating air-conditioning system		
	Number of cooling units	2 units		
	Refrigerant type	R134a		
Mechanical	Dimensions (L x W x H) ²	3.21m (L) x 2.44m (W) x 2.6m (H) (10' container)		
	Net weight	7.2 tons	7.8 tons	8.7 tons
	Fire extinguishing subsystem	Aerosol based, triggered by heat and/or smoke sensors		
	Ingress protection	IP54* (rain and typhoon proof)		
	Operating temperature range	0 to +45 °C external ambient temperature		
	Sound power level ³ at full load	85-89 dB(A) (32 times quieter vs. comparable diesel generator)		
	Sound pressure level at full load	57-61dB(A) (at 7 meters)		
Connectivity		Cellular data (4G)		
Expected Lifetime ⁴		10+ years		
Standards		UL, UN 38.3, CE, IEC, IEEE		

* For DC room

Recommended Combination & Input Requirement⁵

2 x mid-size tower cranes	Enertainer L	25 A
1 x large-size tower crane	Enertainer L	25 A
1 x mid-size tower crane + 1 x material/passenger hoist	Enertainer M	15 A
5 x welders	Enertainer F	40 A

Available Options

Input leakage current reduction system		Optional
Warranty and field engineering	5-year on-site warranty	Included
	8-Year extended on-site warranty	Optional
	Standard support plan	Included
	Premium (Gold) support plan	Optional
	Premium (Platinum) support plan	Optional
Remote access and data	Standard web monitoring interface	Included
	Premium web monitoring interface	Optional
	Data analytics package	Optional



¹In the interests of continual product improvement, specifications are subject to change without notice. Please contact us for the latest specifications.

²An additional 0.9 m clearance on all sides of the Enertainer should be provided for maintenance access.

³ISO 3746:2010 measurement methodology.

⁴Provided for guidance purpose. Life is defined as the ability of the Enertainer to provide the specified rated power. Actual life may vary and will depend on factors such as (but not limited to): (i) operating temperature; (ii) quality of maintenance of the system; (iii) frequency of use; and (iv) time duration spent at different battery states.

⁵Provided for guidance purposes. Actual grid input requirement will depend on factors such as (but not limited to): (i) actual equipment electrical requirements; (ii) utilisation/duty cycle; (iii) daily duration of availability of input power supply; (iv) state-of-health and age of the Enertainer; (v) duration of daily construction site operations.

Appendix 2.4 Plant Inventory

TCE Station East Side Site Clearance / Site Formation												
Works Area / Activity	PME	% Operating Time ⁽¹⁾	Time Correction dB(A)	Units	Unmitigated			Mitigated				
					PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^{(2),(3)}	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)
TCE Station East Side Site Clearance / Site Formation (Zone E1)	Excavator	70	-2	4	CNP081	112	116	EPD-07150	90	Barrier	-5	89
	Breaker, excavator mounted	70	-2	1	CNP028	122	120			Barrier	-10	110
	Roller, Vibratory	50	-3	2	CNP186	108	108	EPD-06997	94	Barrier	-5	89
	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	70	-2	2	CNP048	112	113	EPD-09130	101	Barrier	-5	97
	Lorry	50	-3	2	CNP141	112	112	CPME#	105	Barrier	-5	100
	Dump Truck	50	-3	8	CPME#	105	111			Barrier	-5	106
	Concrete Lorry Mixer / Concrete Truck	70	-2	2	CNP044	109	110			Barrier	-5	105
					Total SWL	123				Total SWL		113
TCE Station East Side Site Clearance / Site Formation (Zone E2)	Excavator	70	-2	4	CNP081	112	116	EPD-07150	90	Barrier	-5	89
	Breaker, excavator mounted	100	0	1	CNP028	122	122			Barrier	-10	112
	Roller, Vibratory	50	-3	2	CNP186	108	108	EPD-06997	94	Barrier	-5	89
	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	70	-2	2	CNP048	112	113	EPD-09130	101	Barrier	-5	97
	Lorry	50	-3	2	CNP141	112	112	CPME#	105	Barrier	-5	100
	Dump Truck	50	-3	8	CPME#	105	111			Barrier	-5	106
	Concrete Lorry Mixer / Concrete Truck	70	-3	2	CNP044	109	109			Barrier	-5	104
					Total SWL	124				Total SWL		114
TCE Station East Side Site Clearance / Site Formation (Zone E3)	Excavator	70	-2	4	CNP081	112	116	EPD-07150	90	Barrier	-5	89
	Breaker, excavator mounted	70	-2	1	CNP028	122	120			Barrier	-10	110
	Roller, Vibratory	50	-3	2	CNP186	108	108	EPD-06997	94	Barrier	-5	89
	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	70	-2	2	CNP048	112	113	EPD-09130	101	Barrier	-5	97
	Lorry	50	-3	2	CNP141	112	112	CPME#	105	Barrier	-5	100
	Dump Truck	50	-3	8	CPME#	105	111			Barrier	-5	106
	Concrete Lorry Mixer / Concrete Truck	70	-3	2	CNP044	109	109			Barrier	-5	104
					Total SWL	123				Total SWL		113
TCE Station East Side Site Clearance / Site Formation (Zone E4)	Excavator	70	-2	4	CNP081	112	116	EPD-07150	90	Barrier	-5	89
	Breaker, excavator mounted	70	-2	1	CNP028	122	120			Barrier	-10	110
	Roller, Vibratory	50	-3	2	CNP186	108	108	EPD-06997	94	Barrier	-5	89
	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	70	-2	2	CNP048	112	113	EPD-09130	101	Barrier	-5	97
	Lorry	50	-3	2	CNP141	112	112	CPME#	105	Barrier	-5	100
	Dump Truck	50	-3	8	CPME#	105	111			Barrier	-5	106
	Concrete Lorry Mixer / Concrete Truck	70	-3	2	CNP044	109	109			Barrier	-5	104
					Total SWL	123				Total SWL		113
TCE Station East Side Site Clearance / Site Formation (Zone E5)	Excavator	70	-2	2	CNP081	112	113	EPD-07150	90	Barrier	-5	86
	Breaker, excavator mounted	70	-2	1	CNP028	122	120			Barrier	-10	110
	Roller, Vibratory	50	-3	1	CNP186	108	105	EPD-06997	94	Barrier	-5	86
	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	70	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94
	Lorry	50	-3	1	CNP141	112	109	CPME#	105	Barrier	-5	97
	Dump Truck	50	-3	4	CPME#	105	108			Barrier	-5	103
	Concrete Lorry Mixer / Concrete Truck	70	-3	2	CNP044	109	109			Barrier	-5	104
					Total SWL	122				Total SWL		112
TCE Station East Side Site Clearance / Site Formation (Zone E6)	Excavator	70	-2	2	CNP081	112	113	EPD-07150	90	Barrier	-5	86
	Breaker, excavator mounted	100	0	1	CNP028	122	122			Barrier	-10	112
	Roller, Vibratory	50	-3	1	CNP186	108	105	EPD-06997	94	Barrier	-5	86
	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	70	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94
	Lorry	50	-3	1	CNP141	112	109	CPME#	105	Barrier	-5	97
	Dump Truck	50	-3	4	CPME#	105	108			Barrier	-5	103
	Concrete Lorry Mixer / Concrete Truck	70	-3	2	CNP044	109	109			Barrier	-5	104
					Total SWL	123				Total SWL		113
TCE Station East Side Site Clearance / Site Formation (Zone E7)	Excavator	70	-2	2	CNP081	112	113	EPD-07150	90	Barrier	-5	86
	Breaker, excavator mounted	70	-2	1	CNP028	122	120			Barrier	-10	110
	Roller, Vibratory	50	-3	1	CNP186	108	105	EPD-06997	94	Barrier	-5	86
	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	70	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94
	Lorry	50	-3	1	CNP141	112	109	CPME#	105	Barrier	-5	97
	Dump Truck	50	-3	4	CPME#	105	108			Barrier	-5	103
	Concrete Lorry Mixer / Concrete Truck	70	-3	2	CNP044	109	109			Barrier	-5	104
					Total SWL	122				Total SWL		112
TCE Station East Side Site Clearance / Site Formation (Zone E8)	Excavator	70	-2	2	CNP081	112	113	EPD-07150	90	Barrier	-5	86
	Breaker, excavator mounted	70	-2	1	CNP028	122	120			Barrier	-10	110
	Roller, Vibratory	50	-3	1	CNP186	108	105	EPD-06997	94	Barrier	-5	86
	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	70	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94
	Lorry	50	-3	1	CNP141	112	109	CPME#	105	Barrier	-5	97
	Dump Truck	50	-3	4	CPME#	105	108			Barrier	-5	103
	Concrete Lorry Mixer / Concrete Truck	70	-3	2	CNP044	109	109			Barrier	-5	104
					Total SWL	122				Total SWL		112
TCE Station East Side Site Clearance / Site Formation (Zone E9)	Excavator	70	-2	2	CNP081	112	113	EPD-07150	90	Barrier	-5	86
	Breaker, excavator mounted	70	-2	1	CNP028	122	120			Barrier	-10	110
	Roller, Vibratory	50	-3	1	CNP186	108	105	EPD-06997	94	Barrier	-5	86
	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	70	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94
	Lorry	50	-3	1	CNP141	112	109	CPME#	105	Barrier	-5	97
	Dump Truck	50	-3	4	CPME#	105	108			Barrier	-5	103
	Concrete Lorry Mixer / Concrete Truck	70	-3	2	CNP044	109	109			Barrier	-5	104
					Total SWL	122				Total SWL		112

Note:
 [1] Percentage on time within 30 minutes.
 [2] PME with code "EPD-XXXXX" is quiet equipment with SWL extracted from the EPD's QPME inventory.
 [3] The plant with code "CPME#" is referenced from the EPD's guidance "Sound Power Level of Other Commonly Used PME" from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

Project : Contract 1202 Tung Chung East Station and Associated Enabling Works for Track Diversion
 Title: Plant Inventory TCE Station

TCE Station East Side Retaining Wall Foundation Construction					Unmitigated			Mitigated				
Works Area / Activity	PME	% Operating Time ^[1]	Time Correction dB(A)	Units	PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^{[2], [3]}	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)
TCE Station East Side Retaining Wall Foundation Construction (Zone E1)	Drill Rig, DTH Drilling Machine	90	0	2	CPME#	110	113			Barrier	-10	103
						Total SWL	113					103
TCE Station East Side Retaining Wall Foundation Construction (Zone E2)	Drill Rig, DTH Drilling Machine	90	0	2	CPME#	110	113			Barrier	-10	103
						Total SWL	113					103
TCE Station East Side Retaining Wall Foundation Construction (Zone E3)	Drill Rig, DTH Drilling Machine	90	0	1	CPME#	110	110			Barrier	-10	100
						Total SWL	110					100
TCE Station East Side Retaining Wall Foundation Construction (Zone E4)	Drill Rig, DTH Drilling Machine	90	0	2	CPME#	110	113			Barrier	-10	103
						Total SWL	113					103
TCE Station East Side Retaining Wall Foundation Construction (Zone E5)	Drill Rig, DTH Drilling Machine	90	0	1	CPME#	110	110			Barrier	-10	100
						Total SWL	110					100
TCE Station East Side Retaining Wall Foundation Construction (Zone E6)	Drill Rig, DTH Drilling Machine	90	0	1	CPME#	110	110			Barrier	-10	100
						Total SWL	110					100
TCE Station East Side Retaining Wall Foundation Construction (Zone E7)	Drill Rig, DTH Drilling Machine	90	0	1	CPME#	110	110			Barrier	-10	100
						Total SWL	110					100
TCE Station East Side Retaining Wall Foundation Construction (Zone E8)	Drill Rig, DTH Drilling Machine	90	0	2	CPME#	110	113			Barrier	-10	103
						Total SWL	113					103
TCE Station East Side Retaining Wall Foundation Construction (Zone E9)	Drill Rig, DTH Drilling Machine	90	0	2	CPME#	110	113			Barrier	-10	103
						Total SWL	113					103

Note:
 [1] Percentage on time within 30 minutes.
 [2] PME with code "EPD-XXXX" is quiet equipment with SWL extracted from the EPD's QPME inventory.
 [3] The plant with code "CPME#" is referenced from the EPD's guidance "Sound Power Level of Other Commonly Used PME" from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

TCE Station East Side Retaining Wall Construction and Noise Mitigation Measures												
Works Area / Activity	PME	% Operating Time ^[1]	Time Correction dB(A)	Units	Unmitigated			Mitigated				
					PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^{[2], [3]}	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)
TCE Station East Side Retaining Wall Construction and Noise Mitigation Measures (Zone E1)	Concrete Pump / Electric Bentonite Circulation Pump	50	-3	2	CNP047	109	109			Barrier	-10	99
	Bar Bender and Cutter	50	-3	1	CNP021	90	87			Barrier	-10	77
	Concrete Lorry Mixer / Concrete Truck	70	-2	2	CNP044	109	110			Barrier	-5	105
	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	100	0	1	CNP048	112	112	EPD-09130	101	Barrier	-5	96
					Total SWL	115				Total SWL		107
TCE Station East Side Retaining Wall Construction and Noise Mitigation Measures (Zone E2)	Concrete Pump / Electric Bentonite Circulation Pump	50	-3	2	CNP047	109	109			Barrier	-10	99
	Bar Bender and Cutter	50	-3	1	CNP021	90	87			Barrier	-10	77
	Concrete Lorry Mixer / Concrete Truck	70	-2	2	CNP044	109	110			Barrier	-5	105
	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	100	0	1	CNP048	112	112	EPD-09130	101	Barrier	-5	96
					Total SWL	115				Total SWL		107
TCE Station East Side Retaining Wall Construction and Noise Mitigation Measures (Zone E3)	Concrete Pump / Electric Bentonite Circulation Pump	50	-3	2	CNP047	109	109			Barrier	-10	99
	Bar Bender and Cutter	50	-3	1	CNP021	90	87			Barrier	-10	77
	Concrete Lorry Mixer / Concrete Truck	70	-2	2	CNP044	109	110			Barrier	-5	105
	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	100	0	1	CNP048	112	112	EPD-09130	101	Barrier	-5	96
					Total SWL	115				Total SWL		107
TCE Station East Side Retaining Wall Construction and Noise Mitigation Measures (Zone E4)	Concrete Pump / Electric Bentonite Circulation Pump	50	-3	2	CNP047	109	109			Barrier	-10	99
	Bar Bender and Cutter	50	-3	1	CNP021	90	87			Barrier	-10	77
	Concrete Lorry Mixer / Concrete Truck	70	-2	2	CNP044	109	110			Barrier	-5	105
	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	100	0	1	CNP048	112	112	EPD-09130	101	Barrier	-5	96
					Total SWL	115				Total SWL		107
TCE Station East Side Retaining Wall Construction and Noise Mitigation Measures (Zone E5)	Concrete Pump / Electric Bentonite Circulation Pump	50	-3	2	CNP047	109	109			Barrier	-10	99
	Bar Bender and Cutter	50	-3	1	CNP021	90	87			Barrier	-10	77
	Concrete Lorry Mixer / Concrete Truck	70	-2	2	CNP044	109	110			Barrier	-5	105
	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	100	0	1	CNP048	112	112	EPD-09130	101	Barrier	-5	96
					Total SWL	115				Total SWL		107
TCE Station East Side Retaining Wall Construction and Noise Mitigation Measures (Zone E6)	Concrete Pump / Electric Bentonite Circulation Pump	50	-3	2	CNP047	109	109			Barrier	-10	99
	Bar Bender and Cutter	50	-3	1	CNP021	90	87			Barrier	-10	77
	Concrete Lorry Mixer / Concrete Truck	70	-2	2	CNP044	109	110			Barrier	-5	105
	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	100	0	1	CNP048	112	112	EPD-09130	101	Barrier	-5	96
					Total SWL	115				Total SWL		107
TCE Station East Side Retaining Wall Construction and Noise Mitigation Measures (Zone E7)	Concrete Pump / Electric Bentonite Circulation Pump	50	-3	2	CNP047	109	109			Barrier	-10	99
	Bar Bender and Cutter	50	-3	1	CNP021	90	87			Barrier	-10	77
	Concrete Lorry Mixer / Concrete Truck	70	-2	2	CNP044	109	110			Barrier	-5	105
	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	100	0	1	CNP048	112	112	EPD-09130	101	Barrier	-5	96
					Total SWL	115				Total SWL		107
TCE Station East Side Retaining Wall Construction and Noise Mitigation Measures (Zone E8)	Concrete Pump / Electric Bentonite Circulation Pump	50	-3	2	CNP047	109	109			Barrier	-10	99
	Bar Bender and Cutter	50	-3	1	CNP021	90	87			Barrier	-10	77
	Concrete Lorry Mixer / Concrete Truck	70	-2	2	CNP044	109	110			Barrier	-5	105
	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	100	0	1	CNP048	112	112	EPD-09130	101	Barrier	-5	96
					Total SWL	115				Total SWL		107
TCE Station East Side Retaining Wall Construction and Noise Mitigation Measures (Zone E9)	Concrete Pump / Electric Bentonite Circulation Pump	50	-3	2	CNP047	109	109			Barrier	-10	99
	Bar Bender and Cutter	50	-3	1	CNP021	90	87			Barrier	-10	77
	Concrete Lorry Mixer / Concrete Truck	70	-2	2	CNP044	109	110			Barrier	-5	105
	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	100	0	1	CNP048	112	112	EPD-09130	101	Barrier	-5	96
					Total SWL	115				Total SWL		107

Note:
 [1] Percentage on time within 30 minutes.
 [2] PME with code "EPD-XXXXX" is quiet equipment with SWL extracted from EPD's QPME inventory.
 [3] The plant with code "CPME#" are referenced from the EPD's guidance "Sound Power Level of Other Commonly Used PME" from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

TCE Station East Side Site Reinstatement												
Works Area / Activity	PME	% Operating Time ^[1]	Time Correction dB(A)	Units	Unmitigated			Mitigated				
					PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^{[2], [3]}	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)
TCE Station East Side Site Reinstatement (Zone E1)	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	60	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94
	Lorry, with Crane / Grab	50	-3	2	CPME#	105	105			Barrier	-5	100
	Excavator	90	0	1	CNP081	112	112	EPD-07150	90	Barrier	-5	85
	Hand Held Breaker	50	-3	1	CNP026	114	111	EPD-13019	101	Barrier	-5	93
	Concrete Lorry Mixer / Concrete Truck	70	-2	1	CNP044	109	107			Barrier	-5	102
	Air Compressor	50	-3	1	CNP003	104	101	EPD-09708	94	Barrier	-10	81
	Total SWL					117	117			Total SWL		105
TCE Station East Side Site Reinstatement (Zone E2)	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	60	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94
	Lorry, with Crane / Grab	60	-2	2	CPME#	105	106			Barrier	-5	101
	Excavator	50	-3	1	CNP081	112	109	EPD-07150	90	Barrier	-5	82
	Hand Held Breaker	90	0	1	CNP026	114	114	EPD-13019	101	Barrier	-5	96
	Concrete Lorry Mixer / Concrete Truck	70	-2	1	CNP044	109	107			Barrier	-5	102
	Air Compressor	50	-3	1	CNP003	104	101	EPD-09708	94	Barrier	-10	81
	Total SWL					117	117			Total SWL		106
TCE Station East Side Site Reinstatement (Zone E3)	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	60	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94
	Lorry, with Crane / Grab	50	-3	2	CPME#	105	105			Barrier	-5	100
	Excavator	90	0	1	CNP081	112	112	EPD-07150	90	Barrier	-5	85
	Hand Held Breaker	50	-3	1	CNP026	114	111	EPD-13019	101	Barrier	-5	93
	Concrete Lorry Mixer / Concrete Truck	70	-2	1	CNP044	109	107			Barrier	-5	102
	Air Compressor	50	-3	1	CNP003	104	101	EPD-09708	94	Barrier	-10	81
	Total SWL					117	117			Total SWL		105
TCE Station East Side Site Reinstatement (Zone E4)	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	60	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94
	Lorry, with Crane / Grab	50	-3	2	CPME#	105	105			Barrier	-5	100
	Excavator	90	0	1	CNP081	112	112	EPD-07150	90	Barrier	-5	85
	Hand Held Breaker	50	-3	1	CNP026	114	111	EPD-13019	101	Barrier	-5	93
	Concrete Lorry Mixer / Concrete Truck	70	-2	1	CNP044	109	107			Barrier	-5	102
	Air Compressor	50	-3	1	CNP003	104	101	EPD-09708	94	Barrier	-10	81
	Total SWL					117	117			Total SWL		105
TCE Station East Side Site Reinstatement (Zone E5)	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	60	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94
	Lorry, with Crane / Grab	50	-3	2	CPME#	105	105			Barrier	-5	100
	Excavator	90	0	1	CNP081	112	112	EPD-07150	90	Barrier	-5	85
	Hand Held Breaker	50	-3	1	CNP026	114	111	EPD-13019	101	Barrier	-5	93
	Concrete Lorry Mixer / Concrete Truck	70	-2	1	CNP044	109	107			Barrier	-5	102
	Air Compressor	50	-3	1	CNP003	104	101	EPD-09708	94	Barrier	-10	81
	Total SWL					117	117			Total SWL		105

Note:
 [1] Percentage on time within 30 minutes.
 [2] PME with code "EPD-XXXXX" is quiet equipment with SWL extracted from the EPD's QPME inventory.
 [3] The plant with code "CPME#" is referenced from the EPD's guidance "Sound Power Level of Other Commonly Used PME" from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

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TCE Station East Side Removal of abandoned D/T												
Works Area / Activity	PME	% Operating Time ^[1]	Time Correction dB(A)	Units	Unmitigated			Mitigated				
					PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^{[2], [3]}	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)
TCE Station East Side Removal of abandoned D/T (Zone E1)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with Crane / Grab	50	-3	1	CPME#	105	102			Barrier	-5	97
						Total SWL	103			Total SWL		98
TCE Station East Side Removal of abandoned D/T (Zone E2)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with Crane / Grab	50	-3	1	CPME#	105	102			Barrier	-5	97
						Total SWL	103			Total SWL		98
TCE Station East Side Removal of abandoned D/T (Zone E3)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with Crane / Grab	50	-3	1	CPME#	105	102			Barrier	-5	97
						Total SWL	103			Total SWL		98
TCE Station East Side Removal of abandoned D/T (Zone E4)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with Crane / Grab	50	-3	1	CPME#	105	102			Barrier	-5	97
						Total SWL	103			Total SWL		98
TCE Station East Side Removal of abandoned D/T (Zone E5)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with Crane / Grab	50	-3	1	CPME#	105	102			Barrier	-5	97
						Total SWL	103			Total SWL		98

Note:
 [1] Percentage on time within 30 minutes.
 [2] PME with code "EPD-XXXX" is quiet equipment with SWL extracted from the EPD's QPME inventory.
 [3] The plant with code "CPME#" is referenced from the EPD's guidance "Sound Power Level of Other Commonly Used PME" from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

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TCE Station East Side Removal of abandoned U/T					Unmitigated			Mitigated				
Works Area / Activity	PME	% Operating Time ^[1]	Time Correction dB(A)	Units	PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^{[2], [3]}	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)
TCE Station East Side Removal of abandoned U/T (Zone E1)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with Crane / Grab	50	-3	1	CPME#	105	102			Barrier	-5	97
						Total SWL	103					98
TCE Station East Side Removal of abandoned U/T (Zone E2)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with Crane / Grab	50	-3	1	CPME#	105	102			Barrier	-5	97
						Total SWL	103					98
TCE Station East Side Removal of abandoned U/T (Zone E3)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with Crane / Grab	50	-3	1	CPME#	105	102			Barrier	-5	97
						Total SWL	103					98
TCE Station East Side Removal of abandoned U/T (Zone E4)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with Crane / Grab	50	-3	1	CPME#	105	102			Barrier	-5	97
						Total SWL	103					98
TCE Station East Side Removal of abandoned U/T (Zone E5)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with Crane / Grab	50	-3	1	CPME#	105	102			Barrier	-5	97
						Total SWL	103					98

Note:

[1] Percentage on time within 30 minutes.

[2] PME with code "EPD-XXXXX" is quiet equipment with SWL extracted from the EPD's QPME inventory.

[3] The plant with code "CPME#" is referenced from the EPD's guidance "Sound Power Level of Other Commonly Used PME" from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

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TCE Station East Side Site Formation for U/T Diversion					Unmitigated			Mitigated				
Works Area / Activity	PME	% Operating Time ^[1]	Time Correction dB(A)	Units	PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^{[2], [3]}	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)
TCE Station East Side Site Formation for U/T Diversion (Zone E2)	Concrete Lorry Mixer/ Concrete Truck	70	-2	1	CNP044	109	107			Barrier	-5	102
	Concrete Pump/ Electric Bentonite Circulation Pump	50	-3	1	CNP047	109	106			Barrier	-10	96
						Total SWL	110					103
TCE Station East Side Site Formation for U/T Diversion (Zone E3)	Concrete Lorry Mixer/ Concrete Truck	70	-2	1	CNP044	109	107			Barrier	-5	102
	Concrete Pump/ Electric Bentonite Circulation Pump	50	-3	1	CNP047	109	106			Barrier	-10	96
						Total SWL	110					103
TCE Station East Side Site Formation for U/T Diversion (Zone E4)	Concrete Lorry Mixer/ Concrete Truck	70	-2	1	CNP044	109	107			Barrier	-5	102
	Concrete Pump/ Electric Bentonite Circulation Pump	60	-2	1	CNP047	109	107			Barrier	-10	97
						Total SWL	110					103

Note:
 [1] Percentage on time within 30 minutes.
 [2] PME with code "EPD-XXXXX" is quiet equipment with SWL extracted from the EPD's QPME inventory.
 [3] The plant with code "CPME#" is referenced from the EPD's guidance "Sound Power Level of Other Commonly Used PME" from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

TCE Station East Side Utilities, Road and Drainage Reinstatement												
Works Area / Activity	PME	% Operating Time ^[1]	Time Correction dB(A)	Units	Unmitigated			Mitigated				
					PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^{[2], [3]}	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)
TCE Station East Side Utilities, Road and Drainage Reinstatement (Zone E6)	Excavator	50	-3	4	CNP081	112	115	EPD-07150	90	Barrier	-5	88
	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	70	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94
	Lorry, with Crane / Grab	50	-3	2	CPME#	105	105			Barrier	-5	100
	Dump Truck	50	-3	4	CPME#	105	108			Barrier	-5	103
	Concrete Lorry Mixer / Concrete Truck	70	-2	2	CNP044	109	110			Barrier	-5	105
						Total SWL	118				Total SWL	
TCE Station East Side Utilities, Road and Drainage Reinstatement (Zone E7)	Excavator	50	-3	4	CNP081	112	115	EPD-07150	90	Barrier	-5	88
	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	70	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94
	Lorry, with Crane / Grab	50	-3	2	CPME#	105	105			Barrier	-5	100
	Dump Truck	50	-3	4	CPME#	105	108			Barrier	-5	103
	Concrete Lorry Mixer / Concrete Truck	70	-2	2	CNP044	109	110			Barrier	-5	105
						Total SWL	118				Total SWL	
TCE Station East Side Utilities, Road and Drainage Reinstatement (Zone E8)	Excavator	50	-3	4	CNP081	112	115	EPD-07150	90	Barrier	-5	88
	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	70	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94
	Lorry, with Crane / Grab	50	-3	2	CPME#	105	105			Barrier	-5	100
	Dump Truck	50	-3	4	CPME#	105	108			Barrier	-5	103
	Concrete Lorry Mixer / Concrete Truck	70	-2	2	CNP044	109	110			Barrier	-5	105
						Total SWL	118				Total SWL	
TCE Station East Side Utilities, Road and Drainage Reinstatement (Zone E9)	Excavator	50	-3	4	CNP081	112	115	EPD-07150	90	Barrier	-5	88
	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	70	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94
	Lorry, with Crane / Grab	50	-3	2	CPME#	105	105			Barrier	-5	100
	Dump Truck	50	-3	4	CPME#	105	108			Barrier	-5	103
	Concrete Lorry Mixer / Concrete Truck	70	-2	2	CNP044	109	110			Barrier	-5	105
						Total SWL	118				Total SWL	

Note:
 [1] Percentage on time within 30 minutes.
 [2] PME with code "EPD-XXXXX" is quiet equipment with SWL extracted from the EPD's QPME inventory.
 [3] The plant with code "CPME#" is referenced from the EPD's guidance "Sound Power Level of Other Commonly Used PME" from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

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TCE Station East Side Stationary Plants					Unmitigated			Mitigated				
Works Area / Activity	PME	% Operating Time ^[1]	Time Correction dB(A)	Units	PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^{[2], [3]}	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)
TCE Station East Side Stationary Plants (S1)	Air Compressor	90	0	16	CNP003	104	116	EPD-09708	94	Barrier	-10	96
	Concrete Mixer/ Bentonite Mixer/ Grout Mixer	50	-3	5	CNP045	96	100			Barrier	-10	90
	Generator	90	0	3	CNP103	95	99	EPD-10735	87	Barrier	-5	86
	Grout Pump	50	-3	5	CPME#	105	109			Barrier	-10	99
					Total SWL	117				Total SWL		101
TCE Station East Side Stationary Plants (S2)	Air Compressor	90	0	12	CNP003	104	114	EPD-09708	94	Barrier	-10	94
	Concrete Mixer/ Bentonite Mixer/ Grout Mixer	50	-3	3	CNP045	96	98			Barrier	-10	88
	Generator	90	0	4	CNP103	95	101	EPD-10735	87	Barrier	-5	88
	Grout Pump	50	-3	3	CPME#	105	107			Barrier	-10	97
					Total SWL	115				Total SWL		99

Note:

[1] Percentage on time within 30 minutes.

[2] PME with code "EPD-XXXXX" is quiet equipment with SWL extracted from the EPD's QPME inventory.

[3] The plant with code "CPME#" is referenced from the EPD's guidance "Sound Power Level of Other Commonly Used PME" from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

TCE Station West Side Stationary Plants					Unmitigated			Mitigated				
Works Area / Activity	PME	% Operating Time ^[1]	Time Correction dB(A)	Units	PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^{[2], [3]}	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)
TCE Station West Side Stationary Plants (S1)	Concrete Mixer/ Bentonite Mixer/ Grout Mixer	50	-3	2	CNP045	96	96			Barrier	-10	86
	Grout Pump	50	-3	2	CPME#	105	105			Barrier	-10	95
	Generator	80	-1	3	CNP103	95	99	EPD-10735	87	Barrier	-5	86
	Ampd Enertainer	50	-3	1	-	89	86			Barrier	-10	76
	Air Compressor	90	0	8	CNP003	104	113	EPD-09708	94	Barrier	-10	93
					Total SWL	114				Total SWL		98
TCE Station West Side Stationary Plants (S2)	Concrete Mixer/ Bentonite Mixer/ Grout Mixer	50	-3	3	CNP045	96	98			Barrier	-10	88
	Grout Pump	50	-3	3	CPME#	105	107			Barrier	-10	97
	Generator	80	-1	4	CNP103	95	100	EPD-10735	87	Barrier	-5	87
	Ampd Enertainer	50	-3	1	-	89	86			Barrier	-10	76
	Air Compressor	90	0	12	CNP003	104	114	EPD-09708	94	Barrier	-10	94
					Total SWL	115				Total SWL		99

Note:

[1] Percentage on time within 30 minutes.

[2] PME with code "EPD-XXXXX" is quiet equipment with SWL extracted from the EPD's QPME inventory.

[3] The plant with code "CPME#" is referenced from the EPD's guidance "Sound Power Level of Other Commonly Used PME" from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

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Retaining Wall Construction (Retaining Wall and Mini Piles) W1-W3					Unmitigated			Mitigated					
Works Area / Activity	PME	% Operating Time ^[1]	Time Correction dB(A)	Units	PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^{[2], [3]}	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)	
Construction of Retaining Wall 240m Section and noise mitigation measures (Zone W1)	Concrete Pump/ Electric Bentonite Circulation Pump	50	-3	1	CNP047	109	106			Barrier	-10	96	
	Bar Bender and Cutter	50	-3	1	CNP021	90	87			Barrier	-10	77	
	Concrete Lorry Mixer/ Concrete Truck	70	-2	1	CNP044	109	107			Barrier	-5	102	
						Total SWL	110					Total SWL	103
Construction of Retaining Wall 240m Section and noise mitigation measures (Zone W2)	Concrete Pump/ Electric Bentonite Circulation Pump	50	-3	1	CNP047	109	106			Barrier	-10	96	
	Bar Bender and Cutter	50	-3	1	CNP021	90	87			Barrier	-10	77	
	Concrete Lorry Mixer/ Concrete Truck	70	-2	1	CNP044	109	107			Barrier	-5	102	
						Total SWL	110					Total SWL	103
Construction of Retaining Wall 240m Section and noise mitigation measures (Zone W3)	Concrete Pump/ Electric Bentonite Circulation Pump	50	-3	1	CNP047	109	106			Barrier	-10	96	
	Bar Bender and Cutter	50	-3	1	CNP021	90	87			Barrier	-10	77	
	Concrete Lorry Mixer/ Concrete Truck	70	-2	1	CNP044	109	107			Barrier	-5	102	
						Total SWL	110					Total SWL	103
Retaining Wall Mini piles 80m opposite Ying Tung Estate (Zone W1)	Drill Rig, DTH Drilling Machine	90	0	1	CPME#	110	110			Barrier	-10	100	
						Total SWL	110					Total SWL	100
Retaining Wall Mini piles 80m opposite Ying Tung Estate (Zone W2)	Drill Rig, DTH Drilling Machine	90	0	1	CPME#	110	110			Barrier	-10	100	
						Total SWL	110					Total SWL	100
Retaining Wall Mini piles 80m opposite Ying Tung Estate (Zone W3)	Drill Rig, DTH Drilling Machine	90	0	2	CPME#	110	113			Barrier	-10	103	
						Total SWL	113					Total SWL	103

Note:

[1] Percentage on time within 30 minutes.

[2] PME with code "EPD-XXXXX" is quiet equipment with SWL extracted from the EPD's QPME inventory.

[3] The plant with code "CPME#" is referenced from the EPD's guidance "Sound Power Level of Other Commonly Used PME" from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

Retaining Wall Construction (Retaining wall& mini piles) W4-W8					Unmitigated			Mitigated				
Works Area / Activity	PME	% Operating Time ^[1]	Time Correction dB(A)	Units	PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^{[2], [3]}	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)
Construction of Retaining Wall 240m Section and noise mitigation measures (Zone W4)	Concrete Pump/ Electric Bentonite Circulation Pump	50	-3	1	CNP047	109	106			Barrier	-10	96
	Bar Bender and Cutter	50	-3	1	CNP021	90	87			Barrier	-10	77
	Concrete Lorry Mixer/ Concrete Truck	70	-2	1	CNP044	109	107			Barrier	-5	102
	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	80	-1	1	CNP048	112	111	EPD-09130	101	Barrier	-5	95
					Total SWL	113					Total SWL	104
Construction of Retaining Wall 240m Section and noise mitigation measures (Zone W5)	Concrete Pump/ Electric Bentonite Circulation Pump	50	-3	1	CNP047	109	106			Barrier	-10	96
	Bar Bender and Cutter	50	-3	1	CNP021	90	87			Barrier	-10	77
	Concrete Lorry Mixer/ Concrete Truck	70	-2	1	CNP044	109	107			Barrier	-5	102
	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	80	-1	1	CNP048	112	111	EPD-09130	101	Barrier	-5	95
					Total SWL	113					Total SWL	104
Construction of Retaining Wall 240m Section and noise mitigation measures (Zone W6)	Concrete Pump/ Electric Bentonite Circulation Pump	50	-3	1	CNP047	109	106			Barrier	-10	96
	Bar Bender and Cutter	50	-3	1	CNP021	90	87			Barrier	-10	77
	Concrete Lorry Mixer/ Concrete Truck	70	-2	1	CNP044	109	107			Barrier	-5	102
	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	80	-1	1	CNP048	112	111	EPD-09130	101	Barrier	-5	95
					Total SWL	113					Total SWL	104
Construction of Retaining Wall 240m Section and noise mitigation measures (Zone W7)	Concrete Pump/ Electric Bentonite Circulation Pump	50	-3	1	CNP047	109	106			Barrier	-10	96
	Bar Bender and Cutter	50	-3	1	CNP021	90	87			Barrier	-10	77
	Concrete Lorry Mixer/ Concrete Truck	70	-2	1	CNP044	109	107			Barrier	-5	102
	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	80	-1	1	CNP048	112	111	EPD-09130	101	Barrier	-5	95
					Total SWL	113					Total SWL	104
Construction of Retaining Wall 240m Section and noise mitigation measures (Zone W8)	Concrete Pump/ Electric Bentonite Circulation Pump	50	-3	1	CNP047	109	106			Barrier	-10	96
	Bar Bender and Cutter	50	-3	1	CNP021	90	87			Barrier	-10	77
	Concrete Lorry Mixer/ Concrete Truck	70	-2	1	CNP044	109	107			Barrier	-5	102
	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	80	-1	1	CNP048	112	111	EPD-09130	101	Barrier	-5	95
					Total SWL	113					Total SWL	104
Retaining Wall Foundation 240m Section (Zone W4)	Drill Rig, DTH Drilling Machine	90	0	2	CPME#	110	113			Barrier	-10	103
					Total SWL	113					Total SWL	103
Retaining Wall Foundation 240m Section (Zone W5)	Drill Rig, DTH Drilling Machine	90	0	1	CPME#	110	110			Barrier	-10	100
					Total SWL	110					Total SWL	100
Retaining Wall Foundation 240m Section (Zone W6)	Drill Rig, DTH Drilling Machine	90	0	1	CPME#	110	110			Barrier	-10	100
					Total SWL	110					Total SWL	100
Retaining Wall Foundation 240m Section (Zone W7)	Drill Rig, DTH Drilling Machine	90	0	1	CPME#	110	110			Barrier	-10	100
					Total SWL	110					Total SWL	100
Retaining Wall Foundation 240m Section (Zone W8)	Drill Rig, DTH Drilling Machine	90	0	1	CPME#	110	110			Barrier	-10	100
					Total SWL	110					Total SWL	100

Note:

[1] Percentage on time within 30 minutes.

[2] PME with code "EPD-XXXX" is quiet equipment with SWL extracted from the EPD's QPME inventory.

[3] The plant with code "CPME#" is referenced from the EPD's guidance "Sound Power Level of Other Commonly Used PME" from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

TCE Station West Side Utilities, Road and Drainage Reinstatement												
Works Area / Activity	PME	% Operating Time ^[1]	Time Correction dB(A)	Units	Unmitigated			Mitigated				
					PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^{[2], [3]}	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)
TCE Station West Side Utilities, Road and Drainage Reinstatement (Zone W1)	Excavator	50	-3	2	CNP081	112	112	EPD-07150	90	Barrier	-5	85
	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	70	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97
	Dump Truck	50	-3	2	CPME#	105	105			Barrier	-5	100
	Concrete Lorry Mixer / Concrete Truck	70	-2	2	CNP044	109	110			Barrier	-5	105
					Total SWL	116				Total SWL		107
TCE Station West Side Utilities, Road and Drainage Reinstatement (Zone W2)	Excavator	50	-3	2	CNP081	112	112	EPD-07150	90	Barrier	-5	85
	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	70	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97
	Dump Truck	50	-3	2	CPME#	105	105			Barrier	-5	100
	Concrete Lorry Mixer / Concrete Truck	70	-2	2	CNP044	109	110			Barrier	-5	105
					Total SWL	116				Total SWL		107
TCE Station West Side Utilities, Road and Drainage Reinstatement (Zone W3)	Excavator	50	-3	2	CNP081	112	112	EPD-07150	90	Barrier	-5	85
	Mobile Crane / Service Crane / Crawler Crane / Lifting Crane	70	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97
	Dump Truck	50	-3	2	CPME#	105	105			Barrier	-5	100
	Concrete Lorry Mixer / Concrete Truck	70	-2	2	CNP044	109	110			Barrier	-5	105
					Total SWL	116				Total SWL		107

Note:

[1] Percentage on time within 30 minutes.

[2] PME with code "EPD-XXXXX" is quiet equipment with SWL extracted from the EPD's QPME inventory.

[3] The plant with code "CPME#" is referenced from the EPD's guidance "Sound Power Level of Other Commonly Used PME" from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

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TCE Station West Side Removal and Reprovision of Existing Noise Barrier					Unmitigated			Mitigated				
Works Area / Activity	PME	% Operating Time ^[1]	Time Correction dB(A)	Units	PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^{[2], [3]}	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)
Construction of Retaining Wall 240m Section and noise mitigation measures (Zone W1)	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	80	-1	2	CNP048	112	114	EPD-09130	101	Barrier	-5	98
	Cherry Picker (Aerial work platform (working height ≤ 13m))	80	-1	2	CPME#	95	97			Barrier	-5	92
	Hand-held breaker / Impact wrench	50	-3	1	CNP026	114	111	EPD-13019	101	Barrier	-5	93
	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
							Total SWL	116			Total SWL	
Construction of Retaining Wall 240m Section and noise mitigation measures (Zone W2)	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	80	-1	2	CNP048	112	114	EPD-09130	101	Barrier	-5	98
	Cherry Picker	80	-1	2	CPME#	95	97			Barrier	-5	92
	Hand-held breaker / Impact wrench	50	-3	1	CNP026	114	111	EPD-13019	101	Barrier	-5	93
	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
							Total SWL	116			Total SWL	
Construction of Retaining Wall 240m Section and noise mitigation measures (Zone W3)	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	80	-1	2	CNP048	112	114	EPD-09130	101	Barrier	-5	98
	Cherry Picker	80	-1	2	CPME#	95	97			Barrier	-5	92
	Hand-held breaker / Impact wrench	50	-3	1	CNP026	114	111	EPD-13019	101	Barrier	-5	93
	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
							Total SWL	116			Total SWL	

Note:
 [1] Percentage on time within 30 minutes.
 [2] PME with code "EPD-XXXXX" is quiet equipment with SWL extracted from the EPD's QPME inventory.
 [3] The plant with code "CPME#" is referenced from the EPD's guidance "Sound Power Level of Other Commonly Used PME" from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

TCE Station West Side Site Reinstatement					Unmitigated			Mitigated					
Works Area/ Activity	PME	% Operating Time ^[1]	Time Correction dB(A)	Units	PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^{[2],[3]}	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)	
TCE Station West Side Site reinstatement (Zone W1)	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	60	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94	
	Lorry, with crane/grab	100	0	2	CPME#	105	108			Barrier	-5	103	
	Excavator	50	-3	1	CNP081	112	109	EPD-07150	90	Barrier	-5	82	
	Hand-Held Breaker	50	-3	1	CNP026	114	111	EPD-13019	101	Barrier	-5	93	
	Concrete Lorry Mixer/ Concrete Truck	70	-2	1	CNP044	109	107			Barrier	-5	102	
	Air Compressor	50	-3	1	CNP003	104	101	EPD-09708	94	Barrier	-10	81	
					Total SWL	116						Total SWL	106
TCE Station West Side Site reinstatement (Zone W2)	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	60	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94	
	Lorry, with crane/grab	100	0	2	CPME#	105	108			Barrier	-5	103	
	Excavator	90	0	1	CNP081	112	112	EPD-07150	90	Barrier	-5	85	
	Hand-Held Breaker	50	-3	1	CNP026	114	111	EPD-13019	101	Barrier	-5	93	
	Concrete Lorry Mixer/ Concrete Truck	70	-2	1	CNP044	109	107			Barrier	-5	102	
	Air Compressor	50	-3	1	CNP003	104	101	EPD-09708	94	Barrier	-10	81	
					Total SWL	117						Total SWL	106
TCE Station West Side Site reinstatement (Zone W3)	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	60	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94	
	Lorry, with crane/grab	100	0	2	CPME#	105	108			Barrier	-5	103	
	Excavator	90	0	1	CNP081	112	112	EPD-07150	90	Barrier	-5	85	
	Hand-Held Breaker	50	-3	1	CNP026	114	111	EPD-13019	101	Barrier	-5	93	
	Concrete Lorry Mixer/ Concrete Truck	70	-2	1	CNP044	109	107			Barrier	-5	102	
	Air Compressor	50	-3	1	CNP003	104	101	EPD-09708	94	Barrier	-10	81	
					Total SWL	117						Total SWL	106
TCE Station West Side Site reinstatement (Zone W4)	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	60	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94	
	Lorry, with crane/grab	50	-3	2	CPME#	105	105			Barrier	-5	100	
	Excavator	90	0	1	CNP081	112	112	EPD-07150	90	Barrier	-5	85	
	Hand-Held Breaker	50	-3	1	CNP026	114	111	EPD-13019	101	Barrier	-5	93	
	Concrete Lorry Mixer/ Concrete Truck	70	-2	1	CNP044	109	107			Barrier	-5	102	
	Air Compressor	50	-3	1	CNP003	104	101	EPD-09708	94	Barrier	-10	81	
					Total SWL	117						Total SWL	105
TCE Station West Side Site reinstatement (Zone W5)	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	60	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94	
	Lorry, with crane/grab	50	-3	2	CPME#	105	105			Barrier	-5	100	
	Excavator	90	0	1	CNP081	112	112	EPD-07150	90	Barrier	-5	85	
	Hand-Held Breaker	50	-3	1	CNP026	114	111	EPD-13019	101	Barrier	-5	93	
	Concrete Lorry Mixer/ Concrete Truck	70	-2	1	CNP044	109	107			Barrier	-5	102	
	Air Compressor	50	-3	1	CNP003	104	101	EPD-09708	94	Barrier	-10	81	
					Total SWL	117						Total SWL	105
TCE Station West Side Site reinstatement (Zone W6)	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	60	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94	
	Lorry, with crane/grab	50	-3	2	CPME#	105	105			Barrier	-5	100	
	Excavator	90	0	1	CNP081	112	112	EPD-07150	90	Barrier	-5	85	
	Hand-Held Breaker	50	-3	1	CNP026	114	111	EPD-13019	101	Barrier	-5	93	
	Concrete Lorry Mixer/ Concrete Truck	70	-2	1	CNP044	109	107			Barrier	-5	102	
	Air Compressor	50	-3	1	CNP003	104	101	EPD-09708	94	Barrier	-10	81	
					Total SWL	117						Total SWL	105
TCE Station West Side Site reinstatement (Zone W7)	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	60	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94	
	Lorry, with crane/grab	50	-3	2	CPME#	105	105			Barrier	-5	100	
	Excavator	90	0	1	CNP081	112	112	EPD-07150	90	Barrier	-5	85	
	Hand-Held Breaker	50	-3	1	CNP026	114	111	EPD-13019	101	Barrier	-5	93	
	Concrete Lorry Mixer/ Concrete Truck	70	-2	1	CNP044	109	107			Barrier	-5	102	
	Air Compressor	50	-3	1	CNP003	104	101	EPD-09708	94	Barrier	-10	81	
					Total SWL	117						Total SWL	105
TCE Station West Side Site reinstatement (Zone W8)	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	60	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94	
	Lorry, with crane/grab	50	-3	2	CPME#	105	105			Barrier	-5	100	
	Excavator	90	0	1	CNP081	112	112	EPD-07150	90	Barrier	-5	85	
	Hand-Held Breaker	50	-3	1	CNP026	114	111	EPD-13019	101	Barrier	-5	93	
	Concrete Lorry Mixer/ Concrete Truck	70	-2	1	CNP044	109	107			Barrier	-5	102	
	Air Compressor	50	-3	1	CNP003	104	101	EPD-09708	94	Barrier	-10	81	
					Total SWL	117						Total SWL	105

Note:
 [1] Percentage on time within 30 minutes.
 [2] PME with code "EPD-XXXX" is quiet equipment with SWL extracted from EPD's QPME inventory.
 [3] The SWL of quiet plant with code "CPME#" is based on SWL of other commonly used PME from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

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TCE Station West Side Removal of abandoned D/T					Unmitigated			Mitigated				
Works Area/ Activity	PME	% Operating Time ^[1]	Time Correction dB(A)	Units	PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^{[2], [3]}	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)
TCE Station West Side Removal of abandoned D/T (Zone W1)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97
							Total SWL	103			Total SWL	98
TCE Station West Side Removal of abandoned D/T (Zone W2)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97
							Total SWL	103			Total SWL	98
TCE Station West Side Removal of abandoned D/T (Zone W3)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97
							Total SWL	103			Total SWL	98
TCE Station West Side Removal of abandoned D/T (Zone W4)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97
							Total SWL	103			Total SWL	98
TCE Station West Side Removal of abandoned D/T (Zone W5)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97
							Total SWL	103			Total SWL	98
TCE Station West Side Removal of abandoned D/T (Zone W6)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97
							Total SWL	103			Total SWL	98
TCE Station West Side Removal of abandoned D/T (Zone W7)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97
							Total SWL	103			Total SWL	98
TCE Station West Side Removal of abandoned D/T (Zone W8)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97
							Total SWL	103			Total SWL	98

Note:

[1] Percentage on time within 30 minutes.

[2] PME with code "EPD-XXXXX" is quiet equipment with SWL extracted from the EPD's QPME inventory.

[3] The SWL of quiet plant with code "CPME#" is based on SWL of other commonly used PME from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

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TCE Station West Side Removal of abandoned U/T					Unmitigated			Mitigated				
Works Area/ Activity	PME	% Operating Time ^[1]	Time Correction dB(A)	Units	PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^{[2], [3]}	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)
TCE Station West Side Removal of abandoned U/T (Zone W1)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97
						Total SWL	103					Total SWL
TCE Station West Side Removal of abandoned U/T (Zone W2)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97
						Total SWL	103					Total SWL
TCE Station West Side Removal of abandoned U/T (Zone W3)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97
						Total SWL	103					Total SWL
TCE Station West Side Removal of abandoned U/T (Zone W4)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97
						Total SWL	103					Total SWL
TCE Station West Side Removal of abandoned U/T (Zone W5)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97
						Total SWL	103					Total SWL
TCE Station West Side Removal of abandoned U/T (Zone W6)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97
						Total SWL	103					Total SWL
TCE Station West Side Removal of abandoned U/T (Zone W7)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97
						Total SWL	103					Total SWL
TCE Station West Side Removal of abandoned U/T (Zone W8)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97
						Total SWL	103					Total SWL

Note:
 [1] Percentage on time within 30 minutes.
 [2] PME with code "EPD-XXXXX" is quiet equipment with SWL extracted from EPD's QPME inventory.
 [3] The SWL of quiet plant with code "CPME#" is based on SWL of other commonly used PME from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

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TCE Station Area Stationary Plants					Unmitigated			Mitigated					
Works Area/ Activity	PME	% Operating Time ^[1]	Time Correction dB(A)	Units	PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^{[2], [3]}	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)	
TCE Station Area Stationary Plants (S1)	Generator	50	-3	2	CNP103	95	95	EPD-10735	87	Barrier	-5	82	
	Air Compressor	90	0	5	CNP003	104	111	EPD-09708	94	Barrier	-10	91	
							Total SWL	111				Total SWL	91
TCE Station Area Stationary Plants (S2)	Generator	50	-3	1	CNP103	95	92	EPD-10735	87	Barrier	-5	79	
	Air Compressor	90	0	3	CNP003	104	108	EPD-09708	94	Barrier	-10	88	
							Total SWL	108				Total SWL	89

Note:

[1] Percentage on time within 30 minutes.

[2] PME with code "EPD-XXXXX" is quiet equipment with SWL extracted from the EPD's QPME inventory.

[3] The SWL of quiet plant with code "CPME#" is based on SWL of other commonly used PME from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

Project: Contract 1202 Tung Chung East Station and Associated Enabling Works for Track Diversion
Title: Plant Inventory TCE Station

TCE Station Site Clearance/Site Formation					Unmitigated			Mitigated				
Works Area/ Activity	PME	% Operating Time ^[1]	Time Correction dB(A)	Units	PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^[2] , ^[3]	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)
TCE Station Site Clearance/Site Formation (Zone A)	Excavator	70	-2	4	CNP081	112	116	EPD-07150	90	Barrier	-5	89
	Breaker, excavator mounted	70	-2	1	CNP028	122	120			Barrier	-10	110
	Roller, Vibratory	50	-3	2	CNP186	108	108	EPD-06997	94	Barrier	-5	89
	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	70	-2	2	CNP048	112	113	EPD-09130	101	Barrier	-5	97
	Lorry	50	-3	2	CNP141	112	112	CPME#	105	Barrier	-5	100
	Dump Truck	50	-3	8	CPME#	105	111			Barrier	-5	106
	Concrete Lorry Mixer/ Concrete Truck	70	-2	4	CNP044	109	113			Barrier	-5	108
							Total SWL	124			Total SWL	114
TCE Station Site Clearance/Site Formation (Zone B)	Excavator	70	-2	4	CNP081	112	116	EPD-07150	90	Barrier	-5	89
	Breaker, excavator mounted	70	-2	1	CNP028	122	120			Barrier	-10	110
	Roller, Vibratory	50	-3	2	CNP186	108	108	EPD-06997	94	Barrier	-5	89
	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	70	-2	2	CNP048	112	113	EPD-09130	101	Barrier	-5	97
	Lorry	50	-3	2	CNP141	112	112	CPME#	105	Barrier	-5	100
	Dump Truck	50	-3	8	CPME#	105	111			Barrier	-5	106
	Concrete Lorry Mixer/ Concrete Truck	70	-2	4	CNP044	109	113			Barrier	-5	108
							Total SWL	124			Total SWL	114
TCE Station Site Clearance/Site Formation (Zone C)	Excavator	70	-2	4	CNP081	112	116	EPD-07150	90	Barrier	-5	89
	Breaker, excavator mounted	70	-2	1	CNP028	122	120			Barrier	-10	110
	Roller, Vibratory	50	-3	2	CNP186	108	108	EPD-06997	94	Barrier	-5	89
	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	70	-2	2	CNP048	112	113	EPD-09130	101	Barrier	-5	97
	Lorry	50	-3	2	CNP141	112	112	CPME#	105	Barrier	-5	100
	Dump Truck	50	-3	8	CPME#	105	111			Barrier	-5	106
	Concrete Lorry Mixer/ Concrete Truck	70	-2	4	CNP044	109	113			Barrier	-5	108
							Total SWL	124			Total SWL	114

Note:

[1] Percentage on time within 30 minutes.

[2] PME with code "EPD-XXXXX" is quiet equipment with SWL extracted from the EPD's QPME inventory.

[3] The SWL of quiet plant with code "CPME#" is based on SWL of other commonly used PME from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

Project: Contract 1202 Tung Chung East Station and Associated Enabling Works for Track Diversion
Title: Plant Inventory TCE Station

TCE Station Structure - Foundation					Unmitigated			Mitigated				
Works Area/ Activity	PME	% Operating Time ^[1]	Time Correction dB(A)	Units	PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^[2] , ^[3]	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)
TCE Station Structure - Foundation (Zone A)	Drill Rig, DTH Drilling Machine	100	0	6	CPME#	110	118			Barrier	-10	108
	Mobile Crane/ Service Crane / Crawler Crane / Lifting Crane	100	0	4	CNP048	112	118	EPD-09130	101	Barrier	-5	102
	Air Compressor	100	0	9	CNP003	104	114	EPD-09708	94	Barrier	-10	94
	Grout Mixer	50	-3	1	CNP045	96	93			Barrier	-10	83
	Grout Pump	50	-3	1	CPME#	105	102			Barrier	-10	92
							Total SWL	122			Total SWL	109
TCE Station Structure - Foundation (Zone B)	Drill Rig, DTH Drilling Machine	100	0	6	CPME#	110	118			Barrier	-10	108
	Mobile Crane/ Service Crane / Crawler Crane / Lifting Crane	100	0	4	CNP048	112	118	EPD-09130	101	Barrier	-5	102
	Air Compressor	100	0	9	CNP003	104	114	EPD-09708	94	Barrier	-10	94
	Grout Mixer	50	-3	1	CNP045	96	93			Barrier	-10	83
	Grout Pump	50	-3	1	CPME#	105	102			Barrier	-10	92
							Total SWL	122			Total SWL	109
TCE Station Structure - Foundation (Zone C)	Drill Rig, DTH Drilling Machine	100	0	6	CPME#	110	118			Barrier	-10	108
	Mobile Crane/ Service Crane / Crawler Crane / Lifting Crane	100	0	4	CNP048	112	118	EPD-09130	101	Barrier	-5	102
	Air Compressor	100	0	9	CNP003	104	114	EPD-09708	94	Barrier	-10	94
	Grout Mixer	50	-3	1	CNP045	96	93			Barrier	-10	83
	Grout Pump	50	-3	1	CPME#	105	102			Barrier	-10	92
							Total SWL	122			Total SWL	109

Note:

[1] Percentage on time within 30 minutes.

[2] PME with code "EPD-XXXXX" is quiet equipment with SWL extracted from the EPD's QPME inventory.

[3] The SWL of quiet plant with code "CPME#" is based on SWL of other commonly used PME from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

Project: Contract 1202 Tung Chung East Station and Associated Enabling Works for Track Diversion
Title: Plant Inventory TCE Station

TCE Station Link Bridge Foundation					Unmitigated			Mitigated					
Works Area/ Activity	PME	% Operating Time ^[1]	Time Correction dB(A)	Units	PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^[2] _{^[3]}	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)	
TCE Station Link Bridge Foundation (Zone C)	Piling, Large Diameter Bored, Oscillator	90	0	2	CNP165	115	118			Barrier	-10	108	
	Drill Rig, DTH Drilling Machine	70	-2	2	CPME#	110	111			Barrier	-10	101	
	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	80	-1	1	CNP048	112	111	EPD-09130	101	Barrier	-5	95	
	Concrete Lorry Mixer/ Concrete Truck	80	-1	1	CNP044	109	108			Barrier	-5	103	
	Concrete Pump/ Electric Bentonite Circulation Pump	80	-1	1	CNP047	109	108			Barrier	-10	98	
	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	70	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94	
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97	
	Electric drill	60	-2	1	CNP064	103	101	EPD-08781	99	Barrier	-5	92	
	Rock drill	70	-2	1	CNP182	123	121			Barrier	-10	111	
	Vibratory Poker	60	-2	3	CNP170	113	116	CPME#	102	Barrier	-10	95	
							Total SWL	125				Total SWL	114

Note:

[1] Percentage on time within 30 minutes.

[2] PME with code "EPD-XXXXX" is quiet equipment with SWL extracted from the EPD's QPME inventory.

[3] The SWL of quiet plant with code "CPME#" is based on SWL of other commonly used PME from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

Project: Contract 1202 Tung Chung East Station and Associated Enabling Works for Track Diversion
Title: Plant Inventory TCE Station

TCE Station Structure - Main Station Structure, Ancillary Buildings, Bridges, Entrances					Unmitigated			Mitigated				
Works Area/ Activity	PME	% Operating Time ^[1]	Time Correction dB(A)	Units	PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^[2] , ^[3]	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)
TCE Station Structure - Main Station Structure, Ancillary Buildings, Bridges, Entrances (Zone A)	Bar Bender and Cutter	100	0	1	CNP021	90	90			Barrier	-10	80
	Concrete Lorry Mixer/ Concrete Truck	80	-1	1	CNP044	109	108			Barrier	-5	103
	Concrete Pump/ Electric Bentonite Circulation Pump	80	-1	1	CNP047	109	108			Barrier	-10	98
	Saw, Circular, Wood	50	-3	1	CNP201	108	105			Barrier	-10	95
	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	80	-1	1	CNP048	112	111	EPD-09130	101	Barrier	-5	95
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97
	Electric drill	70	-2	1	CNP064	103	101	EPD-08781	99	Barrier	-5	92
	Vibratory Poker	60	-2	3	CNP170	113	116	CPME#	102	Barrier	-10	95
							Total SWL	118			Total SWL	106
TCE Station Structure - Main Station Structure, Ancillary Buildings, Bridges, Entrances (Zone B)	Bar Bender and Cutter	100	0	1	CNP021	90	90			Barrier	-10	80
	Concrete Lorry Mixer/ Concrete Truck	80	-1	1	CNP044	109	108			Barrier	-5	103
	Concrete Pump/ Electric Bentonite Circulation Pump	80	-1	1	CNP047	109	108			Barrier	-10	98
	Saw, Circular, Wood	50	-3	1	CNP201	108	105			Barrier	-10	95
	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	80	-1	1	CNP048	112	111	EPD-09130	101	Barrier	-5	95
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97
	Electric drill	70	-2	1	CNP064	103	101	EPD-08781	99	Barrier	-5	92
	Vibratory Poker	60	-2	3	CNP170	113	116	CPME#	102	Barrier	-10	95
							Total SWL	115			Total SWL	106
TCE Station Structure - Main Station Structure, Ancillary Buildings, Bridges, Entrances (Zone C)	Bar Bender and Cutter	100	0	1	CNP021	90	90			Barrier	-10	80
	Concrete Lorry Mixer/ Concrete Truck	80	-1	1	CNP044	109	108			Barrier	-5	103
	Concrete Pump/ Electric Bentonite Circulation Pump	80	-1	1	CNP047	109	108			Barrier	-10	98
	Saw, Circular, Wood	50	-3	1	CNP201	108	105			Barrier	-10	95
	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	80	-1	3	CNP048	112	116	EPD-09130	101	Barrier	-5	100
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97
	Electric drill	70	-2	1	CNP064	103	101	EPD-08781	99	Barrier	-5	92
	Vibratory Poker	60	-2	3	CNP170	113	116	CPME#	102	Barrier	-10	95
							Total SWL	120			Total SWL	107

Note:

[1] Percentage on time within 30 minutes.

[2] PME with code "EPD-XXXXX" is quiet equipment with SWL extracted from the EPD's QPME inventory.

[3] The SWL of quiet plant with code "CPME#" is based on SWL of other commonly used PME from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

Project: Contract 1202 Tung Chung East Station and Associated Enabling Works for Track Diversion
Title: Plant Inventory TCE Station

TCE Station Site Reinstatement					Unmitigated			Mitigated				
Works Area/ Activity	PME	% Operating Time ^[1]	Time Correction dB(A)	Units	PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^[2] , ^[3]	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)
TCE Station Site Reinstatement (Zone A)	Excavator	100	0	4	CNP081	112	118	EPD-07150	90	Barrier	-5	91
	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	50	-3	2	CNP048	112	112	EPD-09130	101	Barrier	-5	96
	Lorry	100	0	2	CNP141	112	115	CPME#	105	Barrier	-5	103
	Dump Truck	100	0	4	CPME#	105	111			Barrier	-5	106
	Concrete Lorry Mixer/ Concrete Truck	100	0	2	CNP044	109	112			Barrier	-5	107
	Roller, Vibratory	70	-2	2	CNP186	108	109	EPD-06997	94	Barrier	-5	90
	Vibratory Poker	50	-3	4	CNP170	113	116	CPME#	102	Barrier	-10	95
	Saw, Circular, Wood	50	-3	2	CNP201	108	108			Barrier	-10	98
							Total SWL	123			Total SWL	111
TCE Station Site Reinstatement (Zone B)	Excavator	100	0	4	CNP081	112	118	EPD-07150	90	Barrier	-5	91
	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	50	-3	2	CNP048	112	112	EPD-09130	101	Barrier	-5	96
	Lorry	100	0	2	CNP141	112	115	CPME#	105	Barrier	-5	103
	Dump Truck	100	0	4	CPME#	105	111			Barrier	-5	106
	Concrete Lorry Mixer/ Concrete Truck	100	0	2	CNP044	109	112			Barrier	-5	107
	Roller, Vibratory	70	-2	2	CNP186	108	109	EPD-06997	94	Barrier	-5	90
	Vibratory Poker	50	-3	4	CNP170	113	116	CPME#	102	Barrier	-10	95
	Saw, Circular, Wood	50	-3	2	CNP201	108	108			Barrier	-10	98
							Total SWL	123			Total SWL	111
TCE Station Site Reinstatement (Zone C)	Excavator	100	0	4	CNP081	112	118	EPD-07150	90	Barrier	-5	91
	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	100	0	2	CNP048	112	115	EPD-09130	101	Barrier	-5	99
	Lorry	100	0	2	CNP141	112	115	CPME#	105	Barrier	-5	103
	Dump Truck	100	0	4	CPME#	105	111			Barrier	-5	106
	Concrete Lorry Mixer/ Concrete Truck	100	0	2	CNP044	109	112			Barrier	-5	107
	Roller, Vibratory	70	-2	2	CNP186	108	109	EPD-06997	94	Barrier	-5	90
	Vibratory Poker	50	-3	4	CNP170	113	116	CPME#	102	Barrier	-10	95
	Saw, Circular, Wood	50	-3	2	CNP201	108	108			Barrier	-10	98
							Total SWL	123			Total SWL	111

Note:

[1] Percentage on time within 30 minutes.

[2] PME with code "EPD-XXXXX" is quiet equipment with SWL extracted from the EPD's QPME inventory.

[3] The SWL of quiet plant with code "CPME#" is based on SWL of other commonly used PME from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

Project: Contract 1202 Tung Chung East Station and Associated Enabling Works for Track Diversion
Title: Plant Inventory TCE Station

TCE - Link Bridge Structure					Unmitigated			Mitigated					
Works Area/ Activity	PME	% Operating Time ^[1]	Time Correction dB(A)	Units	PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^{[2], [3]}	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)	
TCE - Link Bridge Structure (Zone C)	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	50	-3	2	CNP048	112	112	EPD-09130	101	Barrier	-5	96	
	Bar Bender and Cutter	100	0	1	CNP021	90	90			Barrier	-10	80	
	Concrete Lorry Mixer/ Concrete Truck	80	-1	1	CNP044	109	108			Barrier	-5	103	
	Concrete Pump/ Electric Bentonite Circulation Pump	80	-1	1	CNP047	109	108			Barrier	-10	98	
	Saw, Circular, Wood	50	-3	1	CNP201	108	105			Barrier	-10	95	
	Mobile Crane/ Service Crane/ Crawler Crane/ Lifting crane	70	-2	1	CNP048	112	110	EPD-09130	101	Barrier	-5	94	
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97	
	Electric drill	60	-2	1	CNP064	103	101	EPD-08781	99	Barrier	-5	92	
	Rock drill	70	-2	1	CNP182	123	121			Barrier	-10	111	
	Vibratory Poker	60	-2	3	CNP170	113	116	CPME#	102	Barrier	-10	95	
							Total SWL	123				Total SWL	113

Note:

[1] Percentage on time within 30 minutes.

[2] PME with code "EPD-XXXXX" is quiet equipment with SWL extracted from the EPD's QPME inventory.

[3] The SWL of quiet plant with code "CPME#" is based on SWL of other commonly used PME from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

Project: Contract 1202 Tung Chung East Station and Associated Enabling Works for Track Diversion
Title: Plant Inventory TCE Station

TCE Station Removal of abandoned D/T					Unmitigated			Mitigated					
Works Area/ Activity	PME	% Operating Time ^[1]	Time Correction dB(A)	Units	PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^[2] , ^[3]	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)	
TCE Station Removal of abandoned D/T (Zone A)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90	
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97	
							Total SWL	103				Total SWL	98
TCE Station Removal of abandoned D/T (Zone B)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90	
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97	
							Total SWL	103				Total SWL	98
TCE Station Removal of abandoned D/T (Zone C)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90	
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97	
							Total SWL	103				Total SWL	98

Note:

[1] Percentage on time within 30 minutes.

[2] PME with code "EPD-XXXXX" is quiet equipment with SWL extracted from EPD's QPME inventory.

[3] The SWL of quiet plant with code "CPME#" is based on SWL of other commonly used PME from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

Project: Contract 1202 Tung Chung East Station and Associated Enabling Works for Track Diversion
Title: Plant Inventory TCE Station

TCE Station Removal of abandoned U/T					Unmitigated			Mitigated					
Works Area/ Activity	PME	% Operating Time ^[1]	Time Correction dB(A)	Units	PME Reference	Single Unit PME dB(A)	Total SWL dB(A)	QPME Reference ^[2] , ^[3]	Single Unit QPME dB(A)	Mitigation Measures	Correction dB(A)	Total SWL dB(A)	
TCE Station Removal of abandoned U/T (Zone A)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90	
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97	
							Total SWL	103				Total SWL	98
TCE Station Removal of abandoned U/T (Zone B)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90	
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97	
							Total SWL	103				Total SWL	98
TCE Station Removal of abandoned U/T (Zone C)	Grinder	50	-3	1	CNP065	98	95			Barrier	-5	90	
	Lorry, with crane/grab	50	-3	1	CPME#	105	102			Barrier	-5	97	
							Total SWL	103				Total SWL	98

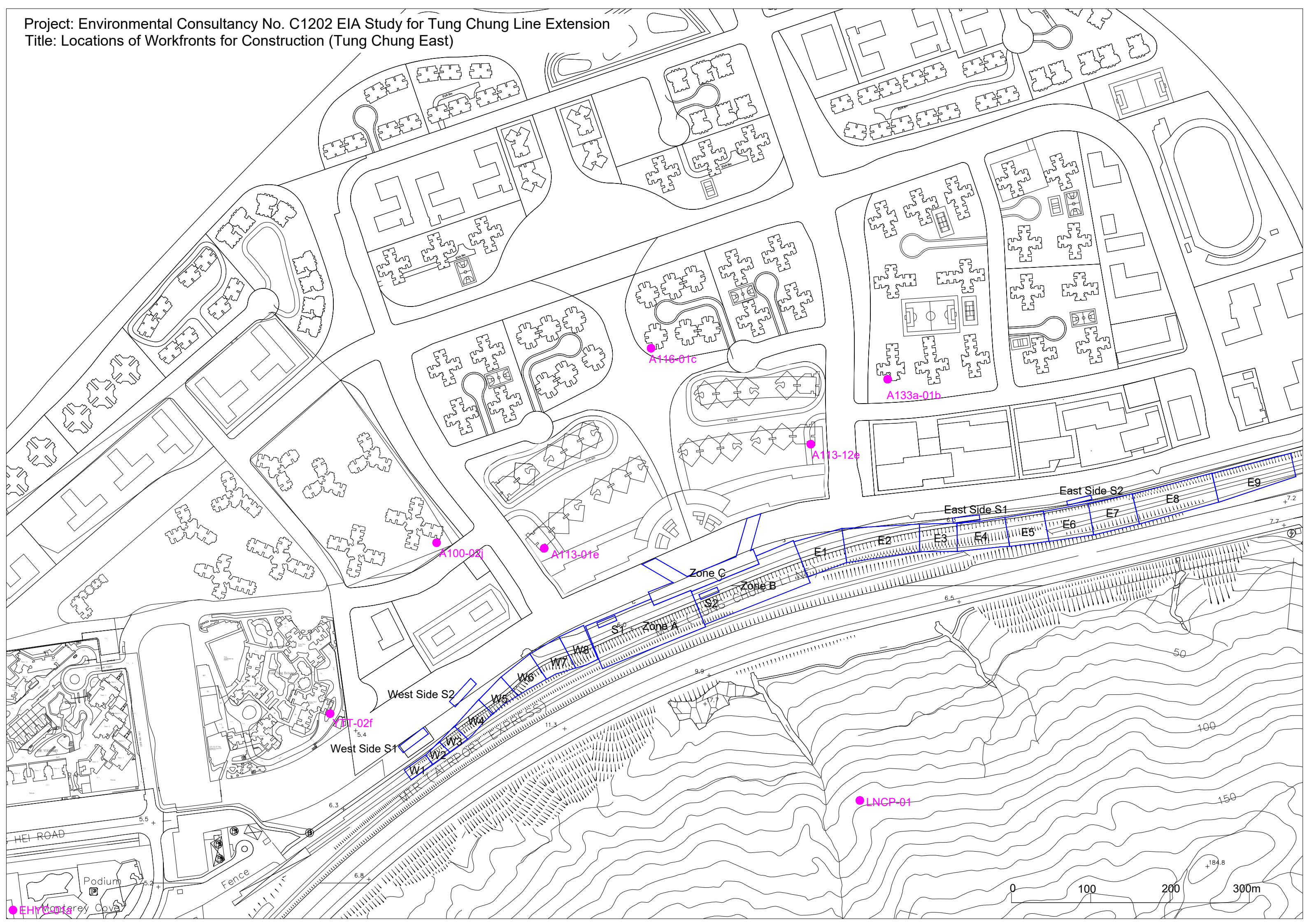
Note:

[1] Percentage on time within 30 minutes.

[2] PME with code "EPD-XXXXX" is quiet equipment with SWL extracted from the EPD's QPME inventory.

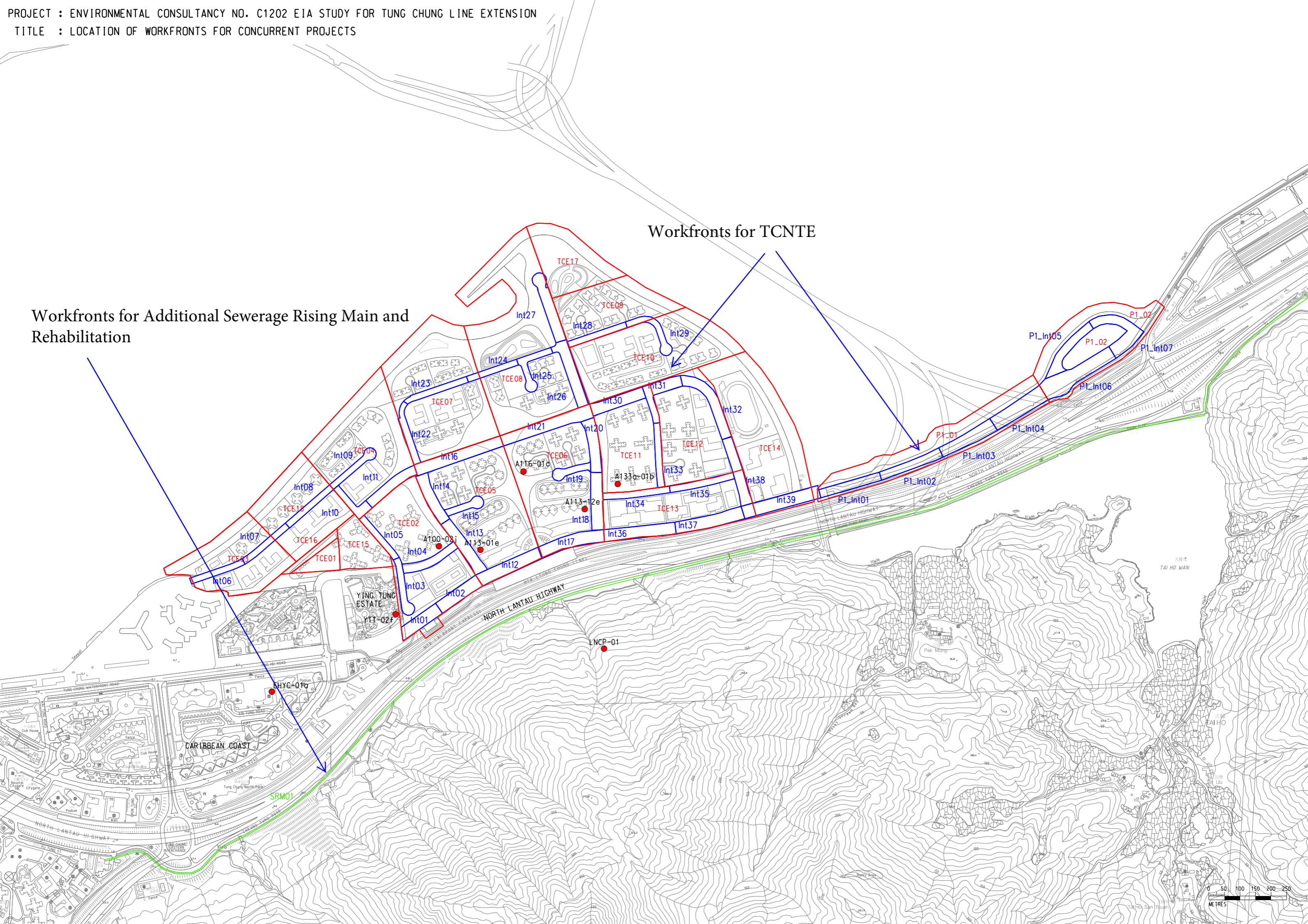
[3] The SWL of quiet plant with code "CPME#" is based on SWL of other commonly used PME from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

Appendix 2.5 Location Plan of Workfronts



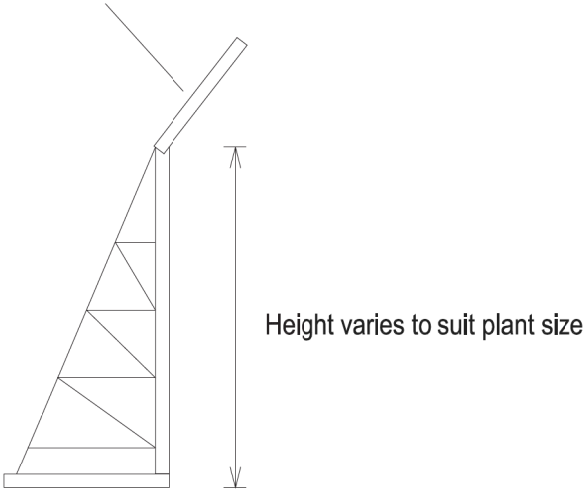
Workfronts for Additional Sewerage Rising Main and Rehabilitation

Workfronts for TCNTE



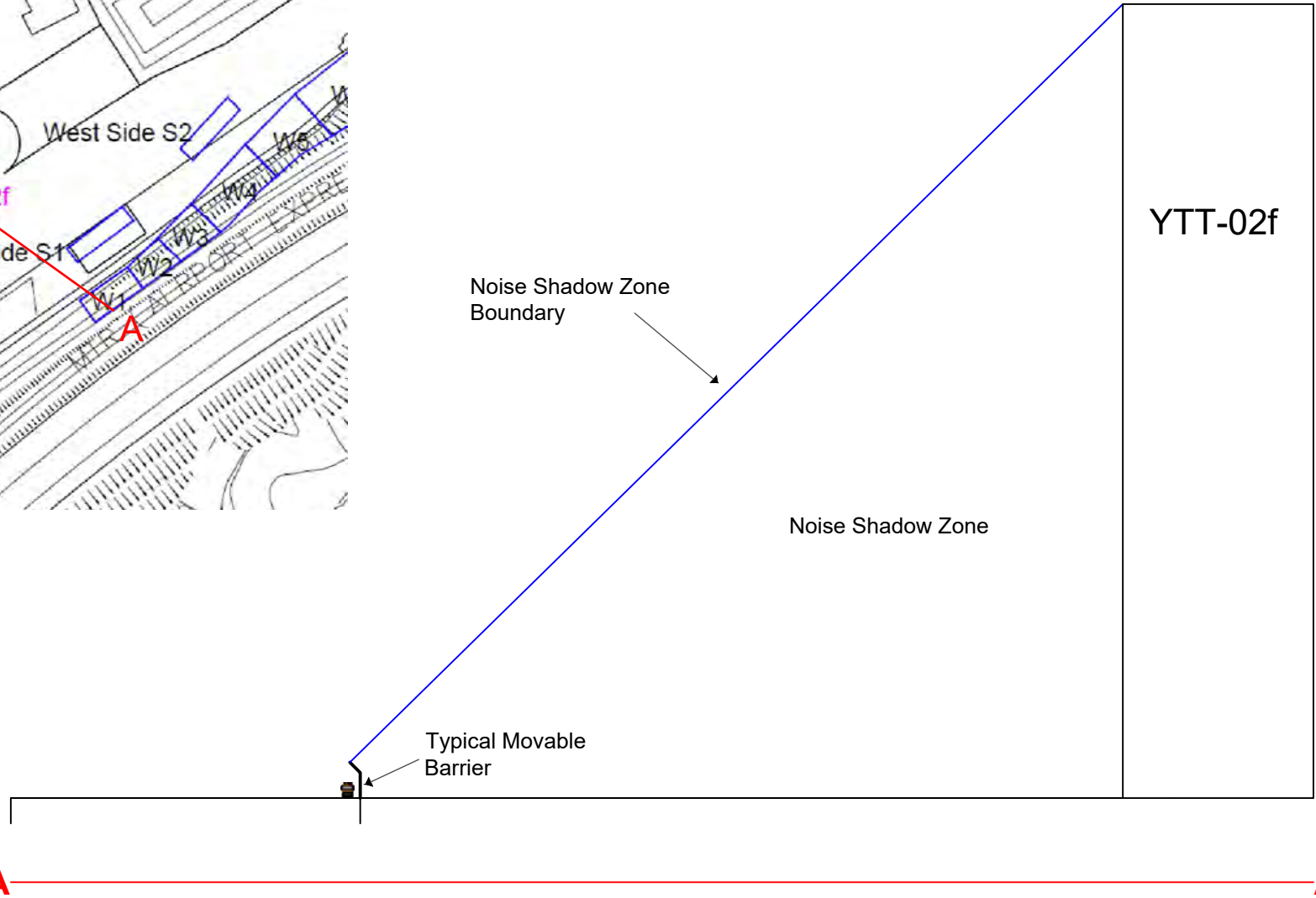
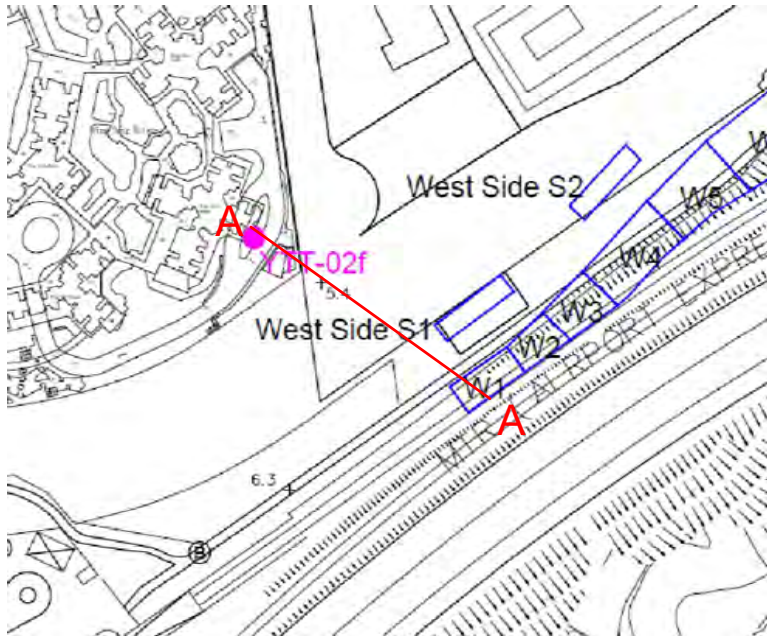
Appendix 2.6 Sectional Drawing of Typical Temporary Noise Barrier

Minimum surface density of 7kg/m²



Typical Section of Temporary Movable Noise Barrier
(2-4m tall)

Section of Typical Temporary Noise Barrier



Typical Arrangement of Movable Noise Barriers During Construction Stage

Note:

The height of movable noise barrier is subject to the on-site condition and undertaking construction works. For maximum effectiveness, a barrier should be located as close as possible to either the noise source, and should be built so as to shield totally the noise source. Gaps and openings at joints in the barrier material should be avoided. The NSRs shall be covered by noise shadow zone, no direct line of sight from NSRs to PMEs.

Appendix 2.7 Extract from Chapter 6 of Best Practice Guide for Environmental Protection on Construction Sites



Idle equipment should be turned off or throttled down to reduce noise, emissions and to save energy.

Excavator-mounted breakers

Excavator-mounted breakers are amongst the noisiest items of general construction equipment. To reduce noise from excavator-mounted breakers, use of a hammer bracket (the bracket is made of special alloy and the inside of it is lined with sound insulation material). A noise reduction of up to 10 dB(A) can be provided.

Equipment with Internal Combustion Engines

Equipment with Internal Combustion Engines include stationary and mobile plant, examples include:

- Stationary Plant: compressors, generators, concrete pumps and welding sets
- Mobile Plant: excavators, bulldozers, loaders and dump trucks

The nature of the noise emissions relating to this kind of equipment includes exhaust noise, cooling system noise and engine noise. Control measures for these include:

- Exhaust Noise
 - Install suitably designed exhaust silencers
- Cooling System Noise (including noise from water pumps, belts, pulleys and cooling fans)
 - Replace poor fan blade design or damaged fan blades with an aerodynamic model
 - Install a contoured fan shroud or cowl with a close fan tip-to-shroud clearance
 - Remove all obstructions such as bars and pipes from the inlet airflow
- Engine Noise
 - Installing a vibration isolator for individual components to reduce transmission of engine noise
 - Installing specially designed partial or full acoustic enclosures for individual noise generating components. Partial or full enclosures can result in a reduction in the overall noise level of up to 5 and 10 dB(A) respectively
 - Apply damping material to vibrating panels

It is essential to regularly maintain and service all mechanical plant and equipment:

- Implement a preventive maintenance programme to ensure equipment is operating in good order and not emitting abnormal noise
- Make sure stocks of regularly required spare parts are available

Piling

Typical noise sources for percussive piling include:

- Ringing noise (radiated from the surface of the pile);
- Impact noise; and
- Exhaust noise (created by the release of pressurized gases from exhaust ports).

Control measures for piling include:

- Use non-percussive piling techniques such as pre-bore, vibratory hammers or hydraulic hammer for driving steel piles.
- Use resilient packing and dolly
 - For percussive piling, the head of the pile should be protected by a helmet fitted with resilient packing over the top of the pile and a dolly which cushions the blow of the hammer.
- Use of a shroud
 - Enclose the complete pile and the pile driver. The shroud should consist of a robust framework fitted with an acoustically designed cladding or acoustic panels.
 - Alternatively, a flexible acoustic curtain of appropriate thickness can be suspended to enclose the whole length of the exposed pile and pile driver.

Joint Cutter / Stone Saw

Noise mitigation measures that can be fitted to a joint cutter and stone saw include:

- A metal hood to screen the operator from the machine;
- Anti-vibration mounts between the engine/motor and the support frame; and
- A small pad supplied with water (for cooling the blade) to serve as a viscous damping layer between pad and blade.

Demolition and Concrete Breaking Works

Noise mitigation measures for demolition and concrete breaking works include using non-percussive equipment such as a hydraulic crusher and quiet plant. The sound pressure level of some commonly used quiet plant is shown in Table 6.3.

- Hydraulic concrete cutter and crushers can replace excavator-mounted percussive breakers in demolition work resulting in noise

Appendix 2.8 Prediction of Noise Impact on Representative NSRs

Project: Contract 1202 Tung Chung East Station and Associated Enabling Works for Track Diversion

Title : Zone B Cumulative Sound Power Level
 Scenario : Unmitigated Scenario for Tung Chung East

	2023		2024												2025												2026												2027												2028											
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun						
TCE Station Structure - Foundation																																																														
TCE Station Structure - Foundation (Zone B)	122	122	122	122	122	122	122																																																							
TCE Station Site Clearance/Site Formation																																																														
TCE Station Site Clearance/Site Formation (Zone B)																																																														
TCE Station Structure - Main Station Structure, Ancillary Buildings, Bridges, Entrances																																																														
TCE Station Structure - Main Station Structure, Ancillary Buildings, Bridges, Entrances (Zone B)																																																														
TCE Station Site Reinstatement																																																														
TCE Station Site Reinstatement (Zone B)																																																														
TCE Station Removal of abandoned D/T																																																														
TCE Station Removal of abandoned D/T (Zone B)																																																														
TCE Station Removal of abandoned U/T																																																														
TCE Station Removal of abandoned U/T (Zone B)																																																														
Cumulative Sound Power Level dB(A):	122	122	122	122	122	123	123	123	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	116	116	124	124	123								

Table with columns for years (2023-2028) and months (Nov-Jun) and rows for noise metrics (Distance from Notional Sources, Distance Attenuation, Predicted Noise Level, dB(A)) across various receiver points (Int09 to Int37).

Project: Contract 1202 Tung Chung East Station and Associated Enabling Works for Track Diversion

Title: Cumulative Noise Level to Lantau North (Extension) Country Park (LNCP-01)
 Scenario: Unmitigated Scenario for Tung Chung East

	2023												2024												2025												2026												2027												2028					
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun										
Int09	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100													
	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950															
	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67	-67																
	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32									

Project: Contract 1202 Tung Chung East Station and Associated Enabling Works for Track Diversion

Title: Cumulative Noise Level to Lantau North (Extension) Country Park (LNCP-01)
Scenario: Unmitigated Scenario for Tung Chung East

	2023		2024												2025												2026												2027												2028																																						
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun																																													
In38	Distance from Notional Sources ^[1] m:												100												100												100												100																																								
	Distance Attenuation:												-64												-64												-64												-64																																								
	Predicted Noise Level, dB(A):												36												36												36												36																																								
In39	Distance from Notional Sources ^[1] m:												100												100												100												100												100																												
	Distance Attenuation:												-64												-64												-64												-64																																								
	Predicted Noise Level, dB(A):												36												36												36												36																																								
P1_In01	Distance from Notional Sources ^[1] m:												103												828												828												828												828																												
	Distance Attenuation:												-66												-66												-66												-66																																								
	Predicted Noise Level, dB(A):												37												37												37												37																																								
P1_In02	Distance from Notional Sources ^[1] m:												103												1019												1019												1019												1019																												
	Distance Attenuation:												-68												-68												-68												-68																																								
	Predicted Noise Level, dB(A):												35												35												35												35																																								
P1_In03	Distance from Notional Sources ^[1] m:												103												1227												1227												1227												1227																												
	Distance Attenuation:												-70												-70												-70												-70																																								
	Predicted Noise Level, dB(A):												33												33												33												33																																								
P1_In04	Distance from Notional Sources ^[1] m:												103												1414												1414												1414												1414																												
	Distance Attenuation:												-71												-71												-71												-71																																								
	Predicted Noise Level, dB(A):												32												32												32												32																																								
P1_In05	Distance from Notional Sources ^[1] m:												103												1659												1659												1659												1659																												
	Distance Attenuation:												-72												-72												-72												-72																																								
	Predicted Noise Level, dB(A):												31												31												31												31																																								
P1_In06	Distance from Notional Sources ^[1] m:												103												1595												1595												1595												1595																												
	Distance Attenuation:												-72												-72												-72												-72																																								
	Predicted Noise Level, dB(A):												31												31												31												31																																								
P1_In07	Distance from Notional Sources ^[1] m:												103												1851												1851												1851												1851																												
	Distance Attenuation:												-73												-73												-73												-73																																								
	Predicted Noise Level, dB(A):												30												30												30												30																																								
Workfronts for Construction from concurrent Project (Additional Sewerage Rising Main and Rehabilitation) ^[2]																																																																																									
SRM01	Distance from Notional Sources ^[1] m:												100												100												100												100												100																												
	Distance Attenuation:												-64												-64												-64												-64																																								
	Predicted Noise Level, dB(A):												46												46												46												46																																								
Cumulative Noise Level, dB(A)^[3]:																														76	76	77	76	76	77	77	77	76	76	75	73	73	73	71	74	74	74	74	74	74	74	74	74	74	74	74	74	74	73	73	73	73	73	73	73	69	69	70	70	74	74	73	59	59	59	55													
Criterion, dB(A):																														NA																																																											
Exceedance:																														NA																																																											
Noise Level due to the Project, dB(A)^[3]:																														76	76	77	76	76	76	77	75	76	74	72	72	72	71	74	74	74	74	74	74	74	74	74	74	74	74	74	74	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	68	68	69	69	74	74	72										
Criterion, dB(A):																														NA																																																											
Exceedance:																														NA																																																											

Note:
 [1] The position of notional sources are considered as all items of PME to be grouped at a position mid-way between the approximate geographical centre of each workfront and its boundary point that is nearest to the NSRs.
 [2] Facade correction is applied to cumulative noise level.
 [3] The cumulative sound power levels of each workfront are acquired from Appendix 4.9 of the approved EIA Report for Tung Chung New Town Extension (Register No.: AEIAR - 196/2016).

Project: Contract 1202 Tung Chung East Station and Associated Enabling Works for Track Diversion

Title : Cumulative Noise Level to Residential Premises in Tung Chung East – Area 100 (A100-02)

Scenario : Unmitigated Scenario for Tung Chung East

	2025												2026												2027												2028											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun						
Workfronts for Construction																																																
Zone E1	Distance from Notional Sources ⁽¹⁾ , m: 480 480 480 480 480 480 480 480 480 480 480 480												Distance Attenuation: -62 -62 -62 -62 -62 -62 -62 -62 -62 -62 -62 -62												Predicted Noise Level, dB(A): 55 55 55 55 55 55 55 55 55 55 55 55												106 106 480 480 -62 -62 44 44											
Zone E2	Distance from Notional Sources ⁽¹⁾ , m: 532 532 532 532 532 532 532 532 532 532 532 532												Distance Attenuation: -63 -63 -63 -63 -63 -63 -63 -63 -63 -63 -63 -63												Predicted Noise Level, dB(A): 54 54 54 54 54 54 54 54 54 54 54 54												106 106 532 532 -63 -63 43 43											
Zone E3	Distance from Notional Sources ⁽¹⁾ , m: 615 615 615 615 615 615 615 615 615 615 615 615												Distance Attenuation: -64 -64 -64 -64 -64 -64 -64 -64 -64 -64 -64 -64												Predicted Noise Level, dB(A): 53 53 53 53 53 53 53 53 53 53 53 53												106 106 615 615 -64 -64 42 42											
Zone E4	Distance from Notional Sources ⁽¹⁾ , m: 665 665 665 665 665 665 665 665 665 665 665 665												Distance Attenuation: -64 -64 -64 -64 -64 -64 -64 -64 -64 -64 -64 -64												Predicted Noise Level, dB(A): 53 53 53 53 53 53 53 53 53 53 53 53												106 106 665 665 -64 -64 42 42											
Zone E5	Distance from Notional Sources ⁽¹⁾ , m: 726 726 726 726 726 726 726 726 726 726 726 726												Distance Attenuation: -65 -65 -65 -65 -65 -65 -65 -65 -65 -65 -65 -65												Predicted Noise Level, dB(A): 52 52 52 52 52 52 52 52 52 52 52 52												106 106 726 726 -65 -65 41 41											
Zone E6	Distance from Notional Sources ⁽¹⁾ , m: 834 834 834 834 834 834 834 834 834 834 834 834												Distance Attenuation: -66 -66 -66 -66 -66 -66 -66 -66 -66 -66 -66 -66												Predicted Noise Level, dB(A): 52 52 52 52 52 52 52 52 52 52 52 52																							
Zone E7	Distance from Notional Sources ⁽¹⁾ , m: 833 833 833 833 833 833 833 833 833 833 833 833												Distance Attenuation: -66 -66 -66 -66 -66 -66 -66 -66 -66 -66 -66 -66												Predicted Noise Level, dB(A): 52 52 52 52 52 52 52 52 52 52 52 52																							
Zone E8	Distance from Notional Sources ⁽¹⁾ , m: 901 901 901 901 901 901 901 901 901 901 901 901												Distance Attenuation: -67 -67 -67 -67 -67 -67 -67 -67 -67 -67 -67 -67												Predicted Noise Level, dB(A): 51 51 51 51 51 51 51 51 51 51 51 51																							
Zone E9	Distance from Notional Sources ⁽¹⁾ , m: 901 901 901 901 901 901 901 901 901 901 901 901												Distance Attenuation: -67 -67 -67 -67 -67 -67 -67 -67 -67 -67 -67 -67												Predicted Noise Level, dB(A): 51 51 51 51 51 51 51 51 51 51 51 51																							
TCE Station East Side Stationary Plants (S1)	Distance from Notional Sources ⁽¹⁾ , m: 664 664 664 664 664 664 664 664 664 664 664 664												Distance Attenuation: -64 -64 -64 -64 -64 -64 -64 -64 -64 -64 -64 -64												Predicted Noise Level, dB(A): 53 53 53 53 53 53 53 53 53 53 53 53																							
TCE Station East Side Stationary Plants (S2)	Distance from Notional Sources ⁽¹⁾ , m: 807 807 807 807 807 807 807 807 807 807 807 807												Distance Attenuation: -66 -66 -66 -66 -66 -66 -66 -66 -66 -66 -66 -66												Predicted Noise Level, dB(A): 49 49 49 49 49 49 49 49 49 49 49 49																							
TCE Station West Side Stationary Plants (S1)	Distance from Notional Sources ⁽¹⁾ , m: 239 239 239 239 239 239 239 239 239 239 239 239												Distance Attenuation: -56 -56 -56 -56 -56 -56 -56 -56 -56 -56 -56 -56												Predicted Noise Level, dB(A): 58 58 58 58 58 58 58 58 58 58 58 58																							
TCE Station West Side Stationary Plants (S2)	Distance from Notional Sources ⁽¹⁾ , m: 181 181 181 181 181 181 181 181 181 181 181 181												Distance Attenuation: -53 -53 -53 -53 -53 -53 -53 -53 -53 -53 -53 -53												Predicted Noise Level, dB(A): 62 62 62 62 62 62 62 62 62 62 62 62																							
Zone W1	Distance from Notional Sources ⁽¹⁾ , m: 276 276 276 276 276 276 276 276 276 276 276 276												Distance Attenuation: -57 -57 -57 -57 -57 -57 -57 -57 -57 -57 -57 -57												Predicted Noise Level, dB(A): 59 59 59 59 59 59 59 59 59 59 59 59												106 106 276 276 -57 -57 49 49											
Zone W2	Distance from Notional Sources ⁽¹⁾ , m: 257 257 257 257 257 257 257 257 257 257 257 257												Distance Attenuation: -56 -56 -56 -56 -56 -56 -56 -56 -56 -56 -56 -56												Predicted Noise Level, dB(A): 60 60 60 60 60 60 60 60 60 60 60 60												106 106 257 257 -56 -56 50 50											
Zone W3	Distance from Notional Sources ⁽¹⁾ , m: 240 240 240 240 240 240 240 240 240 240 240 240												Distance Attenuation: -56 -56 -56 -56 -56 -56 -56 -56 -56 -56 -56 -56												Predicted Noise Level, dB(A): 60 60 60 60 60 60 60 60 60 60 60 60												106 106 240 240 -56 -56 50 50											
Zone W4	Distance from Notional Sources ⁽¹⁾ , m: 220 220 220 220 220 220 220 220 220 220 220 220												Distance Attenuation: -55 -55 -55 -55 -55 -55 -55 -55 -55 -55 -55 -55												Predicted Noise Level, dB(A): 62 62 62 62 62 62 62 62 62 62 62 62												106 106 220 220 -55 -55 51 51											
Zone W5	Distance from Notional Sources ⁽¹⁾ , m: 220 220 220 220 220 220 220 220 220 220 220 220												Distance Attenuation: -55 -55 -55 -55 -55 -55 -55 -55 -55 -55 -55 -55												Predicted Noise Level, dB(A): 62 62 62 62 62 62 62 62 62 62 62 62												106 106 220 220 -55 -55 51 51											
Zone W6	Distance from Notional Sources ⁽¹⁾ , m: 189 189 189 189 189 189 189 189 189 189 189 189												Distance Attenuation: -54 -54 -54 -54 -54 -54 -54 -54 -54 -54 -54 -54												Predicted Noise Level, dB(A): 63 63 63 63 63 63 63 63 63 63 63 63												106 106 189 189 -54 -54 52 52											
Zone W7	Distance from Notional Sources ⁽¹⁾ , m: 197 197 197 197 197 197 197 197 197 197 197 197												Distance Attenuation: -54 -54 -54 -54 -54 -54 -54 -54 -54 -54 -54 -54												Predicted Noise Level, dB(A): 63 63 63 63 63 63 63 63 63 63 63 63												106 106 197 197 -54 -54 52 52											
Zone W8	Distance from Notional Sources ⁽¹⁾ , m: 210 210 210 210 210 210 210 210 210 210 210 210												Distance Attenuation: -54 -54 -54 -54 -54 -54 -54 -54 -54 -54 -54 -54												Predicted Noise Level, dB(A): 63 63 63 63 63 63 63 63 63 63 63 63												106 106 210 210 -54 -54 52 52											
TCE Station Area Stationary Plants (S1)	Distance from Notional Sources ⁽¹⁾ , m: 232 232 232 232 232 232 232 232 232 232 232 232												Distance Attenuation: -55 -55 -55 -55 -55 -55 -55 -55 -55 -55 -55 -55												Predicted Noise Level, dB(A): 56 56 56 56 56 56 56 56 56 56 56 56												111 111 232 232 -55 -55 56 56											
TCE Station Area Stationary Plants (S2)	Distance from Notional Sources ⁽¹⁾ , m: 345 345 345 345 345 345 345 345 345 345 345 345												Distance Attenuation: -59 -59 -59 -59 -59 -59 -59 -59 -59 -59 -59 -59												Predicted Noise Level, dB(A): 49 49 49 49 49 49 49 49 49 49 49 49												108 108 345 345 -59 -59 49 49											
Zone A	Distance from Notional Sources ⁽¹⁾ , m: 267 267 267 267 267 267 267 267 267 267 267 267												Distance Attenuation: -57 -57 -57 -57 -57 -57 -57 -57 -57 -57 -57 -57												Predicted Noise Level, dB(A): 61 61 61 61 61 61 61 61 61 61 61 61												118 118 267 267 -57 -57 124 124 267 267 -57 -57 66 66											

Project: Contract 1202 Tung Chung East Station and Associated Enabling Works for Track Diversion

Title : Cumulative Noise Level to Tung Chung Area 113 (A113-01e)
 Scenario : Unmitigated Scenario for Tung Chung East

	2027												2028					
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Int04	Distance from Notional Sources ⁽¹⁾ , m: Distance Attenuation: Predicted Noise Level, dB(A):																	
Int05	Distance from Notional Sources ⁽¹⁾ , m: Distance Attenuation: Predicted Noise Level, dB(A):																	
Int06	Distance from Notional Sources ⁽¹⁾ , m: Distance Attenuation: Predicted Noise Level, dB(A):																	
Int07	Distance from Notional Sources ⁽¹⁾ , m: Distance Attenuation: Predicted Noise Level, dB(A):																	
Int08	Distance from Notional Sources ⁽¹⁾ , m: Distance Attenuation: Predicted Noise Level, dB(A):																	
Int09	Distance from Notional Sources ⁽¹⁾ , m: Distance Attenuation: Predicted Noise Level, dB(A):																	
Int10	Distance from Notional Sources ⁽¹⁾ , m: Distance Attenuation: Predicted Noise Level, dB(A):																	
Int11	Distance from Notional Sources ⁽¹⁾ , m: Distance Attenuation: Predicted Noise Level, dB(A):																	
Int12	100 85 -47 53	100 85 -47 53	100 85 -47 53	100 85 -47 53	100 85 -47 53	100 85 -47 53	100 85 -47 53	100 85 -47 53	100 85 -47 53	100 85 -47 53	100 85 -47 53	100 85 -47 53						
Int13	100 48 -42 58	100 48 -42 58	100 48 -42 58	100 48 -42 58	100 48 -42 58	100 48 -42 58	100 48 -42 58	100 48 -42 58	100 48 -42 58	100 48 -42 58	100 48 -42 58	100 48 -42 58						
Int14	100 169 -53 47	100 169 -53 47	100 169 -53 47	100 169 -53 47	100 169 -53 47	100 169 -53 47	100 169 -53 47	100 169 -53 47	100 169 -53 47	100 169 -53 47	100 169 -53 47	100 169 -53 47						
Int15	100 150 -52 48	100 150 -52 48	100 150 -52 48	100 150 -52 48	100 150 -52 48	100 150 -52 48	100 150 -52 48	100 150 -52 48	100 150 -52 48	100 150 -52 48	100 150 -52 48	100 150 -52 48						
Int16	100 303 -58 42	100 303 -58 42	100 303 -58 42	100 303 -58 42	100 303 -58 42	100 303 -58 42	100 303 -58 42	100 303 -58 42	100 303 -58 42	100 303 -58 42	100 303 -58 42	100 303 -58 42						
Int17	100 212 -55 45	100 212 -55 45	100 212 -55 45	100 212 -55 45	100 212 -55 45	100 212 -55 45	100 212 -55 45	100 212 -55 45	100 212 -55 45	100 212 -55 45	100 212 -55 45	100 212 -55 45						
Int18	100 387 -60 40	100 387 -60 40	100 387 -60 40	100 387 -60 40	100 387 -60 40	100 387 -60 40	100 387 -60 40	100 387 -60 40	100 387 -60 40	100 387 -60 40	100 387 -60 40	100 387 -60 40						
Int19	100 344 -59 41	100 344 -59 41	100 344 -59 41	100 344 -59 41	100 344 -59 41	100 344 -59 41	100 344 -59 41	100 344 -59 41	100 344 -59 41	100 344 -59 41	100 344 -59 41	100 344 -59 41						
Int20	100 489 -62 38	100 489 -62 38	100 489 -62 38	100 489 -62 38	100 489 -62 38	100 489 -62 38	100 489 -62 38	100 489 -62 38	100 489 -62 38	100 489 -62 38	100 489 -62 38	100 489 -62 38						
Int21	100 386 -60 40	100 386 -60 40	100 386 -60 40	100 386 -60 40	100 386 -60 40	100 386 -60 40	100 386 -60 40	100 386 -60 40	100 386 -60 40	100 386 -60 40	100 386 -60 40	100 386 -60 40						
Int22	100 378 -60 40	100 378 -60 40	100 378 -60 40	100 378 -60 40	100 378 -60 40	100 378 -60 40	100 378 -60 40	100 378 -60 40	100 378 -60 40	100 378 -60 40	100 378 -60 40	100 378 -60 40	100	100	100	100	100	100
Int23	100 518 -62 38	100 518 -62 38	100 518 -62 38	100 518 -62 38	100 518 -62 38	100 518 -62 38	100 518 -62 38	100 518 -62 38	100 518 -62 38	100 518 -62 38	100 518 -62 38	100 518 -62 38	100	100	100	100	100	100
Int24	100 540 -63 37	100 540 -63 37	100 540 -63 37	100 540 -63 37	100 540 -63 37	100 540 -63 37	100 540 -63 37	100 540 -63 37	100 540 -63 37	100 540 -63 37	100 540 -63 37	100 540 -63 37	100	100	100	100	100	100
Int25	100 546 -63 37	100 546 -63 37	100 546 -63 37	100 546 -63 37	100 546 -63 37	100 546 -63 37	100 546 -63 37	100 546 -63 37	100 546 -63 37	100 546 -63 37	100 546 -63 37	100 546 -63 37	100	100	100	100	100	100
Int26	100 578 -63 37	100 578 -63 37	100 578 -63 37	100 578 -63 37	100 578 -63 37	100 578 -63 37	100 578 -63 37	100 578 -63 37	100 578 -63 37	100 578 -63 37	100 578 -63 37	100 578 -63 37	100	100	100	100	100	100
Int27	100 727 -65 35	100 727 -65 35	100 727 -65 35	100 727 -65 35	100 727 -65 35	100 727 -65 35	100 727 -65 35	100 727 -65 35	100 727 -65 35	100 727 -65 35	100 727 -65 35	100 727 -65 35	100	100	100	100	100	100
Int28	100 751 -66 34	100 751 -66 34	100 751 -66 34	100 751 -66 34	100 751 -66 34	100 751 -66 34	100 751 -66 34	100 751 -66 34	100 751 -66 34	100 751 -66 34	100 751 -66 34	100 751 -66 34	100	100	100	100	100	100

Project: Contract 1202 Tung Chung East Station and Associated Enabling Works for Track Diversion

Title: Cumulative Noise Level to Ho Yu College and Primary School (EHYC-01a)
 Scenario: Mitigated Scenario for Tung Chung East

	2023		2024												2025												2026												2027												2028					
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun												
Workfronts for Construction from concurrent Project (TCNTE) ⁽¹⁾																																																								
TCE01	Distance from Notional Sources ⁽¹⁾ m: 105 Distance Attenuation: 412 Predicted Noise Level dB(A): 45																																																							
TCE02	Distance from Notional Sources ⁽¹⁾ m: 112 Distance Attenuation: 578 Predicted Noise Level dB(A): 49																																																							
TCE03	Distance from Notional Sources ⁽¹⁾ m: 105 Distance Attenuation: 374 Predicted Noise Level dB(A): 46																																																							
TCE04	Distance from Notional Sources ⁽¹⁾ m: 112 Distance Attenuation: 735 Predicted Noise Level dB(A): 47																																																							
TCE05	Distance from Notional Sources ⁽¹⁾ m: 112 Distance Attenuation: 796 Predicted Noise Level dB(A): 46																																																							
TCE06	Distance from Notional Sources ⁽¹⁾ m: 1057 Distance Attenuation: 1057 Predicted Noise Level dB(A): 44																																																							
TCE07	Distance from Notional Sources ⁽¹⁾ m: 1022 Distance Attenuation: 1022 Predicted Noise Level dB(A): 44																																																							
TCE08	Distance from Notional Sources ⁽¹⁾ m: 112 Distance Attenuation: 1227 Predicted Noise Level dB(A): 42																																																							
TCE09	Distance from Notional Sources ⁽¹⁾ m: 104 Distance Attenuation: 1582 Predicted Noise Level dB(A): 32																																																							
TCE10	Distance from Notional Sources ⁽¹⁾ m: 104 Distance Attenuation: 1497 Predicted Noise Level dB(A): 32																																																							
TCE11	Distance from Notional Sources ⁽¹⁾ m: 1325 Distance Attenuation: 1325 Predicted Noise Level dB(A): 42																																																							
TCE12	Distance from Notional Sources ⁽¹⁾ m: 1487 Distance Attenuation: 1487 Predicted Noise Level dB(A): 41																																																							
TCE13	Distance from Notional Sources ⁽¹⁾ m: 112 Distance Attenuation: 1270 Predicted Noise Level dB(A): 42																																																							
TCE14	Distance from Notional Sources ⁽¹⁾ m: 105 Distance Attenuation: 508 Predicted Noise Level dB(A): 43																																																							
TCE15	Distance from Notional Sources ⁽¹⁾ m: 105 Distance Attenuation: 508 Predicted Noise Level dB(A): 43																																																							
TCE16	Distance from Notional Sources ⁽¹⁾ m: 104 Distance Attenuation: 1598 Predicted Noise Level dB(A): 32																																																							
TCE17	Distance from Notional Sources ⁽¹⁾ m: 105 Distance Attenuation: 512 Predicted Noise Level dB(A): 43																																																							
TCE18	Distance from Notional Sources ⁽¹⁾ m: 105 Distance Attenuation: 512 Predicted Noise Level dB(A): 43																																																							
P1_01	Distance from Notional Sources ⁽¹⁾ m: 100 Distance Attenuation: 513 Predicted Noise Level dB(A): 38																																																							
P1_02	Distance from Notional Sources ⁽¹⁾ m: 100 Distance Attenuation: 513 Predicted Noise Level dB(A): 38																																																							
Int01	Distance from Notional Sources ⁽¹⁾ m: 100 Distance Attenuation: 513 Predicted Noise Level dB(A): 38																																																							
Int02	Distance from Notional Sources ⁽¹⁾ m: 100 Distance Attenuation: 513 Predicted Noise Level dB(A): 38																																																							
Int03	Distance from Notional Sources ⁽¹⁾ m: 100 Distance Attenuation: 513 Predicted Noise Level dB(A): 38																																																							
Int04	Distance from Notional Sources ⁽¹⁾ m: 100 Distance Attenuation: 513 Predicted Noise Level dB(A): 38																																																							
Int05	Distance from Notional Sources ⁽¹⁾ m: 100 Distance Attenuation: 513 Predicted Noise Level dB(A): 38																																																							
Int06	Distance from Notional Sources ⁽¹⁾ m: 100 Distance Attenuation: 513 Predicted Noise Level dB(A): 38																																																							
Int07	Distance from Notional Sources ⁽¹⁾ m: 100 Distance Attenuation: 513 Predicted Noise Level dB(A): 38																																																							
Int08	Distance from Notional Sources ⁽¹⁾ m: 100 Distance Attenuation: 513 Predicted Noise Level dB(A): 38																																																							

Project: Contract 1202 Tung Chung East Station and Associated Enabling Works for Track Diversion

Title : Cumulative Noise Level to Residential Premises in Tung Chung East – Area 100 (A100-02)
 Scenario : Mitigated Scenario for Tung Chung East

	2025												2026												2027												2028											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun						
Int29	Distance from Notional Sources ^[1] , m:																																															
	Distance Attenuation:																																															
	Predicted Noise Level, d(BA):																																															
Int30	Distance from Notional Sources ^[1] , m:																																															
	Distance Attenuation:																																															
	Predicted Noise Level, d(BA):																																															
Int31	Distance from Notional Sources ^[1] , m:																																															
	Distance Attenuation:																																															
	Predicted Noise Level, d(BA):																																															
Int32	Distance from Notional Sources ^[1] , m:																																															
	Distance Attenuation:																																															
	Predicted Noise Level, d(BA):																																															
Int33	Distance from Notional Sources ^[1] , m:																																															
	Distance Attenuation:																																															
	Predicted Noise Level, d(BA):																																															
Int34	Distance from Notional Sources ^[1] , m:																																															
	Distance Attenuation:																																															
	Predicted Noise Level, d(BA):																																															
Int35	Distance from Notional Sources ^[1] , m:																																															
	Distance Attenuation:																																															
	Predicted Noise Level, d(BA):																																															
Int36	Distance from Notional Sources ^[1] , m:																																															
	Distance Attenuation:																																															
	Predicted Noise Level, d(BA):																																															
Int37	Distance from Notional Sources ^[1] , m:																																															
	Distance Attenuation:																																															
	Predicted Noise Level, d(BA):																																															
Int38	Distance from Notional Sources ^[1] , m:																																															
	Distance Attenuation:																																															
	Predicted Noise Level, d(BA):																																															
Int39	Distance from Notional Sources ^[1] , m:																																															
	Distance Attenuation:																																															
	Predicted Noise Level, d(BA):																																															
P1_Int01	Distance from Notional Sources ^[1] , m:																																															
P1_Int02	Distance from Notional Sources ^[1] , m:																																															
P1_Int03	Distance from Notional Sources ^[1] , m:																																															
P1_Int04	Distance from Notional Sources ^[1] , m:																																															
P1_Int05	Distance from Notional Sources ^[1] , m:																																															
P1_Int06	Distance from Notional Sources ^[1] , m:																																															
P1_Int07	Distance from Notional Sources ^[1] , m:																																															
Workfronts for Construction from concurrent Project (Additional Sewerage Rising Main and Rehabilitation) ^[2]																																																
SRM01	Distance from Notional Sources ^[1] , m:																																															
	Distance Attenuation:																																															
	Predicted Noise Level, d(BA):																																															
Cumulative Noise Level, d(BA) ^[3] :																																																
Criterion, d(BA):																																																
Exceedance:																																																
Noise Level due to the Project, d(BA) ^[3] :																																																
Criterion, d(BA):																																																
Exceedance:																																																

Note:
 [1] The position of notional sources are considered as all items of PME to be grouped at a position mid-way between the approximate geographical centre of each workfronts and its boundary point that is nearest to the NSRs.
 [2] Façade correction is applied to cumulative noise level.
 [3] The cumulative sound power levels of each workfront are acquired from Appendix 4.9 of the approved EIA Report for Tung Chung New Town Extension (Register No.: AEIAR - 196/2016).
 [4] The shaded period means no occupancy at the NSRs

Project: Contract 1202 Tung Chung East Station and Associated Enabling Works for Track Diversion

Title : Cumulative Noise Level to Tung Chung Area 113 (A113-01e)

Scenario : Mitigated Scenario for Tung Chung East

	2027												2028					
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Workfronts for Construction																		
Zone E1	105 350 -59 46	105 350 -59 46	105 350 -59 46	105 350 -59 46	105 350 -59 46	105 350 -59 46	105 350 -59 46				101 350 -59 42	101 350 -59 42						
Zone E2	106 397 -60 46	106 397 -60 46	106 397 -60 46	106 397 -60 46	106 397 -60 46	106 397 -60 46	106 397 -60 46				101 397 -60 41	101 397 -60 41						
Zone E3	105 479 -62 43	105 479 -62 43	105 479 -62 43	105 479 -62 43	105 479 -62 43	105 479 -62 43	105 479 -62 43				101 479 -62 39	101 479 -62 39						
Zone E4	105 535 -63 42	105 535 -63 42	105 535 -63 42	105 535 -63 42	105 535 -63 42	105 535 -63 42	105 535 -63 42				101 535 -63 38	101 535 -63 38						
Zone E5	105 594 -63 42	105 594 -63 42	105 594 -63 42	105 594 -63 42	105 594 -63 42	105 594 -63 42	105 594 -63 42				101 594 -63 38	101 594 -63 38						
Zone E6																		
Zone E7																		
Zone E8																		
Zone E9																		
TCE Station East Side Stationary Plants (S1)																		
TCE Station East Side Stationary Plants (S2)																		
TCE Station West Side Stationary Plants (S1)																		
TCE Station West Side Stationary Plants (S2)																		
Zone W1	106 305 -58 48	106 305 -58 48	106 305 -58 48	106 305 -58 48	106 305 -58 48	106 305 -58 48	106 305 -58 48				101 305 -58 43	101 305 -58 43						
Zone W2	106 282 -57 49	106 282 -57 49	106 282 -57 49	106 282 -57 49	106 282 -57 49	106 282 -57 49	106 282 -57 49				101 282 -57 44	101 282 -57 44						
Zone W3	106 256 -56 50	106 256 -56 50	106 256 -56 50	106 256 -56 50	106 256 -56 50	106 256 -56 50	106 256 -56 50				101 256 -56 45	101 256 -56 45						
Zone W4	105 218 -55 50	105 218 -55 50	105 218 -55 50	105 218 -55 50	105 218 -55 50	105 218 -55 50	105 218 -55 50				101 218 -55 46	101 218 -55 46						
Zone W5	105 184 -53 52	105 184 -53 52	105 184 -53 52	105 184 -53 52	105 184 -53 52	105 184 -53 52	105 184 -53 52				101 184 -53 48	101 184 -53 48						
Zone W6	105 151 -52 53	105 151 -52 53	105 151 -52 53	105 151 -52 53	105 151 -52 53	105 151 -52 53	105 151 -52 53				101 151 -52 49	101 151 -52 49						
Zone W7	105 128 -50 55	105 128 -50 55	105 128 -50 55	105 128 -50 55	105 128 -50 55	105 128 -50 55	105 128 -50 55				101 128 -50 51	101 128 -50 51						
Zone W8	105 113 -49 56	105 113 -49 56	105 113 -49 56	105 113 -49 56	105 113 -49 56	105 113 -49 56	105 113 -49 56				101 113 -49 52	101 113 -49 52						
TCE Station Area Stationary Plants (S1)	91 118 -49 42	91 118 -49 42	91 118 -49 42	91 118 -49 42	91 118 -49 42	91 118 -49 42	91 118 -49 42	91 118 -49 42	91 118 -49 42	91 118 -49 42	91 118 -49 42	91 118 -49 42	91 118 -49 42	91 118 -49 42	91 118 -49 42	91 118 -49 42	91 118 -49 42	91 118 -49 42
TCE Station Area Stationary Plants (S2)	89 214 -55 34	89 214 -55 34	89 214 -55 34	89 214 -55 34	89 214 -55 34	89 214 -55 34	89 214 -55 34	89 214 -55 34	89 214 -55 34	89 214 -55 34	89 214 -55 34	89 214 -55 34	89 214 -55 34	89 214 -55 34	89 214 -55 34	89 214 -55 34	89 214 -55 34	89 214 -55 34
Zone A	106 151 -52 54	106 151 -52 54	106 151 -52 54	106 151 -52 54	106 151 -52 54	106 151 -52 54	106 151 -52 54	106 151 -52 54	106 151 -52 54	106 151 -52 54	107 151 -52 56	107 151 -52 56	112 151 -52 61	112 151 -52 61	111 151 -52 59			

Project: Contract 1202 Tung Chung East Station and Associated Enabling Works for Track Diversion

Title : Cumulative Noise Level to Tung Chung Area 113 (A113-12e)

Scenario : Mitigated Scenario for Tung Chung East

	2027												2028					
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Workfronts for Construction																		
Zone E1	105 119 -50 55	105 119 -50 55	105 119 -50 55	105 119 -50 55	105 119 -50 55	105 119 -50 55	105 119 -50 55				101 119 -50 51	101 119 -50 51						
Zone E2	106 136 -51 55	106 136 -51 55	106 136 -51 55	106 136 -51 55	106 136 -51 55	106 136 -51 55	106 136 -51 55				101 136 -51 50	101 136 -51 50						
Zone E3	105 189 -54 51	105 189 -54 51	105 189 -54 51	105 189 -54 51	105 189 -54 51	105 189 -54 51	105 189 -54 51				101 189 -54 47	101 189 -54 47						
Zone E4	105 236 -55 50	105 236 -55 50	105 236 -55 50	105 236 -55 50	105 236 -55 50	105 236 -55 50	105 236 -55 50				101 236 -55 46	101 236 -55 46						
Zone E5	105 286 -57 48	105 286 -57 48	105 286 -57 48	105 286 -57 48	105 286 -57 48	105 286 -57 48	105 286 -57 48				101 286 -57 44	101 286 -57 44						
Zone E6																		
Zone E7																		
Zone E8																		
Zone E9																		
TCE Station East Side Stationary Plants (S1)																		
TCE Station East Side Stationary Plants (S2)																		
TCE Station West Side Stationary Plants (S1)																		
TCE Station West Side Stationary Plants (S2)																		
Zone W1	106 625 -64 42	106 625 -64 42	106 625 -64 42	106 625 -64 42	106 625 -64 42	106 625 -64 42	106 625 -64 42				101 625 -64 37	101 625 -64 37						
Zone W2	106 603 -64 42	106 603 -64 42	106 603 -64 42	106 603 -64 42	106 603 -64 42	106 603 -64 42	106 603 -64 42				101 603 -64 37	101 603 -64 37						
Zone W3	106 578 -63 43	106 578 -63 43	106 578 -63 43	106 578 -63 43	106 578 -63 43	106 578 -63 43	106 578 -63 43				101 578 -63 38	101 578 -63 38						
Zone W4	105 534 -63 42	105 534 -63 42	105 534 -63 42	105 534 -63 42	105 534 -63 42	105 534 -63 42	105 534 -63 42				101 534 -63 38	101 534 -63 38						
Zone W5	105 491 -62 43	105 491 -62 43	105 491 -62 43	105 491 -62 43	105 491 -62 43	105 491 -62 43	105 491 -62 43				101 491 -62 39	101 491 -62 39						
Zone W6	105 460 -61 44	105 460 -61 44	105 460 -61 44	105 460 -61 44	105 460 -61 44	105 460 -61 44	105 460 -61 44				101 460 -61 40	101 460 -61 40						
Zone W7	105 417 -60 45	105 417 -60 45	105 417 -60 45	105 417 -60 45	105 417 -60 45	105 417 -60 45	105 417 -60 45				101 417 -60 41	101 417 -60 41						
Zone W8	105 381 -60 45	105 381 -60 45	105 381 -60 45	105 381 -60 45	105 381 -60 45	105 381 -60 45	105 381 -60 45				101 381 -60 41	101 381 -60 41						
TCE Station Area Stationary Plants (S1)	91 331 -58 33	91 331 -58 33	91 331 -58 33	91 331 -58 33	91 331 -58 33	91 331 -58 33	91 331 -58 33	91 331 -58 33	91 331 -58 33	91 331 -58 33	91 331 -58 33	91 331 -58 33	91 331 -58 33	91 331 -58 33	91 331 -58 33	91 331 -58 33	91 331 -58 33	91 331 -58 33
TCE Station Area Stationary Plants (S2)	89 222 -55 34	89 222 -55 34	89 222 -55 34	89 222 -55 34	89 222 -55 34	89 222 -55 34	89 222 -55 34	89 222 -55 34	89 222 -55 34	89 222 -55 34	89 222 -55 34	89 222 -55 34	89 222 -55 34	89 222 -55 34	89 222 -55 34	89 222 -55 34	89 222 -55 34	89 222 -55 34
Zone A	106 265 -56 50	106 265 -56 50	106 265 -56 50	106 265 -56 50	106 265 -56 50	106 265 -56 50	106 265 -56 50	106 265 -56 50	106 265 -56 50	106 265 -56 50	107 265 -56 51	107 265 -56 51	112 265 -56 56	112 265 -56 56	111 265 -56 55			

Project: Contract 1202 Tung Chung East Station and Associated Enabling Works for Track Diversion

Title : Cumulative Noise Level to Tung Chung Area 113 (A113-12e)
 Scenario : Mitigated Scenario for Tung Chung East

	2027												2028					
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Int29	Distance from Notional Sources ^[1] , m:																	
	Distance Attenuation:																	
	Predicted Noise Level, dB(A):																	
Int30	Distance from Notional Sources ^[1] , m:																	
	Distance Attenuation:																	
	Predicted Noise Level, dB(A):																	
Int31	Distance from Notional Sources ^[1] , m:																	
	Distance Attenuation:																	
	Predicted Noise Level, dB(A):																	
Int32	Distance from Notional Sources ^[1] , m:																	
	Distance Attenuation:																	
	Predicted Noise Level, dB(A):																	
Int33	Distance from Notional Sources ^[1] , m:																	
	Distance Attenuation:																	
	Predicted Noise Level, dB(A):																	
Int34	Distance from Notional Sources ^[1] , m:																	
	Distance Attenuation:																	
	Predicted Noise Level, dB(A):																	
Int35	Distance from Notional Sources ^[1] , m:																	
	Distance Attenuation:																	
	Predicted Noise Level, dB(A):																	
Int36	Distance from Notional Sources ^[1] , m:																	
	Distance Attenuation:																	
	Predicted Noise Level, dB(A):																	
Int37	Distance from Notional Sources ^[1] , m:																	
	Distance Attenuation:																	
	Predicted Noise Level, dB(A):																	
Int38	Distance from Notional Sources ^[1] , m:																	
	Distance Attenuation:																	
	Predicted Noise Level, dB(A):																	
Int39	Distance from Notional Sources ^[1] , m:																	
	Distance Attenuation:																	
	Predicted Noise Level, dB(A):																	
P1_Int01	Distance from Notional Sources ^[1] , m:																	
	Distance Attenuation:																	
	Predicted Noise Level, dB(A):																	
P1_Int02	Distance from Notional Sources ^[1] , m:																	
	Distance Attenuation:																	
	Predicted Noise Level, dB(A):																	
P1_Int03	Distance from Notional Sources ^[1] , m:																	
	Distance Attenuation:																	
	Predicted Noise Level, dB(A):																	
P1_Int04	Distance from Notional Sources ^[1] , m:																	
	Distance Attenuation:																	
	Predicted Noise Level, dB(A):																	
P1_Int05	Distance from Notional Sources ^[1] , m:																	
	Distance Attenuation:																	
	Predicted Noise Level, dB(A):																	
P1_Int06	Distance from Notional Sources ^[1] , m:																	
	Distance Attenuation:																	
	Predicted Noise Level, dB(A):																	
P1_Int07	Distance from Notional Sources ^[1] , m:																	
	Distance Attenuation:																	
	Predicted Noise Level, dB(A):																	
Workfronts for Construction from concurrent Project (Additional Sewerage Rising Main and Rehabilitation) ^[3]																		
SRM01	Distance from Notional Sources ^[1] , m:																	
	Distance Attenuation:																	
	Predicted Noise Level, dB(A):																	
Cumulative Noise Level, dB(A)^[2]:																		
Criterion, dB(A):																		
Exceedance:																		
Noise Level due to the Project, dB(A)^[2]:																		
Criterion, dB(A):																		
Exceedance:																		

Note:
 [1] The position of notional sources are considered as all items of PME to be grouped at a position mid-way between the approximate geographical centre of each workfronts and its boundary point that is nearest to the NSRs.
 [2] Façade correction is applied to cumulative noise level.
 [3] The cumulative sound power levels of each workfront are acquired from Appendix 4.9 of the approved EIA Report for Tung Chung New Town Extension (Register No.: AEIAR - 196/2016).
 [4] The shaded period means no occupancy at the NSRs

Appendix 2.9 Implementation Schedule of Noise Mitigation Measure

**Noise Mitigation Implementation Schedule
Tung Chung Line Extension Contract 1202**

CNMP Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Phase
S2.6.2	<p>The following measures should be implemented:</p> <ul style="list-style-type: none"> - Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme; - Machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; - Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs; - Silencers or mufflers which available on construction equipment should be properly fitted and maintained during the construction works; - Spoil transportation routes should be directed away from NSRs as far as practicable; - Mobile plant should be sited as far away from NSRs as possible and practicable; - Material stockpiles, site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities; and - Noise monitoring at selected NSRs (i.e NM1 - Ying Tung Estate) should be conducted as far as practicable. 	Control construction airborne noise	Contractor	All construction sites (Tung Chung East Station and realignment works)	Construction Phase
S2.6.3	Use of quiet plant which should be made reference to the Powered Mechanical Equipment (PME) listed in the Technical Memorandum or the Quality Powered Mechanical Equipment (QPME) / other commonly	Reduce the noise levels from plant items	Contractor	All construction sites (Tung Chung East Station and	Construction Phase

**Noise Mitigation Implementation Schedule
Tung Chung Line Extension Contract 1202**

CNMP Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Phase
	used PME listed in Environmental Protection Department (EPD) web pages as far as possible which includes the Sound Power Level (SWLs) for specific quiet PME.			realignment works)	
S2.6.4 – S2.6.7	Install movable temporary noise barriers (typical design is wooden framed barrier with a small-cantilevered upper portion of superficial density no less than 7kg/m ² on a skid footing with 25mm thick internal sound absorptive lining), and full enclosure, screen the noisy plants including water pump etc.	Minimise the construction noise levels through screening	Contractor	All construction sites (Tung Chung East Station and realignment works)	Construction Phase
S2.6.8	The following quieter construction method proposed in Construction Noise Management Plan should be implemented: <ul style="list-style-type: none"> - Use of quieter type saw; - Use of non-percussive pile types; - Use of Self-compacting concrete; and - Other applicable quieter construction methods will be used as far as practicable. 	Reduce the noise levels from plant items	Contractor	All construction sites (Tung Chung East Station and realignment works)	Construction Phase