

By Post

Our Ref : P221002-CNMP-R3.4-V

Date : 6th January 2026

Binnies Hong Kong Limited
43/F, AIA Kowloon Tower,
100 How Ming Street,
Kwun Tong, Kowloon, Hong Kong

Attn: Wilson CK Lam

Agreement No. DHSR/IEC/001

**Consultancy Service of Independent Environmental Checker (IEC) for Relocation of Diamond Hill Fresh Water and Salt
Water Service Reservoirs to Caverns under Contract No. 21/WSD/21**

Construction Noise Management Plan

Dear Sir,

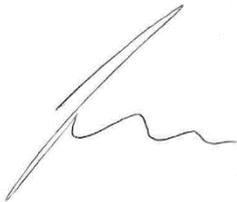
Pursuant to Condition 2.12 of Environmental Permit (EP) No. EP-602/2021, please note the Construction Noise Management Plan Revision 3.4, dated 6 January 2026 submitted under the EP, certified by the Environmental Team Leader on 6 January 2026, had been reviewed and is hereby verified.

Should you have any query, please feel free to contact the undersigned at 3756 9590 or ivyanting@umwelt.consulting.

Your faithfully,

For and on behalf of:

Umwelt Consulting Limited



Ting Po Chung Ivan

Independent Environmental Checker

Date: 6 January 2026
Your ref:
Our ref: PL-202601004

Binnies Hong Kong Limited
43/A, AIA Kowloon Tower
100 How Ming Street
Kwun Tong, Kowloon
Hong Kong

Attn.: Mr. Wilson C. K. Lam

Dear Mr. Lam,

Contract No. 21/WSD/21
Relocation of Diamond Hill Fresh Water and Salt Water Service Reservoirs to Caverns
Certification of Construction Noise Management Plan

Reference is made to the Construction Noise Management Plan (CNMP) (Revision 3.4) submitted by the Contractor on 6 January 2026. We are pleased to inform you that we have no adverse comment on the CNMP.

I hereby certify the CNMP for submission under condition 2.12 of Environmental Permit No. EP-602/2021.

Thank you.

Yours faithfully,
For and on behalf of
Acuity Sustainability Consulting Limited



F. C. Tsang
Environmental Team Leader

cc. Umwelt Consulting Limited
Chun Wo – Sinohydro JV

Mr. Ivan Ting (IEC) via email
Mr. Pauleo Yu (Site agent) via email



CHUN WO - SINOHYDRO JV

CONSTRUCTION NOISE MANAGEMENT PLAN (CNMP)

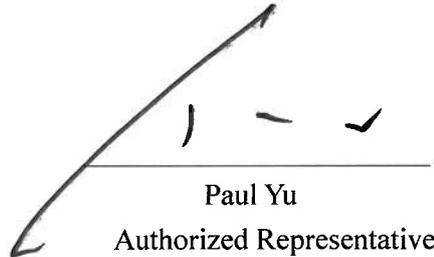
CONTRACT NO. 21/WSD/21

RELOCATION OF DIAMOND HILL FRESH WATER AND
SALT WATER RESERVOIRS TO CAVERNS

Revision : 3.4

Date : 06 Jan 2026

Approved by:

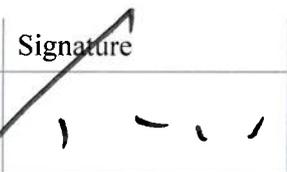


Paul Yu
Authorized Representative

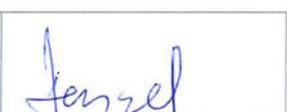
Construction Noise Management Plan (CNMP)

Revision: 3.4
Date: 06 Jan 2026

Checked by:

Position	Signature	Name	Date
Authorized Representative		Paul Yu	06 Jan 2026

Prepared by:

Environmental Officer		Denzel Chan	06 Jan 2026
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CONTENTS

1. Background	2
1.1 Project Description	2
1.2 Requirements for Construction Noise Management Plan (CNMP)	2
2. Description of Construction Works in the Study Area	3
2.1 Noise Sensitive Receivers	3
2.2 Construction Methodology	4
2.3 Updated Preliminary Construction Programme	4
2.4 Updated Powered Mechanical Equipment List	4
3. Noise Assessment and Proposed Mitigation Measures	7
3.1 Assessment Methodology and Assumptions	7
3.2 Proposed Mitigation Strategy and Noise Assessment Results	7
3.3 Good Site Management Practices	14
4. Monitoring and Audit Requirement	14
5. Conclusion	15

LIST OF APPENDICES

Appendix A	Layout Plan of the Works Area showing the NSRs.
Appendix B	Construction Programme for Noise Calculation
Appendix C	Detailed Construction Noise Assessment
Appendix D	Details of Acoustic Noise Barriers
Appendix E	Implementation Schedule of Proposed Mitigation Measures
Appendix F	Concrete Lorry Mixer Sound Power Level Measurement Report
Appendix G	Relevant School Examination Calendar

1. Background

1.1 Project Description

Relocation of Diamond Hill Fresh Water and Salt Water Service Reservoirs to Caverns Environmental Impact Assessment (EIA) Report (Register No.: AEIAR-232/2021) was approved without conditions by Environmental Protection Department (EPD) on 16 November 2021. An Environmental Permit (EP-602/2021) was issued on 14 December 2021.

Chun Wo – Sinohydro JV (CWSJV) was commissioned by Water Supplies Department as the appointed main contractor for Contract No. 21/WSD/21 Relocation of Diamond Hill Fresh Water and Salt Water Service Reservoirs to Caverns.

The Works to be executed under this Contract included, but not exclusively, the following items:

- (i) Construction of the relocated Diamond Hill Fresh Water and Salt Water Service Reservoirs (DHSRs) and associated pumping stations and water main laying works;
- (ii) Construction of tunnels, adits, ventilation system and caverns for accommodating the relocated DHSRs and the associated facilities;
- (iii) Construction of a 2-storey Portal Ancillary Building; and
- (iv) Other associated works that are incidental to and necessary for the completion of the Project.

A Site Layout showing the site boundary is shown in Appendix A.

1.2 Requirements for Construction Noise Management Plan (CNMP)

According to the condition 2.12 of the EP-602/2021, the Permit Holder shall, no later than 1 month before the commencement of construction of the Project or otherwise approved by the Director, deposit with the Director 3 hard copies and 1 electronic copy of a Construction Noise Management Plan (CNMP).

The CNMP shall include:

- Layout plan(s) detailing the locations and arrangements of the noise mitigation measures, including but not limited to the use of movable noise barriers, enclosures and quality powered mechanical equipment.
- An 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.

Before submission to the Director, the CNMP shall be certified by the Environmental Team (ET) Leader and verified by the Independent Environmental Checker (IEC) as conforming to the relevant information and recommendations contained in the EIA Report

(Register No. AEIAR-232/2021).

If there is any change to the construction noise mitigation measures and/or plant inventory recommended in the deposited CNMP, the Permit Holder shall, no later than 1 month before the implementation of any such change, deposit with the Director 3 hard copies and 1 electronic copy of an updated CNMP. The updated CNMP shall be certified by the ET Leader and verified by the IEC as conforming to the relevant information and recommendations of the EIA Report (Register No. AEIAR-232/2021). All mitigation measures recommended and requirements specified in the CNMP and the updated CNMP shall be fully implemented.

2. Description of Construction Works in the Study Area

2.1 Noise Sensitive Receivers

The list of NSRs is shown in Table 2.1. The layout plan of the works area showing the NSRs is provided in Appendix A.

Table 2.1 List of Noise Sensitive Receivers (NSRs)

NSR	Description	Environmental Impact Assessment Ordinance Technical Memorandum Noise Criteria, dB(A) [1]
NSR 1	Block B, Peninsula Heights	75
NSR 2	Block 1, Meridian Hill	75
NSR 3	Chun Sing House, Tin Ma Court	75
NSR 4	Chun Wai House, Tin Ma Court	75
NSR 5	Grace Methodist Church Kindergarten	70
NSR 6	Wang King House, Tin Wang Court	75
NSR 7	Block 6, Tsui Chuk Garden	75
NSR 8	Baptist Hung Hin Shiu Rainbow Primary School	70/ (65)
NSR 9	Pang Ching Court	75
NSR 10	Chung Yuen House, Chuk Yuen North Estate	75
NSR 11	Wah Yuen House, Chuk Yuen South Estate	75
NSR 12	Mui Yuen House, Chuk Yuen North Estate	75
NSR 13	Our Lady of Maryknoll Hospital	75
NSR 14	Our Lady's College	70/ (65)
NSR 15	Evangel Children's Home	75
NSR 16	Wing Shing House	75
NSR 17	Ying Fuk Court	75

NSR 18	Diamond Hill Kwong Yum Home for the Aged	75
NSR 19	St. Bonaventure College and High School	70/ (65)
NSR 20	Wu York Yu Health Centre	75
NSR 21	TWGHs Wong Tai Sin Hospital	75
NSR 22	Ho Lap Primary School	70/ (65)
NSR 23	Lok Shing House, Tsz Lok Estate	75
NSR 24	Fat Chong Temple	75
NSR 25	Wo Tin House	75
NSR 26	CCC Kei Tsz Primary School	70/ (65)
NSR P1	Sheung Fung Street Customs Staff Quarters	75

Notes: [1] Values in parentheses indicate the noise criterion during examination period of educational institution

2.2 Construction Methodology

The proposed construction methodology is generally following that presented in Section 2.8 of the approved EIA Report (Register No. AEIAR-232/2021).

A breakdown of the major construction activities in sequence to be carried out within the contract are provided in Appendix B.

2.3 Updated Preliminary Construction Programme

Upon reviewing the concurrent projects close to the Project, there is no additional potential concurrent projects which would have cumulative construction noise impacts on the NSRs during the construction phase. The updated preliminary construction programme is provided in Appendix B.

2.4 Updated Powered Mechanical Equipment List

The updated Powered Mechanical Equipment (PME) list for the construction works is provided in Table 2.2. The Sound Power Levels (SWL) for the PMEs have been adopted from EPD's Technical Memorandum on Noise from Construction Work Other than Percussive Piling (GW-TM), list of SWLs of other commonly used PME or British Standard 5228 - Part 1:2009 Code of Practice for Noise and Vibration Control on Construction and Open Sites. It should be noted that the PMEs proposed are commonly available in Hong Kong market. The PMEs to be adopted for individual construction activities for this contract are provided in Appendix C.

If the exact model specified in the references of the listed quiet PME are not available during the

construction period, the model with SWL not higher than the listed SWL shall be adopted.

Table 2.2: List of Updated Powered Mechanical Equipment (PME)

PME Description	Other Ref. (a) / QPME ID Code (b) / TM Ref. (c)	Unit Sound Power Level, SWL dB(A)
Air Compressor with QPME label showing a sound power level \leq 98dB(A)	EPD-12829 Brand: AIRMAN Model: PDS390S-5C1	98
Breaker, excavator mounted (hydraulic)	Ref: Sandhurst - XT-200 [f]	110
Excavator/loader, wheeled/tracked with QPME label showing a sound power level \leq 95dB(A)	EPD-12806 Brand: KOBELCO Model: SK225SR	95
Generator, silenced, 75dB(A) at 7m with QPME label showing a sound power level \leq 93dB(A)	EPD-13131 Brand: DENYO Model: DCA-220LSIE	93
Concrete lorry mixer	[d]	103
Concrete pump, stationary/lorry mounted	CNP 047	109
Poker, vibratory, Hand-held (electric)	[a]	102
Crane, mobile with QPME label showing a sound power level \leq 92dB(A)	EPD-06841R Brand: Kobelco Model: CK90UR-3	92
Dump truck, 5.5 tonne < gross vehicle weight \leq 38 tonne	[a]	105
Piling, vibrating hammer	[a]	115
Rock drill, crawler mounted (hydraulic)	CNP 182	123
Water pump (electric)	CNP 281	88
Ventilation fan	CNP 241	108
Conveyor Belt	CNP 041	90
Crusher	[e]	118
Breaker, handheld, mass > 10kg and < 20kg with QPME label showing a sound power level \leq 103 dB(A)	EPD-14846 Brand: Hilti Model: TE 500-X	103
Saw, circular, wood	CNP 201	108
Bar bender and cutter (electric)	CNP 021	90
Lorry, with crane/grab, 5.5 tonne < gross vehicle weight \leq 38 tonne	[a]	105

PME Description	Other Ref. (a) / QPME ID Code (b) / TM Ref. (c)	Unit Sound Power Level, SWL dB(A)
Asphalt paver with QPME label showing a sound power level <= 104 dB(A)	EPD-12785 Brand: JOSEPH VOEGELE AG / VOEGELE Model: SUPER 1603-3	104
Paint line marker	CNP 161	90
Road roller with QPME label showing a sound power level <= 101 dB(A)	EPD-12035 Brand: AMMANN Model: ARX40-2	101
Air blower (electric)	[a]	95
Winch (electric)	CNP 262	95
Hand-held Percussive Breaker with QPME label showing a sound power level <= 99dB(A)	EPD-16264 Brand: Hilti Model: TE 1000-AVR (02)	99
Crawler crane with QPME label showing a sound power level <= 108 dB(A)	EPD-12661 Brand: SANY Model: SCC2500A	108
Tower crane	CNP 049	95

Notes:

(a) Sound power levels of other commonly used PME

https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLs_eng.pdf

(b) QPME ID Code refer to Quiet Powered Mechanical Equipment from EPD's website

<https://www.epd.gov.hk/epd/qpme/eng/index.html>

(c) TECHNICAL MEMORANDUM ON NOISE FROM CONSTRUCTION WORK OTHER THAN PERCUSSIVE PILING

https://www.epd.gov.hk/epd/sites/default/files/epd/english/environmentinhk/noise/guide_ref/files/tm_nonpp.pdf

(d) Sound Power Level Measurement Report – Showed in Appendix F.

(e) Reference is made from EP-313/2008 - West Island Line Environmental Assessment Report

https://www.epd.gov.hk/eia/files/applications/en/pp_130/aep_2666/progress/action_17114/ear200906.pdf

(f) Reference for Sandhurst - XT-200 is made from AEIAR-171/2013 - Central Kowloon Route

https://www.epd.gov.hk/eia/files/applications/en/pp_156/eia_1806/progress/action_2277/2_EIA/PDF/Appendix/Volume%203/Appendix%205.4a.pdf

3. Noise Assessment and Proposed Mitigation Measures

3.1 Assessment Methodology and Assumptions

The construction noise assessment has been carried out in accordance with the methodology used in the approved EIA Report (Register No. AEIAR-232/2021). The percentage on-time for each PME has been estimated individually for each construction activity to ensure practicality.

All mitigation measures and their effectiveness proposed in the EIA Report (Register No. AEIAR-232/2021) including the use of temporary movable noise barrier and enclosure (with sufficient ventilation) for relatively static plant, acoustic mat and quiet plant have been considered in this CNMP. The use of quiet plant associated with construction work is prescribed in British Standard "Code of practice for noise and vibration control on construction and open sites, BS5228" which contains the SWLs for specific quiet PME.

School calendar for NSR 8, NSR 14, NSR 19, NSR 22 and NSR 26 have been collected for examination period. For worst case scenario, the noise mitigation criteria for the NSRs were set to 65dB(A) for all months. The school calendar of the schools has been given in Appendix G.

In the calculation of Activities for each Works ID, only 1 group of activity the maximum value SWL dB(A) of one of the activities is taken for Noise Calculation Construction Plant Inventory (Mitigated Scenario 1 and 2) in Appendix C.

3.2 Proposed Mitigation Strategy and Noise Assessment Results

The mitigation measures proposed in the approved EIA report (Register No. AEIAR-232/2021) have been adopted.

To minimize the potential construction noise impacts of the watermain laying work, the pipe section to be constructed by open cut method is limited in a length of no more than 30 m at any one time when works are in close proximity to NSRs. Each work front along the proposed watermain laying should be separated by a clearance distance of at least 60 m.

The use of quiet PME is considered to be a practicable means to mitigate the construction noise impact. Quiet plant is defined as a PME having actual SWL lower than the value specified in the GW-TM.

Movable temporary noise barriers that can be located close to noisy plant and be moved

concurrently with the plant along a worksite can be very effective for screening noise from NSRs. A typical design which has been used locally is a wooden framed barrier with a small-cantilevered on a skid footing with 25mm 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. Movable barriers will be used for some PME (e.g. asphalt paver, excavator etc.). It is anticipated that suitably designed barriers could achieve at least 5 -10dB(A) reduction. For a conservative assessment, only a reduction of 5dB(A) is assumed. The use of enclosure (The sheet material mass of the noise enclosure should be at least 10 kg/m² and sound-absorbent lining inside the enclosure should be at least 25 mm thick) has been considered to shelter relatively stationary plant including air compressor, generator. The enclosures barriers can provide about 10dB(A) noise reduction. CWSJV shall ensure the practicability to block the line-of-sight for nearby NSRs during the usage of noise barriers. The testing report for the materials proposed are given in Appendix D.

Noise reduction fabrics and proprietary noise barriers will be used for the main laying works for further screening noise from concerned NSRs. The testing reports for the proprietary noise barriers are given in Appendix D. Considering the height of a proprietary noise barrier (Silent Up) can reach 7m high, the proprietary noise barrier can be deployed at works sites at Lung Fung Street to shield the PME from the NSR completely. The illustration showing the noise barrier during works is also shown in Appendix D. As such, a noise reduction of 10dB(A) is assumed for the construction works conducted at the area.

Blast door will be installed for blockage of noise from tunnel. This blast door served as noise enclosure and is lined with absorptive materials shall be provided at the tunnel portal to mitigate the noise from tunnel/cavern construction. This noise enclosure at the portal will be designed by consultant and the relevant details be updated in the CNMP shortly. The enclosure is a gap free enclosure with acoustic doors for vehicular access purpose. The acoustic doors shall remain closed throughout the construction period. The sheet material mass of the noise enclosure should be at least 10 kg/m² and sound-absorbent lining inside the enclosure should be at least 25 mm thick. The construction activities to be carried out in underground / cavern and there is no direct line of sight from the NSR to works inside the tunnel. This blast door will adopt not less than 20 dB(A) reduction screening effect (referring to Section 4.8.4 of the approved EIA Report (Register No. AEIAR-232/2021)).

Noise barrier /enclosure/ proprietary Noise Barriers should be inspected and maintained regularly. CWSJV should design and provide details of the temporary noise barriers, noise enclosure and blast door to the Engineer for approval.

All mitigation measures recommended, and requirements specified in the CNMP and the updated CNMP shall be fully implemented.

Mitigated Scenario 1 – Adoption of Quiet PME & Temporary Noise Barriers/Enclosures

The mitigated noise levels at the representative NSRs for mitigated scenario 1 were calculated and the results are summarised in Table 3.1. with details of the calculations given in Appendix C. With the implementation of the mitigated scenario 1, noise exceedances at NSR 14 and NSR 19 are predicted.

Table 3.1 Predicted Construction Noise Levels (Mitigated Scenario 1)

NSR	Description	Maximum Predicted Noise Level, dB(A)	EIA-TM Noise Criteria, dB(A) [1]	Compliance
NSR 1	Block B, Peninsula Heights	71	75	Yes
NSR 2	Block 1, Meridian Hill	72	75	Yes
NSR 3	Chun Sing House, Tin Ma Court	66	75	Yes
NSR 4	Chun Wai House, Tin Ma Court	67	75	Yes
NSR 5	Grace Methodist Church Kindergarten	67	70	Yes
NSR 6	Wang King House, Tin Wang Court	64	75	Yes
NSR 7	Block 6, Tsui Chuk Garden	62	75	Yes
NSR 8	Baptist Hung Hin Shiu Rainbow Primary School	56	70/ (65)	Yes
NSR 9	Pang Ching Court	57	75	Yes
NSR 10	Chung Yuen House, Chuk Yuen North Estate	60	75	Yes
NSR 11	Wah Yuen House, Chuk Yuen South Estate	61	75	Yes
NSR 12	Mui Yuen House, Chuk Yuen North Estate	56	75	Yes
NSR 13	Our Lady of Maryknoll Hospital	72	75	Yes
NSR 14	Our Lady's College	<u>70</u>	70/ (65)	<u>No</u>
NSR 15	Evangel Children's Home	66	75	Yes
NSR 16	Wing Shing House	66	75	Yes
NSR 17	Ying Fuk Court	51	75	Yes
NSR 18	Diamond Hill Kwong Yum Home for the Aged	62	75	Yes

NSR	Description	Maximum Predicted Noise Level, dB(A)	EIA-TM Noise Criteria, dB(A) [1]	Compliance
NSR 19	St. Bonaventure College and High School	69	70/ (65)	No
NSR 20	Wu York Yu Health Centre	68	75	Yes
NSR 21	TWGHs Wong Tai Sin Hospital	55	75	Yes
NSR 22	Ho Lap Primary School	57	70/ (65)	Yes
NSR 23	Lok Shing House, Tsz Lok Estate	58	75	Yes
NSR 24	Fat Chong Temple	51	75	Yes
NSR 25	Wo Tin House	63	75	Yes
NSR 26	CCC Kei Tsz Primary School	56	70/ (65)	Yes
NSR P1	Sheung Fung Street Customs Staff Quarters	67	75	Yes

3.1s: [1] Values in parentheses indicate the noise criterion during examination period of educational institution

Mitigated Scenario 2 – Additional Mitigation Measures.

During examination period, Fresh Water / Salt Water Main laying (Reinstatement Works) will be carried out 20m from the school site boundary. The reduced construction noise levels at these NSRs during normal school days/ examination periods have been quantitatively assessed.

The mitigated noise levels at the representative NSRs were calculated and the results are summarized in Table 3.2 with details of the calculations given in Appendix C. With the adoption of recommended mitigation measures, the construction noise level at the NSR 14 and NSR 19 will comply with the required noise criteria.

Table 3.2 Predicted Construction Noise Levels for NSR 5, NSR14 and NSR19 (Mitigated Scenario 2)

NSR	Description	Maximum Predicted Noise Level, dB(A)	EIA-TM Noise Criteria, dB(A) [1]	Compliance
NSR 14	Our Lady's College	59/56*	70/ (65)	Yes
NSR 19	St. Bonaventure College and High School	59/56*	70/ (65)	Yes

Notes:

[1] Values in parentheses indicate the noise criterion during examination period of educational institution.

* Implementation of mitigated scenario 1 and Fresh Water / Salt Water Main laying (Reinstatement Works) will be carried out 20m from the school site boundary during examination period.

Examination schedules of NSR 8, NSR 14, NSR 19, NSR 22 and NSR 26 are included in the school calendars presented in Appendix G. From NSR 5 Kindergarten just have normal school days, no examination.

The predicted noise levels at identified NSRs after implementation of mitigation measures, including quiet plants, noise enclosure/shed, movable barriers and enclosure are shown in Appendix C and summarized in Table 3.1 and Table 3.2. Summary of PME with proposed mitigation measures are shown in Table 3.3.

Table 3.3 Summary of PME with proposed mitigation measures

Construction Activities	PME	Proposed Mitigation Measures	Noise Reduction, dB(A)
<p><u>1.Site Mobilization:</u> -Excavation Cavern -Formation of works site - Mobilization of construction plants and materials</p> <p><u>2.Cavern and Tunnel Construction:</u> -Open-cut Construction of Tunnel and Tunnel Portal (Group 1) -Open-cut Construction of Tunnel and Tunnel Portal (Group 2)</p> <p><u>3.Structural Works:</u> - Ancillary Buildings at Tunnel Portal – Excavation, Foundation, Structural Works</p> <p><u>4. Main laying</u> -Fresh Water / Salt Water Main laying - Surface Breaking and Excavation & Pipe laying -Fresh Water / Salt Water Main laying – Reinstatement</p>	Air blower (electric)	Movable Barrier for Mitigated Scenario 1 and Mitigated Scenario 2	5
	Bar bender and cutter (electric)		
	Breaker, excavator mounted (hydraulic)		
	Breaker, handheld, mass > 10kg and < 20kg with QPME label showing a sound power level <= 103dB(A)		
	Concrete lorry mixer		
	Concrete pump, stationary/lorry mounted		
	Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne		
	Excavator/loader, wheeled/tracked with QPME label showing a sound power level <= 95dB(A)		
	Hand-held Percussive Breaker with QPME label showing a sound power level <= 99dB(A)		
	Lorry, with crane/grab, 5.5		

Construction Activities	PME	Proposed Mitigation Measures	Noise Reduction, dB(A)
<p><u>5. E&M Installation</u> -E&M Installation for Ancillary Building</p> <p><u>6. Other Associated Works</u> -Slope, Landscaping Works, and Reinstatement for Access Tunnel Portal</p>	<p>tonne < gross vehicle weight \leq 38 tonne</p> <p>Paint line marker</p> <p>Piling, vibrating hammer</p> <p>Poker, vibratory, Hand-held (electric)</p> <p>Saw, circular, wood</p> <p>Water pump (electric)</p> <p>Winch (electric)</p>		
<p><u>4. Main laying:</u> -Fresh Water / Salt Water Main laying – Reinstatement</p>	<p>Asphalt paver with QPME label showing a sound power level \leq 104dB(A)</p> <p>Concrete lorry mixer</p> <p>Dump truck, 5.5 tonne < gross vehicle weight \leq 38 tonne</p> <p>Poker, vibratory, hand-held (electric)</p> <p>Road roller with QPME label showing a sound power level \leq 101 dB(A)</p>	<p>Noise reduction fabrics and Proprietary Noise barriers for Mitigated Scenario 1 and Mitigated Scenario 2</p>	<p>10</p>
<p><u>1.Site Mobilization:</u> -Excavation Cavern -Formation of works site - Mobilization of construction plants and materials</p> <p><u>2.Cavern and Tunnel Construction:</u> -Open-cut Construction of Tunnel and Tunnel Portal (Group 1) -Stone Crushing</p> <p><u>3.Structural Works:</u> - Ancillary Buildings at Tunnel</p>	<p>Air Compressor, air flow > 10m³/min and < 30m³/min with QPME label showing a sound power level \leq 98 dB(A)</p> <p>Crusher</p> <p>Generator, silenced, 75 dB(A) at 7 m with QPME label showing a sound power level \leq 93dB(A)</p>	<p>Noise enclosure for Mitigated Scenario 1 and Mitigated Scenario 2</p>	<p>10</p>

Construction Activities	PME	Proposed Mitigation Measures	Noise Reduction, dB(A)
<p>Portal – Excavation, Foundation, Structural Works</p> <p><u>4. Main laying</u></p> <p>-Fresh Water / Salt Water Main laying - Surface Breaking</p> <p>-Fresh Water / Salt Water Main laying – Reinstatement</p>			
<p><u>2.Cavern and Tunnel Construction:</u></p> <p>-Excavation of Access Tunnel</p> <p>-Excavation of Cavern</p> <p><u>3.Structural Works:</u></p> <p>-Structural Works for Relocated DHSRs and Pumping Stations</p> <p><u>5. E&M Installation</u></p> <p>-E&M Installation for Relocated DHSRs and Pumping Stations</p>	<p>Bar bender and cutter (electric)</p> <p>Breaker, excavator mounted (hydraulic)</p> <p>Concrete lorry mixer</p> <p>Concrete pump, stationary/lorry mounted</p> <p>Conveyor Belt</p> <p>Crane, mobile with QPME label showing a sound power level $\leq 92\text{dB(A)}$</p> <p>Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne</p> <p>Generator, silenced, 75 dB(A) at 7 m</p> <p>Lorry, with crane/grab, 5.5 tonne < gross vehicle weight ≤ 38 tonne</p> <p>Poker, vibratory, Hand-held (electric)</p> <p>Rock drill, crawler mounted (hydraulic)</p> <p>Saw, circular, wood</p> <p>Ventilation fan</p>	<p>Acoustic doors at tunnel portal for Mitigated Scenario 1 and Mitigated Scenario 2</p>	<p>20</p>

Construction Activities	PME	Proposed Mitigation Measures	Noise Reduction, dB(A)
	Water pump (electric)		

3.3 Good Site Management Practices

CWSJV shall implement the following good site management practices to reduce the potential noise impact of the construction activities on nearby NSRs,

1. Only well-maintained plant should be operated on-site, and plant will be serviced regularly during the construction phase;
2. Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction phase;
3. Mobile plant, if any, should be sited away from NSRs;
4. Machines and plant (such as trucks) that may be in intermittent use should be shut down between work periods or will be throttled down to a minimum;
5. Plant known to emit noise strongly in one direction should be orientated so that the noise is directed away from the nearby NSRs;
6. Material stockpiles and other structures should be effectively utilized in screening noise from on-site construction activities;
7. The contractor should devise, arrange methods of working and carrying out the works in such manner to minimise noise impacts on the surrounding environment, and should provide experienced personnel with suitable training to ensure that all these measures are implemented properly; and;
8. The contractor should minimise construction noise exposure to the school (especially during examination periods) as much as possible. The contractor should liaise with the school and Examination Authority to ascertain the exact dates and times of all examination periods during the course of the contract and to avoid noisy activities during these periods.

4. Monitoring and Audit Requirement

Noise monitoring and weekly site audit are proposed to be carried out during construction phase. The mitigation measures and noise control design will be implemented by the frontline staff of the contractor, supervised by the Environmental Officer/ Site Engineer and checked by the ET, IEC and RE during routine site inspection under the EM&A programme.

Site records, including photos and measurement reports, for substantiating proper implementation of the Plan shall be well kept by the Contractor on site for review/checking by ET/IEC/EPD at any

time. The implementation schedule of proposed mitigation measures is showed in Appendix E.

The public are welcome to contact us through the hotline (9233 9816). We aim to handle and provide immediate response to the enquiries and complaints on environmental issues from the public.

5. Conclusion

The use of powered mechanical equipment during the construction phase of the Project is expected to create noise impact to the nearby NSRs. Assessment indicates that the construction noise impact can be mitigated to meet the criteria in the EIAO-TM by use of quiet construction equipment, erecting noise barriers / enclosures and use of quieter construction method restrictions on construction works near schools. With the implementation of the recommended mitigation measures, no exceedance of the daytime construction noise criteria is expected.

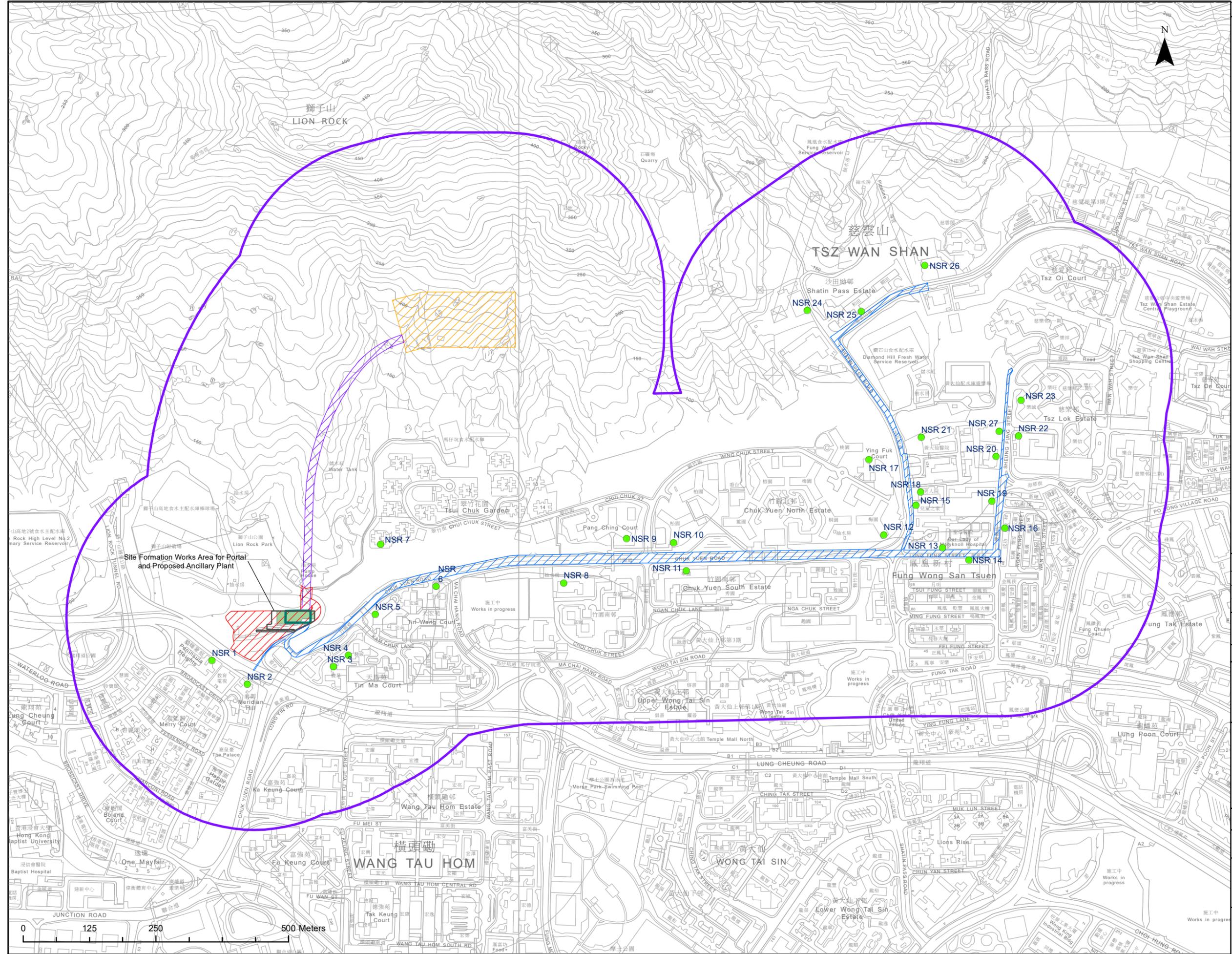
Contract No. 21/WSD/21

Relocation of Diamond Hill Fresh Water and Salt Water Reservoirs to Caverns

Appendix A – Layout Plan of the Works Area showing the NSRs



- Legend**
- Representative Noise Sensitive Receivers
 - ▭ Study Area (300m)
 - ▨ Works Area A
 - ▨ Works Area B
 - ▨ Works Area C
 - ▨ Works Area D
 - ▨ Works Area E
 - ▨ Works Area F



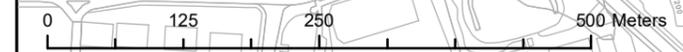
Revision	Description			
	Designed	Reviewed	Drawn	Checked
Initial				
Date				
Approved				

Agreement No. _____
 Project Title
**Contract No. 21/WSD/21
 Relocation of Diamond Hill Fresh
 Water and Salt Water Service Reser-
 voirs to Caverns**

Figure Title
Locations of Works Area

Drawing No.	Revision
	-

Scale
A3: 1:6,500



Contract No. 21/WSD/21

Relocation of Diamond Hill Fresh Water and Salt Water Reservoirs to Caverns

Appendix B – Construction Programme for Noise Calculation



Contract No. 21/WSD/21

Relocation of Diamond Hill Fresh Water and Salt Water Reservoirs to Caverns

Appendix C – Detailed Construction Noise Assessment

Construction Plant Inventory (Mitigated Scenario 1)

Works ID	Activities	Plant	TM Ref. / Other Ref.	Unit SWL, dB(A)	No. of PME	On- time %	Type of Noise Control	Noise reduction, dB(A)	SWL, dB(A)	Total SWL, dB(A)	
	General										
1-1	Site Mobilization - Excavation	Air Compressor, air flow > 10m ³ /min and < 30m ³ /min	EPD-12829 Brand: AIRMAN Model : PDS390S-5C1	98	1	100%	Enclosure	-10	88	102	
		Breaker, excavator mounted (hydraulic)	(Ref: Sandhurst - XT-200) ^[4]	110	1	50%	Barrier	-5	102		
		Excavator/loader, wheeled/tracked	EPD-12806 Brand: KOBELCO Model : SK225SR	95	1	100%	Barrier	-5	90		
		Generator, silenced, 75dB(A) at 7m	EPD-13131 Brand :DENYO Model : DCA-220LSIE	93	1	50%	Enclosure	-10	80		
	Site Mobilization - Formation of works site	Concrete lorry mixer	[5]	103	1	40%	Barrier	-5	94	97	
		Poker, vibratory, Hand-held (electric)	[2]	102	1	40%	Barrier	-5	93		
		Generator, silenced, 75dB(A) at 7m	EPD-13131 Brand :DENYO Model : DCA-220LSIE	93	1	100%	Enclosure	-10	83		
	Site Mobilization - Mobilization of construction plants and materials	Crane, mobile with QPME label showing a sound power level <= 92dB(A)	EPD-06841R Brand: Kobelco Model: CK90UR-3	92	1	45%				89	98
		Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne	[2]	105	1	50%	Barrier	-5	97		
		Generator, silenced, 75dB(A) at 7m	EPD-13131 Brand :DENYO Model : DCA-220LSIE	93	1	100%	Enclosure	-10	83		

Works ID	Activities	Plant	TM Ref. / Other Ref.	Unit SWL, dB(A)	No. of PME	On-time %	Type of Noise Control	Noise reduction, dB(A)	SWL, dB(A)	Total SWL, dB(A)
	Cavern and Tunnel Construction									
2-1	Open-cut Construction of Tunnel and Tunnel Portal	Excavator/loader, wheeled/tracked	EPD-12806 Brand: KOBELCO Model : SK225SR	95	2	70%	Barrier	-5	91	107
		Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne	[2]	105	1	70%	Barrier	-5	98	
		Air Compressor, air flow > 10m ³ /min and < 30m ³ /min	EPD-12829 Brand: AIRMAN Model : PDS390S-SC1	98	2	100%	Enclosure	-10	91	
		Piling, vibrating hammer	[2]	115	1	40%	Barrier	-5	106	
2-1	Open-cut Construction of Tunnel and Tunnel Portal (Group 2)	Crawler crane	EPD-12661 Brand: SANY Model : SCC2500A	108	1	50%			105	107
		Poker, vibratory, Hand-held (electric)	[2]	102	1	50%	Barrier	-5	94	
		Saw, circular, wood	CNP 201	108	1	50%	Barrier	-5	100	
		Bar bender and cutter (electric)	CNP 021	90	2	50%	Barrier	-5	85	
		Water pump (electric)	CNP 281	88	2	80%	Barrier	-5	85	
		Concrete pump, stationary/lorry mounted	CNP 047	109	1	30%	Barrier	-5	99	
		Concrete lorry mixer	[5]	103	1	50%	Barrier	-5	95	
2-2	Excavation of Access Tunnel	Rock drill, crawler mounted (hydraulic)	CNP 182	123	1	75%	Inside Cavern	-20	102	103
		Breaker, excavator mounted (hydraulic)	(Ref: Sandhurst - XT-200) ^[4]	110	1	80%	Inside Cavern	-20	89	
		Water pump (electric)	CNP 281	88	2	80%	Inside Cavern	-20	70	
		Concrete pump, stationary/lorry mounted	CNP 047	109	1	60%	Inside Cavern	-20	87	
		Concrete lorry mixer	[5]	103	1	60%	Inside Cavern	-20	81	
		Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne	[2]	105	1	70%	Inside Cavern	-20	83	
		Ventilation fan	CNP 241	108	2	100%	Inside Cavern	-20	91	
		Conveyor Belt	CNP 041	90	1	100%	Inside Cavern	-20	70	
2-3	Excavation of Cavern	Rock drill, crawler mounted (hydraulic)	CNP 182	123	2	70%	Inside Cavern	-20	104	105
		Breaker, excavator mounted (hydraulic)	(Ref: Sandhurst - XT-200) ^[4]	110	3	70%	Inside Cavern	-20	93	
		Water pump (electric)	CNP 281	88	2	70%	Inside Cavern	-20	69	
		Concrete pump, stationary/lorry mounted	CNP 047	109	2	60%	Inside Cavern	-20	90	
		Concrete lorry mixer	[5]	103	4	60%	Inside Cavern	-20	87	
		Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne	[2]	105	5	70%	Inside Cavern	-20	90	
		Ventilation fan	CNP 241	108	2	100%	Inside Cavern	-20	91	
2-4	Stone Crushing	Crusher	[6]	118	1	50%	Enclosure	-10	105	105

Works ID	Activities	Plant	TM Ref. / Other Ref.	Unit SWL, dB(A)	No. of PME	On-time %	Type of Noise Control	Noise reduction, dB(A)	SWL, dB(A)	Total SWL, dB(A)
	<u>Mainlaying</u>									
4-1	Fresh Water / Salt Water Mainlaying - Surface Breaking	Hand-held Percussive Breaker with QPME label showing a sound power level <= 99dB(A)	EPD-16264 Brand: Hilti Model: TE 1000-AVR (02)	99	1	30%	Barrier	-5	89	90
		Generator, silenced, 75dB(A) at 7m	EPD-13131 Brand :DENYO Model : DCA-220LSIE	93	1	100%	Enclosure	-10	83	
	Fresh Water / Salt Water Mainlaying - Excavation & Pipe laying	Excavator/loader, wheeled/tracked	EPD-12806 Brand: KOBELCO Model : SK225SR	95	1	50%	Barrier	-5	87	87
	Fresh Water / Salt Water Mainlaying - Reinstatement (Group 1)	Concrete lorry mixer	[5]	103	1	50%	Barrier (Type 2)	-10	90	90
	Fresh Water / Salt Water Mainlaying - Reinstatement (Group 2)	Poker, vibratory, Hand-held (electric)	[2]	102	1	50%	Barrier (Type 2)	-10	89	90
		Generator, silenced, 75 dB(A) at 7 m	EPD-13131 Brand :DENYO Model : DCA-220LSIE	93	1	100%	Enclosure	-10	83	
	Fresh Water / Salt Water Mainlaying - Reinstatement (Group 3)	Asphalt paver	EPD-12785 Brand :JOSEPH VOEGELE AG / VOEGELE Model : SUPER 1603-3	104	1	40%	Barrier (Type 2)	-10	90	90
	Fresh Water / Salt Water Mainlaying - Reinstatement (Group 4)	Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne	[2]	105	1	30%	Barrier (Type 2)	-10	90	90
	Fresh Water / Salt Water Mainlaying - Reinstatement (Group 5)	Paint line marker	CNP 161	90	1	50%	Barrier	-5	82	82
	Fresh Water / Salt Water Mainlaying - Reinstatement (Group 6)	Road roller	EPD-12035 Brand : AMMANN Model : ARX40-2	101	1	50%	Barrier (Type 2)	-10	88	88
	Fresh Water / Salt Water Mainlaying - Reinstatement (Group 7)	Air blower (electric)	[2]	95	1	50%	Barrier	-5	87	90
		Winch (electric)	CNP 262	95	1	50%	Barrier	-5	87	

Works ID	Activities	Plant	TM Ref./ Other Ref.	Unit SWL, dB(A)	No. of PME	On- time %	Type of Noise Control	Noise reduction, dB(A)	SWL, dB(A)	Total SWL, dB(A)
	E&M Installation									
5-1	E&M Installation for Ancillary Buildings	Lorry, with crane/grab, 5.5 tonne < gross vehicle weight ≤ 38 tonne	[2]	105	1	100%	Barrier	-5	100	102
		Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne	[2]	105	1	50%	Barrier	-5	97	
5-2	E&M Installation for Relocated DHSRs and Pumping Stations	Lorry, with crane/grab, 5.5 tonne < gross vehicle weight ≤ 38 tonne	[2]	105	1	100%	Inside Cavern	-20	85	89
		Ventilation fan	CNP 241	108	1	70%	Inside Cavern	-20	86	
		Generator, silenced, 75 dB(A) at 7 m	EPD-13131 Brand :DENYO Model : DCA-220LSIE	93	1	100%	Inside Cavern	-20	73	

Works ID	Activities	Plant	TM Ref./ Other Ref.	Unit SWL, dB(A)	No. of PME	On- time %	Type of Noise Control	Noise reduction, dB(A)	SWL, dB(A)	Total SWL, dB(A)
	Other Associated Works									
6-1	Slope, Landscaping Works and Reinstatement for Access Tunnel Portal	Lorry, with crane/grab, 5.5 tonne < gross vehicle weight ≤ 38 tonne	[2]	105	1	70%	Barrier	-5	98	98

Notes:

- [1] As only one group of PME would be operated simultaneously under same Works ID, only the activity with the highest total SWL under the same Works ID will be used for the construction noise assessment for each NSR
- [2] Sound power levels of other commonly used PME (https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLs_eng.pdf)
- [3] Quality Powered Mechanical Equipment (<https://www.epd.gov.hk/epd/qpme/eng/index.html>)
- [4] Reference for Sandhurst - XT-200 is made from AEIAR-171/2013 - Central Kowloon Route (https://www.epd.gov.hk/eia/files/applications/en/pp_156/eia_1806/progress/action_2277/2_EIA/PDF/Appendix/Volume%203/Appendix%205.4a.pdf)
- [5] Reference for Concrete Lorry Mixer is made from sound power level measurement report (Refer to Appendix F)
- [6] Reference is made from AEIAR-126/2008 - West Island Line (https://www.epd.gov.hk/eia/files/applications/en/pp_130/aep_2666/progress/action_17114/ear200906.pdf)

Summary of Predicted Noise Levels from Construction (Mitigated Scenario 1)

NSR	Description	EIAO-TM Noise Criteria, dB(A)	Max. Predicted CNL, db(A)			
			Low Level	Mid Level	High Level	Overall
NSR 1	Block B, Peninsula Heights	75	71	71	69	71
NSR 2	Block 1, Meridian Hill	75	71	72	71	72
NSR 3	Chun Sing House, Tin Ma Court	75	66	66	64	66
NSR 4	Chun Wai House, Tin Ma Court	75	67	66	64	67
NSR 5	Grace Methodist Church Kindergarten	70	67	N/A	N/A	67
NSR 6	Wang King House, Tin Wang Court	75	64	61	60	64
NSR 7	Block 6, Tsui Chuk Garden	75	63	62	57	63
NSR 8	Baptist Hung Hin Shiu Rainbow Primary School	70/65	57	57	57	57
NSR 9	Pang Ching Court	75	57	55	54	57
NSR 10	Chung Yuen House, Chuk Yuen North Estate	75	60	54	52	60
NSR 11	Wah Yuen House, Chuk Yuen South Estate	75	61	58	55	61
NSR 12	Mui Yuen House, Chuk Yuen North Estate	75	57	51	49	57
NSR 13	Our Lady of Maryknoll Hospital	75	72	63	59	72
NSR 14	Our Lady's College	70/65	70	68	61	70
NSR 15	Evangel Children's Home	75	66	62	59	66
NSR 16	Wing Shing House	75	66	62	59	66
NSR 17	Ying Fuk Court	75	52	51	49	52
NSR 18	Diamond Hill Kwong Yum Home for the Aged	75	62	61	58	62
NSR 19	St. Bonaventure College and High School	70/65	69	62	57	69
NSR 20	Wu York Yu Health Centre	75	68	65	63	68
NSR 21	TWGHs Wong Tai Sin Hospital	75	55	55	55	55
NSR 22	Ho Lap Primary School	70/65	57	57	55	57
NSR 23	Lok Shing House, Tsz Lok Estate	75	58	51	48	58
NSR 24	Fat Chong Temple	75	52	52	52	52
NSR 25	Wo Tin House	75	63	51	49	63
NSR 26	CCC Kei Tsz Primary School	70/65	56	55	54	56
NSR P1	Sheung Fung Street Customs Staff Quarters	75	67	54	50	67

 Predicted Noise Level exceeded the corresponding EIAO-TM noise criteria of 75 db(A) for residential / 70 db(A) for school during normal school days

 Predicted Noise Level exceeded the corresponding EIAO-TM noise criteria of 65db(A) for school during examination period

Construction Noise Assessment (Mitigated Scenario 1)

NSR 4

Chun Wai House, Tin Ma Court

Representative Floor:		1							mPD Level:							57							(Low Level)																																																										
Activity	Works ID	Works Area	Hor. Dist. m	mPD Level	SWL dB(A)	Distance m	Corr. for Distance dB(A) [1][2]	Corr. for Topo	Corr. for façade dB(A)	2023												2024												2025												2026												2027												2028											
										4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12															
General																																																																																	
Site Mobilization																																																																																	
Open-cut Construction of Tunnel and Tunnel Portal																																																																																	
Excavation of Access Tunnel																																																																																	
Excavation of Cavern																																																																																	
Stone Crushing																																																																																	
Structural Works																																																																																	
Ancillary Buildings at Tunnel Portal																																																																																	
Structural Works for Relocated DHSRs and Pumping Stations																																																																																	
Mainlining Works																																																																																	
Fresh Water / Salt Water Mainlaying																																																																																	
E&M Installation																																																																																	
E&M Installation for Ancillary Buildings																																																																																	
E&M Installation for Relocated DHSRs and Pumping Stations																																																																																	
Other Associated Works																																																																																	
Slope, Landscaping Works and Reinstatement for Access Tunnel Portal																																																																																	
Predicted Noise Level during Daytime Period, dB(A)																																																																																	

Representative Floor:		19							mPD Level:							105							(Mid Level)																																																										
Activity	Works ID	Works Area	Hor. Dist. m	mPD Level	SWL dB(A)	Distance m	Corr. for Distance dB(A) [1][2]	Corr. for Topo	Corr. for façade dB(A)	2023												2024												2025												2026												2027												2028											
										4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12															
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Open-cut Construction of Tunnel and Tunnel Portal																																																																																	
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Other Associated Works																																																																																	
Slope, Landscaping Works and Reinstatement for Access Tunnel Portal																																																																																	
Predicted Noise Level during Daytime Period, dB(A)																																																																																	

Representative Floor:		37							mPD Level:							153							(High Level)																																																										
Activity	Works ID	Works Area	Hor. Dist. m	mPD Level	SWL dB(A)	Distance m	Corr. for Distance dB(A) [1][2]	Corr. for Topo	Corr. for façade dB(A)	2023												2024												2025												2026												2027												2028											
										4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12															
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Other Associated Works																																																																																	
Slope, Landscaping Works and Reinstatement for Access Tunnel Portal																																																																																	
Predicted Noise Level during Daytime Period, dB(A)																																																																																	

Predicted Noise Level exceeded the corresponding EIAO-TM noise criteria of 75 dB(A)

Note:

[1] Distance Correction for PMEs = 10*log(2*PI*r^2) [where PI = 3.1416 and r is the distance of NSR from notional noise source]

[2] The figures are rounded-up to a whole number.

Construction Noise Assessment (Mitigated Scenario 1)

NSR 6

Wang King House, Tin Wang Court

Representative Floor:		1		mPD Level:		57		(Low Level)		2023												2024												2025												2026												2027												2028																							
Activity	Works ID	Works Area	Hor. Dist. m	mPD Level	SWL dB(A)	Distance m	Corr. for Distance dB(A) [1][2]	Corr. for Topo	Corr. for façade dB(A)	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12															
General										Site Mobilization												Open-cut Construction of Tunnel and Tunnel Portal												Excavation of Access Tunnel												Excavation of Cavern												Stone Crushing												Ancillary Buildings at Tunnel Portal												Structural Works for Relocated DHSRs and Pumping Stations											
Cavern and Tunnel Construction										Open-cut Construction of Tunnel and Tunnel Portal												Excavation of Access Tunnel												Excavation of Cavern												Stone Crushing												Ancillary Buildings at Tunnel Portal												Structural Works for Relocated DHSRs and Pumping Stations																							
Structural Works										Ancillary Buildings at Tunnel Portal												Structural Works for Relocated DHSRs and Pumping Stations												Fresh Water / Salt Water Mainlaying												E&M Installation for Ancillary Buildings												E&M Installation for Relocated DHSRs and Pumping Stations												Slope, Landscaping Works and Reinstatement for Access Tunnel Portal												Predicted Noise Level during Daytime Period, dB(A)											

Representative Floor:		11		mPD Level:		84		(Mid Level)		2023												2024												2025												2026												2027												2028																							
Activity	Works ID	Works Area	Hor. Dist. m	mPD Level	SWL dB(A)	Distance m	Corr. for Distance dB(A) [1][2]	Corr. for Topo	Corr. for façade dB(A)	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12															
General										Site Mobilization												Open-cut Construction of Tunnel and Tunnel Portal												Excavation of Access Tunnel												Excavation of Cavern												Stone Crushing												Ancillary Buildings at Tunnel Portal												Structural Works for Relocated DHSRs and Pumping Stations											
Cavern and Tunnel Construction										Open-cut Construction of Tunnel and Tunnel Portal												Excavation of Access Tunnel												Excavation of Cavern												Stone Crushing												Ancillary Buildings at Tunnel Portal												Structural Works for Relocated DHSRs and Pumping Stations																							
Structural Works										Ancillary Buildings at Tunnel Portal												Structural Works for Relocated DHSRs and Pumping Stations												Fresh Water / Salt Water Mainlaying												E&M Installation for Ancillary Buildings												E&M Installation for Relocated DHSRs and Pumping Stations												Slope, Landscaping Works and Reinstatement for Access Tunnel Portal												Predicted Noise Level during Daytime Period, dB(A)											

Representative Floor:		21		mPD Level:		111		(High Level)		2023												2024												2025												2026												2027												2028																							
Activity	Works ID	Works Area	Hor. Dist. m	mPD Level	SWL dB(A)	Distance m	Corr. for Distance dB(A) [1][2]	Corr. for Topo	Corr. for façade dB(A)	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12															
General										Site Mobilization												Open-cut Construction of Tunnel and Tunnel Portal												Excavation of Access Tunnel												Excavation of Cavern												Stone Crushing												Ancillary Buildings at Tunnel Portal												Structural Works for Relocated DHSRs and Pumping Stations											
Cavern and Tunnel Construction										Open-cut Construction of Tunnel and Tunnel Portal												Excavation of Access Tunnel												Excavation of Cavern												Stone Crushing												Ancillary Buildings at Tunnel Portal												Structural Works for Relocated DHSRs and Pumping Stations																							
Structural Works										Ancillary Buildings at Tunnel Portal												Structural Works for Relocated DHSRs and Pumping Stations												Fresh Water / Salt Water Mainlaying												E&M Installation for Ancillary Buildings												E&M Installation for Relocated DHSRs and Pumping Stations												Slope, Landscaping Works and Reinstatement for Access Tunnel Portal												Predicted Noise Level during Daytime Period, dB(A)											

Predicted Noise Level exceeded the corresponding EIAO-TM noise criteria of 75 dB(A)

Note:

[1] Distance Correction for PMEs = 10*log(2*PI*r²) [where PI = 3.1416 and r is the distance of NSR from notional noise source]

[2] The figures are rounded-up to a whole number.

Construction Noise Assessment (Mitigated Scenario 1)

NSR 8

Baptist Hung Hin Shiu Rainbow Primary School

Representative Floor: 1										mPD Level: 49 (Low Level)																																																																							
Activity	Works ID	Works Area	Hor. Dist. m	mPD Level	SWL dB(A)	Distance m	Corr. for Distance dB(A) [1][2]	Corr. for Topo	Corr. for façade dB(A)	2023												2024												2025												2026												2027												2028											
										4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12			
General																																																																																	
Site Mobilization																																																																																	
Cavern and Tunnel Construction																																																																																	
Open-cut Construction of Tunnel and Tunnel Portal																																																																																	
Excavation of Access Tunnel																																																																																	
Excavation of Cavern																																																																																	
Stone Crushing																																																																																	
Structural Works																																																																																	
Ancillary Buildings at Tunnel Portal																																																																																	
Structural Works for Relocated DHSRs and Pumping Stations																																																																																	
Mainlaying Works																																																																																	
Fresh Water / Salt Water Mainlaying																																																																																	
E&M Installation																																																																																	
E&M Installation for Ancillary Buildings																																																																																	
E&M Installation for Relocated DHSRs and Pumping Stations																																																																																	
Other Associated Works																																																																																	
Slope, Landscaping Works and Reinstatement for Access Tunnel Portal																																																																																	
Predicted Noise Level during Daytime Period, dB(A)																																																																																	

Representative Floor: 3										mPD Level: 55 (Mid Level)																																																																							
Activity	Works ID	Works Area	Hor. Dist. m	mPD Level	SWL dB(A)	Distance m	Corr. for Distance dB(A) [1][2]	Corr. for Topo	Corr. for façade dB(A)	2023												2024												2025												2026												2027												2028											
										4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12			
General																																																																																	
Site Mobilization																																																																																	
Cavern and Tunnel Construction																																																																																	
Open-cut Construction of Tunnel and Tunnel Portal																																																																																	
Excavation of Access Tunnel																																																																																	
Excavation of Cavern																																																																																	
Stone Crushing																																																																																	
Structural Works																																																																																	
Ancillary Buildings at Tunnel Portal																																																																																	
Structural Works for Relocated DHSRs and Pumping Stations																																																																																	
Mainlaying Works																																																																																	
Fresh Water / Salt Water Mainlaying																																																																																	
E&M Installation																																																																																	
E&M Installation for Ancillary Buildings																																																																																	
E&M Installation for Relocated DHSRs and Pumping Stations																																																																																	
Other Associated Works																																																																																	
Slope, Landscaping Works and Reinstatement for Access Tunnel Portal																																																																																	
Predicted Noise Level during Daytime Period, dB(A)																																																																																	

Representative Floor: 6										mPD Level: 66 (High Level)																																																																							
Activity	Works ID	Works Area	Hor. Dist. m	mPD Level	SWL dB(A)	Distance m	Corr. for Distance dB(A) [1][2]	Corr. for Topo	Corr. for façade dB(A)	2023												2024												2025												2026												2027												2028											
										4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12			
General																																																																																	
Site Mobilization																																																																																	
Cavern and Tunnel Construction																																																																																	
Open-cut Construction of Tunnel and Tunnel Portal																																																																																	
Excavation of Access Tunnel																																																																																	
Excavation of Cavern																																																																																	
Stone Crushing																																																																																	
Structural Works																																																																																	
Ancillary Buildings at Tunnel Portal																																																																																	
Structural Works for Relocated DHSRs and Pumping Stations																																																																																	
Mainlaying Works																																																																																	
Fresh Water / Salt Water Mainlaying																																																																																	
E&M Installation																																																																																	
E&M Installation for Ancillary Buildings																																																																																	
E&M Installation for Relocated DHSRs and Pumping Stations																																																																																	
Other Associated Works																																																																																	
Slope, Landscaping Works and Reinstatement for Access Tunnel Portal																																																																																	
Predicted Noise Level during Daytime Period, dB(A)																																																																																	

Predicted Noise Level exceeded the corresponding EIAO-TM noise criteria of 70 dB(A) during school days
 Predicted Noise Level exceeded the corresponding EIAO-TM noise criteria of 65dB(A) during examination period

Note:

[1] Distance Correction for PMEs = 10*log(2*PI*r²) [where PI = 3.1416 and r is the distance of NSR from notional noise source]
 [2] The figures are rounded-up to a whole number.

Construction Noise Assessment (Mitigated Scenario 1)

NSR 17

Ying Fuk Court

Representative Floor:		1		mPD Level:		58		(Low Level)		2023												2024												2025												2026												2027												2028																							
Activity	Works ID	Works Area	Hor. Dist. m	mPD Level	SWL dB(A)	Distance m	Corr. for Distance dB(A) [1][2]	Corr. for Topo	Corr. for façade dB(A)	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12															
General										Site Mobilization												Open-cut Construction of Tunnel and Tunnel Portal												Excavation of Access Tunnel												Excavation of Cavern												Stone Crushing												Ancillary Buildings at Tunnel Portal												Structural Works for Relocated DHSRs and Pumping Stations											
Cavern and Tunnel Construction										Open-cut Construction of Tunnel and Tunnel Portal												Excavation of Access Tunnel												Excavation of Cavern												Stone Crushing												Ancillary Buildings at Tunnel Portal												Structural Works for Relocated DHSRs and Pumping Stations																							
Structural Works										Ancillary Buildings at Tunnel Portal												Structural Works for Relocated DHSRs and Pumping Stations												Fresh Water / Salt Water Mainlaying												E&M Installation for Ancillary Buildings												E&M Installation for Relocated DHSRs and Pumping Stations												Slope, Landscaping Works and Reinstatement for Access Tunnel Portal												Predicted Noise Level during Daytime Period, dB(A)											
Mainlaying Works										Fresh Water / Salt Water Mainlaying												E&M Installation												E&M Installation for Ancillary Buildings												E&M Installation for Relocated DHSRs and Pumping Stations												Other Associated Works												Slope, Landscaping Works and Reinstatement for Access Tunnel Portal												Predicted Noise Level during Daytime Period, dB(A)											

Representative Floor:		19		mPD Level:		107		(Mid Level)		2023												2024												2025												2026												2027												2028																							
Activity	Works ID	Works Area	Hor. Dist. m	mPD Level	SWL dB(A)	Distance m	Corr. for Distance dB(A) [1][2]	Corr. for Topo	Corr. for façade dB(A)	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12															
General										Site Mobilization												Open-cut Construction of Tunnel and Tunnel Portal												Excavation of Access Tunnel												Excavation of Cavern												Stone Crushing												Ancillary Buildings at Tunnel Portal												Structural Works for Relocated DHSRs and Pumping Stations											
Cavern and Tunnel Construction										Open-cut Construction of Tunnel and Tunnel Portal												Excavation of Access Tunnel												Excavation of Cavern												Stone Crushing												Ancillary Buildings at Tunnel Portal												Structural Works for Relocated DHSRs and Pumping Stations																							
Structural Works										Ancillary Buildings at Tunnel Portal												Structural Works for Relocated DHSRs and Pumping Stations												Fresh Water / Salt Water Mainlaying												E&M Installation for Ancillary Buildings												E&M Installation for Relocated DHSRs and Pumping Stations												Slope, Landscaping Works and Reinstatement for Access Tunnel Portal												Predicted Noise Level during Daytime Period, dB(A)											
Mainlaying Works										Fresh Water / Salt Water Mainlaying												E&M Installation												E&M Installation for Ancillary Buildings												E&M Installation for Relocated DHSRs and Pumping Stations												Other Associated Works												Slope, Landscaping Works and Reinstatement for Access Tunnel Portal												Predicted Noise Level during Daytime Period, dB(A)											

Representative Floor:		37		mPD Level:		155		(High Level)		2023												2024												2025												2026												2027												2028																							
Activity	Works ID	Works Area	Hor. Dist. m	mPD Level	SWL dB(A)	Distance m	Corr. for Distance dB(A) [1][2]	Corr. for Topo	Corr. for façade dB(A)	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12															
General										Site Mobilization												Open-cut Construction of Tunnel and Tunnel Portal												Excavation of Access Tunnel												Excavation of Cavern												Stone Crushing												Ancillary Buildings at Tunnel Portal												Structural Works for Relocated DHSRs and Pumping Stations											
Cavern and Tunnel Construction										Open-cut Construction of Tunnel and Tunnel Portal												Excavation of Access Tunnel												Excavation of Cavern												Stone Crushing												Ancillary Buildings at Tunnel Portal												Structural Works for Relocated DHSRs and Pumping Stations																							
Structural Works										Ancillary Buildings at Tunnel Portal												Structural Works for Relocated DHSRs and Pumping Stations												Fresh Water / Salt Water Mainlaying												E&M Installation for Ancillary Buildings												E&M Installation for Relocated DHSRs and Pumping Stations												Slope, Landscaping Works and Reinstatement for Access Tunnel Portal												Predicted Noise Level during Daytime Period, dB(A)											
Mainlaying Works										Fresh Water / Salt Water Mainlaying												E&M Installation												E&M Installation for Ancillary Buildings												E&M Installation for Relocated DHSRs and Pumping Stations												Other Associated Works												Slope, Landscaping Works and Reinstatement for Access Tunnel Portal												Predicted Noise Level during Daytime Period, dB(A)											

Predicted Noise Level exceeded the corresponding EIAO-TM noise criteria of 75 dB(A)

Note:

[1] Distance Correction for PMEs = 10*log(2*PI*r²) [where PI = 3.1416 and r is the distance of NSR from notional noise source]

[2] The figures are rounded-up to a whole number.

Construction Noise Assessment (Mitigated Scenario 1)

NSR 21

TWGHs Wong Tai Sin Hospital

Representative Floor:		G		mPD Level:							67 (Low Level)																																	
Activity	Works ID	Works Area	Hor. Dist. m	mPD Level	SWL dB(A)	Distance m	Corr. for Distance dB(A) [1][2]	Corr. for Topo	Corr. for façade dB(A)	2023				2024				2025				2026				2027				2028														
										4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2
General																																												
Site Mobilization	1-1	C	1172	77	102	1172	-69	0	3	36																																		
Cavern and Tunnel Construction																																												
Open-cut Construction of Tunnel and Tunnel Portal	2-1	C	1172	77	107	1172	-69	0	3	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41						
Excavation of Access Tunnel	2-2	B	987	78	103	987	-68	0	3													38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38			
Excavation of Cavern	2-3	A	780	80	105	780	-66	0	3																									42	42	42	42	42	42	42	42			
Stone Crushing	2-4	F	1192	77	105	1192	-70	0	3																	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38			
Structural Works																																												
Ancillary Buildings at Tunnel Portal	3-1	C	1172	77	106	1172	-69	0	3																	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40			
Structural Works for Relocated DHSRs and Pumping Stations	3-2	A	780	80	89	780	-66	0	3																	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26			
Maintaining Works																																												
Fresh Water / Salt Water Mainlaying	4-1	D	34	75	90	36	-39	0	3			54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54							
E&M Installation																																												
E&M Installation for Ancillary Buildings	5-1	E	1185	77	102	1185	-69	0	3																									35	35	35	35	35	35	35	35			
E&M Installation for Relocated DHSRs and Pumping Stations	5-2	A	780	80	89	780	-66	0	3																									26	26	26	26	26	26	26	26			
Other Associated Works																																												
Slope, Landscaping Works and Reinstatement for Access Tunnel Portal	6-1	C	1172	77	98	1172	-69	0	3																									32	32	32	32	32	32	32	32			
Predicted Noise Level during Daytime Period, dB(A)										42	41	41	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54			

Representative Floor:		2		mPD Level:							75 (Mid Level)																																	
Activity	Works ID	Works Area	Hor. Dist. m	mPD Level	SWL dB(A)	Distance m	Corr. for Distance dB(A) [1][2]	Corr. for Topo	Corr. for façade dB(A)	2023				2024				2025				2026				2027				2027														
										4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2
General																																												
Site Mobilization	1-1	C	1172	77	102	1172	-69	0	3	36																																		
Cavern and Tunnel Construction																																												
Open-cut Construction of Tunnel and Tunnel Portal	2-1	C	1172	77	107	1172	-69	0	3	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41						
Excavation of Access Tunnel	2-2	B	987	78	103	987	-68	0	3													38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38			
Excavation of Cavern	2-3	A	780	80	105	780	-66	0	3																									42	42	42	42	42	42	42	42			
Stone Crushing	2-4	F	1192	77	105	1192	-70	0	3																	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38			
Structural Works																																												
Ancillary Buildings at Tunnel Portal	3-1	C	1172	77	106	1172	-69	0	3																	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40			
Structural Works for Relocated DHSRs and Pumping Stations	3-2	A	780	80	89	780	-66	0	3																	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26			
Maintaining Works																																												
Fresh Water / Salt Water Mainlaying	4-1	D	34	75	90	34	-39	0	3			54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54							
E&M Installation																																												
E&M Installation for Ancillary Buildings	5-1	E	1185	77	102	1185	-69	0	3																									35	35	35	35	35	35	35	35			
E&M Installation for Relocated DHSRs and Pumping Stations	5-2	A	780	80	89	780	-66	0	3																									26	26	26	26	26	26	26	26			
Other Associated Works																																												
Slope, Landscaping Works and Reinstatement for Access Tunnel Portal	6-1	C	1172	77	98	1172	-69	0	3																									32	32	32	32	32	32	32	32			
Predicted Noise Level during Daytime Period, dB(A)										42	41	41	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54			

Representative Floor:		4		mPD Level:							83 (High Level)																																	
Activity	Works ID	Works Area	Hor. Dist. m	mPD Level	SWL dB(A)	Distance m	Corr. for Distance dB(A) [1][2]	Corr. for Topo	Corr. for façade dB(A)	2023				2024				2025				2026				2027				2028														
										4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2
General																																												
Site Mobilization	1-1	C	1172	77	102	1172	-69	0	3	36																																		
Cavern and Tunnel Construction																																												
Open-cut Construction of Tunnel and Tunnel Portal	2-1	C	1172	77	107	1172	-69	0	3	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41						
Excavation of Access Tunnel	2-2	B	987	78	103	987	-68	0	3													38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38			
Excavation of Cavern	2-3	A	780	80	105	780	-66	0	3																									42	42	42	42	42	42	42	42			
Stone Crushing	2-4	F	1192	77	105	1192	-70	0	3																	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38			
Structural Works																																												
Ancillary Buildings at Tunnel Portal	3-1	C	1172	77	106	1172	-69	0	3																	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40			
Structural Works for Relocated DHSRs and Pumping Stations	3-2	A	780	80	89	780	-66	0	3																	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26			
Maintaining Works																																												
Fresh Water / Salt Water Mainlaying	4-1	D	34	75	90	35	-39	0	3			54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54							
E&M Installation																																												
E&M Installation for Ancillary Buildings	5-1	E	1185	77	102	1185	-69	0	3																									35	35	35	35	35	35	35	35			
E&M Installation for Relocated DHSRs and Pumping Stations	5-2	A	780	80	89	780	-66	0	3																									26	26	26	26	26	26	26	26			
Other Associated Works																																												
Slope, Landscaping Works and Reinstatement for Access Tunnel Portal	6-1	C	1172	77	98	1172	-69	0	3																									32	32	32	32	32	32	32	32			
Predicted Noise Level during Daytime Period, dB(A)										42	41	41	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54			

Predicted Noise Level exceeded the corresponding EIAO-TM noise criteria of 75 dB(A)

Note:

[1] Distance Correction for PMEs = 10*log(2

Appendix 4F Cumulative Construction Noise Impact (Mitigated)

Cumulative Construction Noise Impact (Mitigated Scenario 1)

NSR No.	Description	Concurrent Project - Pedestrian Link near Chuk Yuen North Estate					Max. Predicted Mitigated CNL for this Project, dB(A)	Max. Predicted Cumulative CNL, dB(A)
		Max. SWL, dB(A)	Distance from Notional Noise Source of Current Project, m	Corr. for Distance, dB(A) [1][2]	Corr. for façade, dB(A)	Max. Predicted Mitigated CNL for Concurrent Project, dB(A)		
NSR 12	Mui Yuen House, Chuk Yuen North Estate	103	18	-33	3	73	57	73
NSR 13	Our Lady of Maryknoll Hospital	103	69	-45	3	61	72	72
NSR 14	Our Lady's College	103	119	-49	3	57	70	70
NSR 15	Evangel Children's Home	103	63	-44	3	62	66	67
NSR 16	Wing Shing House	103	190	-54	3	52	66	66
NSR 17	Ying Fuk Court	103	150	-51	3	55	52	56
NSR 18	Diamond Hill Kwong Yum Home for the Aged	103	90	-47	3	59	62	64
NSR 19	St. Bonaventure College and High School	103	180	-53	3	53	69	69
NSR 20	Wu York Yu Health Centre	103	231	-55	3	51	68	68
NSR 21	TWGHs Wong Tai Sin Hospital	103	188	-53	3	53	55	57
NSR 22	Ho Lap Primary School	103	288	-57	3	49	57	58
NSR P1	Proposed Departmental Quarters for Customs & Excise Department	103	264	-56	3	50	67	67

NSR No.	Description	Concurrent Project - Improvement of Lion Rock Tunnel					Max. Predicted Mitigated CNL for this Project, dB(A)	Max. Predicted Cumulative CNL, dB(A)
		Max. SWL, dB(A)	Distance from Notional Noise Source of Current Project, m	Corr. for Distance, dB(A) [1][2]	Corr. for façade, dB(A)	Max. Predicted Mitigated CNL for Concurrent Project, dB(A)		
NSR 1	Block B, Peninsula Heights	117	101	-48	3	72	71	75
NSR 2	Block 1, Meridian Hill	117	222	-55	3	65	72	72
NSR 3	Chun Sing House, Tin Ma Court	117	353	-59	3	61	66	68

Predicted Noise Level exceeded the corresponding EIAO-TM noise criteria of 75 db(A) for residential / 70 db(A) for school during normal school days

Predicted Noise Level exceeded the corresponding EIAO-TM noise criteria of 65db(A) for school during examination period

Note:

[1] Distance Correction for PMEs = $10 \cdot \log(2 \cdot \text{PI} \cdot r^2)$ [where PI = 3.1416 and r is the distance of NSR from notional noise source]

[2] The figures are rounded-up to a whole number.

Construction Plant Inventory (Mitigated Scenario 2)

Works ID	Activities	Plant	TM Ref. / Other Ref.	Unit SWL, dB(A)	No. of PME	On-time %	Type of Noise Control	Noise reduction, dB(A)	SWL, dB(A)	Total SWL, dB(A)	
	General										
1-1	Site Mobilization - Excavation	Air Compressor, air flow > 10m ³ /min and < 30m ³ /min	EPD-12829 Brand: AIRMAN Model : PDS390S-5C1	98	1	100%	Enclosure	-10	88	102	
		Breaker, excavator mounted (hydraulic)	(Ref: Sandhurst - XT-200) [4]	110	1	50%	Barrier	-5	102		
		Excavator/loader, wheeled/tracked	EPD-12806 Brand: KOBELCO Model : SK225SR	95	1	100%	Barrier	-5	90		
		Generator, silenced, 75dB(A) at 7m	EPD-13131 Brand :DENYO Model : DCA-220LSIE	93	1	50%	Enclosure	-10	80		
	Site Mobilization - Formation of works site	Concrete lorry mixer	[5]	103	1	40%	Barrier	-5	94	97	
		Poker, vibratory, Hand-held (electric)	[2]	102	1	40%	Barrier	-5	93		
		Generator, silenced, 75dB(A) at 7m	EPD-08978	93	1	100%	Enclosure	-10	83		
	Site Mobilization - Mobilization of construction plants and materials	Crane, mobile with QPME label showing a sound power level <= 92dB(A)	EPD-06841R Brand: Kobelco Model: CK90UR-3	92	1	45%				89	98
		Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne	[2]	105	1	50%	Barrier	-5	97		
		Generator, silenced, 75dB(A) at 7m	EPD-13131 Brand :DENYO Model : DCA-220LSIE	93	1	100%	Enclosure	-10	83		

Works ID	Activities	Plant	TM Ref. / Other Ref.	Unit SWL, dB(A)	No. of PME	On-time %	Type of Noise Control	Noise reduction, dB(A)	SWL, dB(A)	Total SWL, dB(A)
	Cavern and Tunnel Construction									
2-1	Open-cut Construction of Tunnel and Tunnel Portal (Group 1)	Excavator/loader, wheeled/tracked	EPD-12806 Brand: KOBELCO Model : SK2255R	95	2	70%	Barrier	-5	91	107
		Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne	[2]	105	1	70%	Barrier	-5	98	
		Air Compressor, air flow > 10m ³ /min and < 30m ³ /min	EPD-12829 Brand: AIRMAN Model : PDS3905-5C1	98	2	100%	Enclosure	-10	91	
		Piling, vibrating hammer	[2]	115	1	40%	Barrier	-5	106	
	Open-cut Construction of Tunnel and Tunnel Portal (Group 2)	Crawler crane	EPD-12661 Brand: SANY Model : SCC2500A	108	1	50%			105	107
		Poker, vibratory, Hand-held (electric)	[2]	102	1	50%	Barrier	-5	94	
		Saw, circular, wood	CNP 201	108	1	50%	Barrier	-5	100	
		Bar bender and cutter (electric)	CNP 021	90	2	50%	Barrier	-5	85	
		Water pump (electric)	CNP 281	88	2	80%	Barrier	-5	85	
		Concrete pump, stationary/lorry mounted	CNP 047	109	1	30%	Barrier	-5	99	
	Concrete lorry mixer	[5]	103	1	50%	Barrier	-5	95		
2-2	Excavation of Access Tunnel	Rock drill, crawler mounted (hydraulic)	CNP 182	123	1	75%	Inside Cavern	-20	102	103
		Breaker, excavator mounted (hydraulic)	(Ref: Sandhurst - XT-200) ^[4]	110	1	80%	Inside Cavern	-20	89	
		Water pump (electric)	CNP 281	88	2	80%	Inside Cavern	-20	70	
		Concrete pump, stationary/lorry mounted	CNP 047	109	1	60%	Inside Cavern	-20	87	
		Concrete lorry mixer	[5]	103	1	60%	Inside Cavern	-20	81	
		Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne	[2]	105	1	70%	Inside Cavern	-20	83	
		Ventilation fan	CNP 241	108	2	100%	Inside Cavern	-20	91	
		Conveyor Belt	CNP 041	90	1	100%	Inside Cavern	-20	70	
2-3	Excavation of Cavern	Rock drill, crawler mounted (hydraulic)	CNP 182	123	2	70%	Inside Cavern	-20	104	105
		Breaker, excavator mounted (hydraulic)	(Ref: Sandhurst - XT-200) ^[4]	110	3	70%	Inside Cavern	-20	93	
		Water pump (electric)	CNP 281	88	2	70%	Inside Cavern	-20	69	
		Concrete pump, stationary/lorry mounted	CNP 047	109	2	60%	Inside Cavern	-20	90	
		Concrete lorry mixer	[5]	103	4	60%	Inside Cavern	-20	87	
		Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne	[2]	105	5	70%	Inside Cavern	-20	90	
		Ventilation fan	CNP 241	108	2	100%	Inside Cavern	-20	91	
2-4	Stone Crushing	Crusher	[6]	118	1	50%	Enclosure	-10	105	105

Works ID	Activities	Plant	TM Ref. / Other Ref.	Unit SWL, dB(A)	No. of PME	On-time %	Type of Noise Control	Noise reduction, dB(A)	SWL, dB(A)	Total SWL, dB(A)
	Structural Works									
3-1	Ancillary Buildings at Tunnel Portal - Excavation	Air Compressor, air flow > 10m ³ /min and < 30m ³ /min	EPD-12829 Brand: AIRMAN Model : PDS3905-5C1	98	1	100%	Enclosure	-10	88	102
		Breaker, handheld, mass > 10kg and < 20kg with QPME label showing a sound power level <= 103 dB(A)	EPD-14846 Brand: Hilti Model: TE 500-X	103	1	50%	Barrier	-5	95	
		Excavator/loader, wheeled/tracked	EPD-12806 Brand: KOBELCO Model : SK225SR	95	2	70%	Barrier	-5	91	
		Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne	[2]	105	2	50%	Barrier	-5	100	
		Generator, silenced, 75dB(A) at 7m	EPD-13131 Brand :DENYO Model : DCA-220LSIE	93	1	100%	Enclosure	-10	83	
Ancillary Buildings at Tunnel Portal - Foundation		Concrete lorry mixer	[5]	103	2	50%	Barrier	-5	98	106
		Concrete pump, stationary/lorry mounted	CNP 047	109	1	50%	Barrier	-5	101	
		Poker, vibratory, Hand-held (electric)	[2]	102	2	50%	Barrier	-5	97	
		Saw, circular, wood	CNP 201	108	2	60%	Barrier	-5	104	
		Bar bender and cutter (electric)	CNP 021	90	2	60%	Barrier	-5	86	
		Crane, mobile with QPME label showing a sound power level <= 92dB(A)	EPD-06841R Brand: Kobelco Model: CK90UR-3	92	1	40%			88	
		Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne	[2]	105	1	50%	Barrier	-5	97	
		Generator, silenced, 75dB(A) at 7m	EPD-13131 Brand :DENYO Model : DCA-220LSIE	93	1	100%	Enclosure	-10	83	
Ancillary Buildings at Tunnel Portal - Structural Works		Concrete pump, stationary/lorry mounted	CNP 047	109	1	50%	Barrier	-5	101	106
		Concrete lorry mixer	[5]	103	1	80%	Barrier	-5	97	
		Poker, vibratory, Hand-held (electric)	[2]	102	2	80%	Barrier	-5	99	
		Saw, circular, wood	CNP 201	108	1	60%	Barrier	-5	101	
		Bar bender and cutter (electric)	CNP 021	90	1	70%	Barrier	-5	83	
		Tower crane	CNP 049	95	1	60%			93	
		Generator, silenced, 75dB(A) at 7m	EPD-13131 Brand :DENYO Model : DCA-220LSIE	93	1	100%	Enclosure	-10	83	
3-2	Structural Works for Relocated DHSRs and Pumping Stations	Crane, mobile with QPME label showing a sound power level <= 92dB(A)	EPD-06841R Brand: Kobelco Model: CK90UR-3	92	1	70%	Inside Cavern	-20	70	89
		Concrete lorry mixer	[5]	103	1	80%	Inside Cavern	-20	82	
		Poker, vibratory, Hand-held (electric)	[2]	102	1	80%	Inside Cavern	-20	81	
		Generator, silenced, 75dB(A) at 7m	EPD-13131 Brand :DENYO Model : DCA-220LSIE	93	1	100%	Inside Cavern	-20	73	
		Saw, circular, wood	CNP 201	108	1	70%	Inside Cavern	-20	86	
		Bar bender and cutter (electric)	CNP 021	90	1	70%	Inside Cavern	-20	68	

Works ID	Activities	Plant	TM Ref. / Other Ref.	Unit SWL, dB(A)	No. of PME	On-time %	Type of Noise Control	Noise reduction, dB(A)	SWL, dB(A)	Total SWL, dB(A)
	<u>Mainlaying</u>									
4-1	Fresh Water / Salt Water Mainlaying - Surface Breaking	Hand-held Percussive Breaker with QPME label showing a sound power level <= 99dB(A)	EPD-16264 Brand: Hilti Model: TE 1000-AVR (02)	99	1	30%	Barrier	-5	89	90
		Generator, silenced, 75dB(A) at 7m	EPD-13131 Brand :DENYO Model : DCA-220LSIE	93	1	100%	Enclosure	-10	83	
	Fresh Water / Salt Water Mainlaying - Excavation & Pipe laying	Excavator/loader, wheeled/tracked	EPD-12806 Brand: KOBELCO Model : SK225SR	95	1	50%	Barrier	-5	87	87
	Fresh Water / Salt Water Mainlaying - Reinstatement (Group 1)	Concrete lorry mixer	[5]	103	1	50%	Barrier (Type 2)	-10	90	90
	Fresh Water / Salt Water Mainlaying - Reinstatement (Group 2)	Poker, vibratory, hand-held (electric)	[2]	102	1	50%	Barrier (Type 2)	-10	89	90
		Generator, silenced, 75 dB(A) at 7 m	EPD-13131 Brand :DENYO Model : DCA-220LSIE	93	1	100%	Enclosure	-10	83	
	Fresh Water / Salt Water Mainlaying - Reinstatement (Group 3)	Asphalt paver	EPD-12785 Brand :JOSEPH VOEGELE AG / VOEGELE Model : SUPER 1603-3	104	1	40%	Barrier (Type 2)	-10	90	90
	Fresh Water / Salt Water Mainlaying - Reinstatement (Group 4)	Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne	[2]	105	1	30%	Barrier (Type 2)	-10	90	90
	Fresh Water / Salt Water Mainlaying - Reinstatement (Group 5)	Paint line marker	CNP 161	90	1	50%	Barrier	-5	82	82
	Fresh Water / Salt Water Mainlaying - Reinstatement (Group 6)	Road roller	EPD-12035 Brand : AMMANN Model : ARX40-2	101	1	50%	Barrier (Type 2)	-10	88	88
	Fresh Water / Salt Water Mainlaying - Reinstatement (Group 8)	Air blower (electric)	[2]	95	1	50%	Barrier	-5	87	90
		Winch (electric)	CNP 262	95	1	50%	Barrier	-5	87	

Works ID	Activities	Plant	TM Ref./ Other Ref.	Unit SWL, dB(A)	No. of PME	On-time %	Type of Noise Control	Noise reduction, dB(A)	SWL, dB(A)	Total SWL, dB(A)
	E&M Installation									
5-1	E&M Installation for Ancillary Buildings	Lorry, with crane/grab, 5.5 tonne < gross vehicle weight \leq 38 tonne	[2]	105	1	100%	Barrier	-5	100	102
		Dump truck, 5.5 tonne < gross vehicle weight \leq 38 tonne	[2]	105	1	50%	Barrier	-5	97	
5-2	E&M Installation for Relocated DHSRs and Pumping Stations	Lorry, with crane/grab, 5.5 tonne < gross vehicle weight \leq 38 tonne	[2]	105	1	100%	Inside Cavern	-20	85	89
		Ventilation fan	CNP 241	108	1	70%	Inside Cavern	-20	86	
		Generator, silenced, 75 dB(A) at 7 m	EPD-13131 Brand :DENYO Model : DCA-220LSIE	93	1	100%	Inside Cavern	-20	73	

Works ID	Activities	Plant	TM Ref./ Other Ref.	Unit SWL, dB(A)	No. of PME	On-time %	Type of Noise Control	Noise reduction, dB(A)	SWL, dB(A)	Total SWL, dB(A)
	Other Associated Works									
6-1	Slope, Landscaping Works and Reinstatement for Access Tunnel Portal	Lorry, with crane/grab, 5.5 tonne < gross vehicle weight \leq 38 tonne	[2]	105	1	70%	Barrier	-5	98	98

Notes:

- [1] As only one group of PME would be operated simultaneously under same Works ID, only the activity with the highest total SWL under the same Works ID will be used for the construction noise assessment for each NSR
- [2] Sound power levels of other commonly used PME (https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLs_eng.pdf)
- [3] Quality Powered Mechanical Equipment (<https://www.epd.gov.hk/epd/qpme/eng/index.html>)
- [4] Reference for Sandhurst - XT-200 is made from AEIAR-171/2013 - Central Kowloon Route (https://www.epd.gov.hk/eia/files/applications/en/pp_156/eia_1806/progress/action_2277/2_EIA/PDF/Appendix/Volume%203/Appendix%205.4a.pdf)
- [5] Reference for Concrete Lorry Mixer is made from sound power level measurement report (Refer to Appendix F)
- [6] Reference is made from AEIAR-126/2008 - West Island Line (https://www.epd.gov.hk/eia/files/applications/en/pp_130/aep_2666/progress/action_17114/ear200906.pdf)

Summary of Predicted Noise Levels from Construction (Mitigated Scenario 2)

NSR	Description	EIAO-TM Noise Criteria, dB(A)	Max. Predicted CNL, db(A)			
			Low Level	Mid Level	High Level	Overall
NSR 5	Grace Methodist Church Kindergarten	70 (Normal School Days)	66	N/A	N/A	66
NSR 14	Our Lady's College	65 (examination period)	56	56	55	56
NSR 19	St. Bonaventure College and High School	65 (examination period)	56	55	54	56
NSR 22	Ho Lap Primary School	65 (examination period)	56	55	54	56
NSR 26	CCC Kei Tsz Primary School	65 (examination period)	49	49	48	49

During examination period, Fresh Water / Salt Water Mainlaying (Reinstatement Works) will be carried out 20m from the school site boundary.

Construction Noise Assessment (Mitigated Scenario 2)

NSR 19

St. Bonaventure College and High School

(Examination Period)

Representative Floor:		mPD Level: 1										mPD Level: 50										(Low Level)																																																											
Activity	Works ID	Works Area	Hor. Dist. m	mPD Level	SWL dB(A)	Distance m	Corr. for Distance dB(A) [1][2]	Corr. for Topo	Corr. for façade dB(A)	2023												2024												2025												2026												2027												2028											
										4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12			
General																																																																																	
Site Mobilization																																																																																	
Cavern and Tunnel Construction																																																																																	
Open-cut Construction of Tunnel and Tunnel Portal																																																																																	
Excavation of Access Tunnel																																																																																	
Excavation of Cavern																																																																																	
Stone Crushing																																																																																	
Structural Works																																																																																	
Ancillary Buildings at Tunnel Portal																																																																																	
Structural Works for Relocated DHSRs and Pumping Stations																																																																																	
Mainlaying Works																																																																																	
Fresh Water / Salt Water Mainlaying																																																																																	
E&M Installation																																																																																	
E&M Installation for Ancillary Buildings																																																																																	
E&M Installation for Relocated DHSRs and Pumping Stations																																																																																	
Other Associated Works																																																																																	
Slope, Landscaping Works and Reinstatement for Access Tunnel Portal																																																																																	
Predicted Noise Level during Daytime Period, dB(A)																																																																																	

Representative Floor:		mPD Level: 4										mPD Level: 62										(Mid Level)																																																											
Activity	Works ID	Works Area	Hor. Dist. m	mPD Level	SWL dB(A)	Distance m	Corr. for Distance dB(A) [1][2]	Corr. for Topo	Corr. for façade dB(A)	2023												2024												2025												2026												2027												2028											
										4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12			
General																																																																																	
Site Mobilization																																																																																	
Cavern and Tunnel Construction																																																																																	
Open-cut Construction of Tunnel and Tunnel Portal																																																																																	
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Excavation of Cavern																																																																																	
Stone Crushing																																																																																	
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Ancillary Buildings at Tunnel Portal																																																																																	
Structural Works for Relocated DHSRs and Pumping Stations																																																																																	
Mainlaying Works																																																																																	
Fresh Water / Salt Water Mainlaying																																																																																	
E&M Installation																																																																																	
E&M Installation for Ancillary Buildings																																																																																	
E&M Installation for Relocated DHSRs and Pumping Stations																																																																																	
Other Associated Works																																																																																	
Slope, Landscaping Works and Reinstatement for Access Tunnel Portal																																																																																	
Predicted Noise Level during Daytime Period, dB(A)																																																																																	

Representative Floor:		mPD Level: 7										mPD Level: 73										(Mid Level)																																																											
Activity	Works ID	Works Area	Hor. Dist. m	mPD Level	SWL dB(A)	Distance m	Corr. for Distance dB(A) [1][2]	Corr. for Topo	Corr. for façade dB(A)	2023												2024												2025												2026												2027												2028											
										4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12			
General																																																																																	
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E&M Installation for Relocated DHSRs and Pumping Stations																																																																																	
Other Associated Works																																																																																	
Slope, Landscaping Works and Reinstatement for Access Tunnel Portal																																																																																	
Predicted Noise Level during Daytime Period, dB(A)																																																																																	

Note:

[1] Distance Correction for PMEs = 10*log(2^PI/r^2) [where PI = 3.1416 and r is the distance of NSR from notional noise source]

[2] The figures are rounded-up to a whole number.

Remarks: During examination period, no mainlaying works will be carried out within 30m from the school site boundary.

Construction Noise Assessment (Mitigated Scenario 2)

NSR 26

CCC Kei Tsz Primary School

(Normal School Days)

Activity	Works ID	Works Area	Hor. Dist. m	mPD Level	SWL dB(A)	Distance m	mPD Level: 1	Corr. for Distance dB(A) [1][2]	Corr. for Topo	Corr. for façade dB(A)	135 (Low Level)																																																																							
											2023												2024												2025												2026												2027												2028											
											4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12			
General																																																																																		
Site Mobilization																																																																																		
Cavern and Tunnel Construction																																																																																		
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Structural Works																																																																																		
Ancillary Buildings at Tunnel Portal																																																																																		
Structural Works for Relocated DHSRs and Pumping Stations																																																																																		
Mainlaying Works																																																																																		
Fresh Water / Salt Water Mainlaying																																																																																		
E&M Installation																																																																																		
E&M Installation for Ancillary Buildings																																																																																		
E&M Installation for Relocated DHSRs and Pumping Stations																																																																																		
Other Associated Works																																																																																		
Slope, Landscaping Works and Reinstatement for Access Tunnel Portal																																																																																		
Predicted Noise Level during Daytime Period, dB(A)																																																																																		

Activity	Works ID	Works Area	Hor. Dist. m	mPD Level	SWL dB(A)	Distance m	mPD Level: 3	Corr. for Distance dB(A) [1][2]	Corr. for Topo	Corr. for façade dB(A)	144 (Mid Level)																																																																							
											2023												2024												2025												2026												2027												2028											
											4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12			
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Activity	Works ID	Works Area	Hor. Dist. m	mPD Level	SWL dB(A)	Distance m	mPD Level: 5	Corr. for Distance dB(A) [1][2]	Corr. for Topo	Corr. for façade dB(A)	152 (High Level)																																																																							
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Note:

[1] Distance Correction for PMEs = 10*log₁₀(2*PI*r²) [where PI = 3.1416 and r is the distance of NSR from notional noise source]

[2] The figures are rounded-up to a whole number.

Construction Noise Assessment (Mitigated Scenario 2)

NSR 26

CCC Kei Tsz Primary School

(Normal School Days)

Activity	Works ID	Works Area	Hor. Dist. m	mPD Level	SWL dB(A)	Distance m	mPD Level: 1	Corr. for Distance dB(A) [1][2]	Corr. for Topo	Corr. for façade dB(A)	135 (Low Level)																																																																									
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General													Site Mobilization																																																																							
Cavern and Tunnel Construction													Open-cut Construction of Tunnel and Tunnel Portal												Excavation of Access Tunnel												Excavation of Cavern												Stone Crushing																																			
Structural Works													Ancillary Buildings at Tunnel Portal												Structural Works for Relocated DHSRs and Pumping Stations																																																											
Mainlaying Works													Fresh Water / Salt Water Mainlaying																																																																							
E&M Installation													E&M Installation for Ancillary Buildings												E&M Installation for Relocated DHSRs and Pumping Stations																																																											
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Activity	Works ID	Works Area	Hor. Dist. m	mPD Level	SWL dB(A)	Distance m	mPD Level: 3	Corr. for Distance dB(A) [1][2]	Corr. for Topo	Corr. for façade dB(A)	144 (Mid Level)																																																																									
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Activity	Works ID	Works Area	Hor. Dist. m	mPD Level	SWL dB(A)	Distance m	mPD Level: 5	Corr. for Distance dB(A) [1][2]	Corr. for Topo	Corr. for façade dB(A)	152 (High Level)																																																																									
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Note:
 [1] Distance Correction for PMEs = 10*log₁₀(2*PI*r²) [where PI = 3.1416 and r is the distance of NSR from notional noise source]
 [2] The figures are rounded-up to a whole number.

Cumulative Construction Noise Impact (Mitigated Scenario 2)

NSR No.	Description	Concurrent Project - Pedestrian Link near Chuk Yuen North Estate					Max. Predicted Mitigated CNL for this Project, dB(A)	Max. Predicted Cumulative CNL, dB(A)
		Max. SWL, dB(A)	Distance from Notional Noise Source of Current Project, m	Corr. for Distance, dB(A) [1][2]	Corr. for façade, dB(A)	Max. Predicted Mitigated CNL for Concurrent Project, dB(A)		
NSR 13	Our Lady of Maryknoll Hospital	103	69	-45	3	61	#REF!	#REF!
NSR 14	Our Lady's College	103	119	-49	3	57	56	59 (Normal School Days)
		103	119	-49	3	57	56	59 (Examination Period)
NSR 19	St. Bonaventure College and High School	103	180	-53	3	53	56	58 (Normal School Days)
		103	180	-53	3	53	59	60 (Examination Period)
NSR 20	Wu York Yu Health Centre	103	231	-55	3	51	59	60
NSR 22	Ho Lap Primary School	103	288	-57	3	49	59	60 (Normal School Days)
		103	288	-57	3	49	59	60 (Examination Period)

Note:

[1] Distance Correction for PMEs = $10 \cdot \log(2 \cdot \pi \cdot r^2)$ [where $\pi = 3.1416$ and r is the distance of NSR from notional noise source]

[2] The figures are rounded-up to a whole number.

Contract No. 21/WSD/21

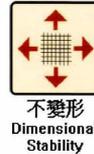
Relocation of Diamond Hill Fresh Water and Salt Water Reservoirs to Caverns

Appendix D – Details of Acoustic Noise Barriers



Model No. CK2009	High Tenacity Polyester PVC Laminated Fabrics
General Applications:	Construction, Marine (Field) covers, Storage covers and many other applications
Colors:	Yellow, Sky Blue, Green, Orange, Dark Green, White, Grey
Available Grades:	Fire-Retardant, Ultra-Violet, Anti-Mildew, Anti-Cold, Sound Insulated
Type of Products:	Roll Type
Raw Material Origin:	From Japan
Flammability Test Method:	BS 5867-2 2008
Sizes:	2M x 6M, 2M x 30M(roll type)

Sample name(provided by sponsor): PVC Tarpaulin
 Color: Gray
 Mass per unit area : 958 g/m²
 Area, S, of test element : 3.8 m²
 Air temp. in the test rooms : 27°C
 Relative humidity in the test rooms : 58%
 Receiving room volume : 67.9 m³

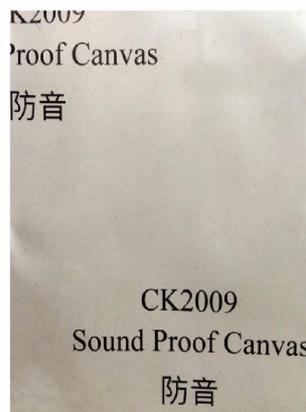
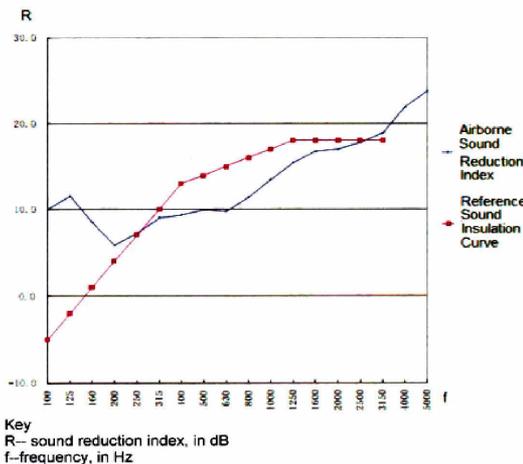


Physical Properties:

III. Test results

f Hz	R dB
100	10.1
125	11.6
160	8.6
200	5.9
250	7.3
315	9.1
400	9.4
500	10.0
630	9.9
800	11.5
1000	13.5
1250	15.5
1600	16.7
2000	17.0
2500	17.8
3150	18.9
4000	21.9
5000	23.9
Rw (C;Ctr)	14(-1;-2)

Fabric Detail 網布規格	1000D x 1000D x 20 x22			
Item 項目名稱	Test Method 執行標準	Unit 單位	Value 數據	
Thickness 厚度	DIN53353	mm	1.0	
Total Weight 總重量	DIN53352	g/m ²	1132.2	
Tensile Strength 拉伸強度	DIN53354	N/5cm	經 Warp	3040
			緯 Weft	2549
Elongation at Break 斷裂伸長率	DIN53354	%	經 Warp	17.3
			緯 Weft	23.3
Tear Strength 撕裂強度	DIN53363	N	經 Warp	448
			緯 Weft	374
Adhesion of Coating Strength 剝離負荷	DIN53357	N/5cm	經 Warp	123
			緯 Weft	108
Remarks 備註				



This technical data is offered as helpful suggestion only. It's accurate to the best of our knowledge at time of printing.

祥記帆布工程有限公司
Cheung Kee Canvas Ltd.

G/F, 352 Reclamation St., Kowloon, Hong Kong.
 香港九龍新填地街 352 號地下
 Tel: 2385 2644, 2780 7505 Fax: 2771 4599
 url: <http://www.ckcanvasltd.com> email: contact@ckcanvasltd.com



Acoustics Innovation

SilentUP[®]

Retractable Noise Barrier

PATENTED



Product of Hong Kong
**THE WORLD'S FIRST
RETRACTABLE NOISE BARRIER**
27dB(A) NOISE REDUCTION*

* Tested with white noise source with SilentUP[®] STC24

Happy Valley Race Course



Roadworks



Breaking
Drilling



Piling



Loading
Unloading



Concreting

aihk.hk

info@aihk.hk

(852) 2702-2007

R&D Division of





Acoustics Innovation

SilentUP®

Product Description

SilentUP® is a patented retractable noise barrier for construction works and outdoor music events. It can be easily installed and mobilized by people without using any machines. No concrete foundation is required and the installation process is quiet enough to be conducted even at night time. The panels are installed upwards from ground level and connected by magnetic gap sealing.

Our product has been widely used in Hong Kong. Visit our website for the job references aihk.hk/SilentUP/reference.

Benefits

- ▶ Minimize noise complaints
- ▶ Quiet and manual installation
- ▶ No concrete foundation required
- ▶ Flexible construction site planning
- ▶ Facilitate Construction Noise Permit (CNP) application process

Technical Information

SilentUP® noise barrier material conforms to the flammability requirement specifications.

BS5867-2:2008 TYPE B
GF8624

Product Specification

STC	18	24
Insertion Loss*	22 dB(A)	27 dB(A)
Modular Weight	5kg	8kg
Maximum Height	7m	5m
Modular Size	1m(H) x1.35m(W)	
Standard Colour	Grey	
Panel Thickness	100mm on edges	

* Tested with white noise source



CITF 建造業
創科基金

CITF Pre-approved Product

Eligible contractors can apply for CITF.

citf.cic.hk

Installation videos available at aihk.hk/youtube

aihk.hk

info@aihk.hk

(852) 2702-2007

R&D Division of



Care has been taken to ensure the provided information is accurate, but Acoustics Innovation Ltd, does not accept responsibility or liability for errors or information which is found to be misleading.



Client Feedback

“Some of our contractors have used the retractable noise barriers to facilitate CNP application. They have found this innovative product useful - lightweight, easy to manoeuvre, and fit for purpose.”

Richard Kwan
Former Environment Manager
MTR Corporation Ltd

“We are impressed by SilentUP’s quick installation and relocation, it is definitely one of the best innovations and practicable “ approaches for the noise mitigation measures for the construction activities.”

Lighting Chan
Environmental Compliance Support Manager,
Leighton Asia Ltd

“We are happy with Acoustics Innovation’s professional service (SilentUP Noise Barrier) in helping us achieve our noise mitigation goals.”

Ronald Fung
Project QA & Environmental Manager
Kier - Laing O’Rourke - Kaden Joint Venture

“SilentUP is definitely a useful tool to minimize the noise pollution. We successfully obtained a CNP and most importantly no complaint has been received from the NSRs.”

Clarence Yeung
Environmental Officer
Chun Wo Construction and Engineering Co. Ltd

REPORT TO: Acoustics Innovation Limited

ADDRESS: Unit 106, 1/F, Block A, Shatin Industrial Centre
5-7 Yuen Shun Circuit
Shatin, N.T., H.K.

ATTN.: Mr. Max Yiu

REPORT NO.: APJ16-034-RP001(STC)

ISSUE DATE: 3 February 2017

**HOKLAS Accredited Laboratory
Sound Transmission Loss Measurement
Test Report
for
SilentUP[®] Retractable Noise Barrier**

(PROJECT NO.: APJ16-034)

HKAS has accredited this Laboratory (Reg. No. HOKLAS 122) under HOKLAS for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories.

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APJ16-034-RP001(STC)

Page 1 of 9

1. Method of Measurement

- 1.1 The measurement was carried out in accordance with ASTM E90-09 "Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions" in the reverberation room of Acoustics and Air Testing Laboratory Co. Ltd. And the single number rating of airborne sound transmission loss is given as Sound Transmission Class (STC) by evaluated in accordance with ASTM E413-10 "Classification for Rating Sound Insulation".

2. Details of Measurement**2.1 Principle of Measurement**

The sound transmission loss is usually measured in a laboratory by placing the element in an opening between two adjacent reverberant rooms designed for such tests. Noise is introduced into one of the rooms, referred to as the source room, and part of the sound energy is transmitted through the test element into the second room, referred to as the receiving room. The resulting mean space-average sound pressure levels in the source and receiving rooms are denoted by L_1 and L_2 respectively.

The sound transmission loss is given by

$$TL = L_1 - L_2 + 10 \log(S/A)$$

Where

- L_1 is the average sound pressure level in the source room, in dB;
 L_2 is the average sound pressure level in the receiving room, in dB;
 S is the area of the test specimen, in m^2 ;
 A is the equivalent absorption area in the receiving room, in meters sabins.

$$A = (0.9210Vd/c)$$

Where

- V is the receiving room volume, in m^3 ;
 d is the rate of decay of sound pressure level in receiving room, dB/s;
 c is the speed of sound in the medium, m/s.

The speed of sound changes with temperature and is shall be calculated for the conditions existing at the time of test from the equation:

$$c = 20.047 \sqrt{273.15 + t}$$

Where

- t is the receiving room temperature, measured to nearest degree.

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APJ16-034-RP001(STC)

Page 2 of 9

The Sound Transmission Class (STC) of test specimen is calculated by comparing the sixteen values of Sound Transmission Loss from 125 Hz to 4000 Hz with a defined reference curve which is incremented until the requirements of ASTM E 413-10 are met.

2.2 Laboratory Location

Fo Tan Main Laboratory -
Room 422, Leader Industrial Centre, 57-59 Au Pui Wan Street,
Fo Tan, Shatin, N.T., Hong Kong.

2.3 Test Condition

Conditions	Source room	Receiving room
Volume	84m ³	203m ³
Air Temperature	22.0°C	21.6°C
Relative Humidity	51.0%	52.5%

2.4 Test Date

Date of receipt of test item: 25 January 2017

Dates of commencement and completion of test

Commencement date: 2 February 2017

Completion date: 2 February 2017

2.5 Instrumentation

2.5.1 For sound production

Type	Serial No.
One Real Time Frequency Analyzer – LAN-XI 3160A	3160-100361
One Equalizer – Marantz EQ20D	56E040097
One Amplifier – B&K 2716 Power Amplifier	2571771
One OmniPower Sound Source – Bruel & Kjaer 4296	2128136
One Loudspeaker – JBL EON 515 Loudspeaker	VTP0890-14112

2.5.2 For sound measurement

One Real Time Frequency Analyzer – LAN-XI 3160A	3160-100361
Two Free-field ½" Microphone – Bruel & Kjaer 4190	2731708 & 2731709
Two ½" Microphone Preamplifier – Bruel & Kjaer 2669	2081972 & 2081971
One Sound Level Calibrator – Bruel & Kjaer 4231	1914426

2.5.3 For reverberation time measurement

One Real Time Frequency Analyzer – LAN-XI 3160A	3160-100361
One Free-field ½" Microphone – Bruel & Kjaer 4190	2731708
One ½" Microphone Preamplifier – Bruel & Kjaer 2669	2081972

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APJ16-034-RP001(STC)

Page 3 of 9



3. Results Application

- 3.1 The results obtained can be used to design building elements with appropriate acoustic properties, to compare the sound insulation properties of building elements and to classify such elements according to their sound insulation capabilities.
- 3.2 The measurements are performed in laboratory test facilities in which transmission of sound on flanking paths is suppressed. Results of measurements shall not be applied directly in the field without accounting for other factors affecting sound insulation, especially flanking transmission and loss factor.
- 3.3 The obtained test results relate only to the tested specimen.

4. Description of the Test Construction

- 4.1 Specimen description: The test specimen composed of 2 layers of 40mm thick acoustics absorptive infill (0.5kg/m^2) sandwiched by 2 layers of 0.55kg/m^2 acoustic mat (0.9mm thick) with ~100mm separation.
- 4.2 The system was essentially as detailed in the client supplied drawing reproduced as in Appendix 1. Only the physical dimensions of the system were verified by the laboratory.
- 4.3 Overall specimen size: 3000 mm (wide) X 3450 mm (high) X ~100 mm (thick).
- 4.4 The tested noise barrier system was supplied and installed by Acoustics Innovation Limited
- 4.5 Photographic records showing the test specimen and measurement setup are given in Appendix 2.

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APJ16-034-RP001(STC)

Page 4 of 9



5. Measurement Results

5.1 The results of measurement for the tested specimen are given in the following table:

Frequency f, Hz	Sound Transmission loss, dB	Sound Transmission loss, dB	Uncertainty, dB
100	2	5	± 1.64
125	6		± 1.20
160	8		± 0.90
200	7	7	± 1.21
250	7		± 1.07
315	7		± 0.74
400	9	11	± 0.68
500	12		± 0.56
630	15		± 0.45
800	20	22	± 0.41
1000	23		± 0.36
1250	26		± 0.32
1600	28	30	± 0.29
2000	31		± 0.34
2500	32		± 0.27
3150	33	34	± 0.29
4000	34		± 0.31
5000	35		± 0.33

5.2 The measured sound transmission loss of the tested specimen against 1/3-octave band center frequencies is plotted on Figure 1.

5.3 The 95% confidence interval is calculated according to the method stated in the Standard ASTM E90-09 A2.

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APJ16-034-RP001(STC)

Page 5 of 9

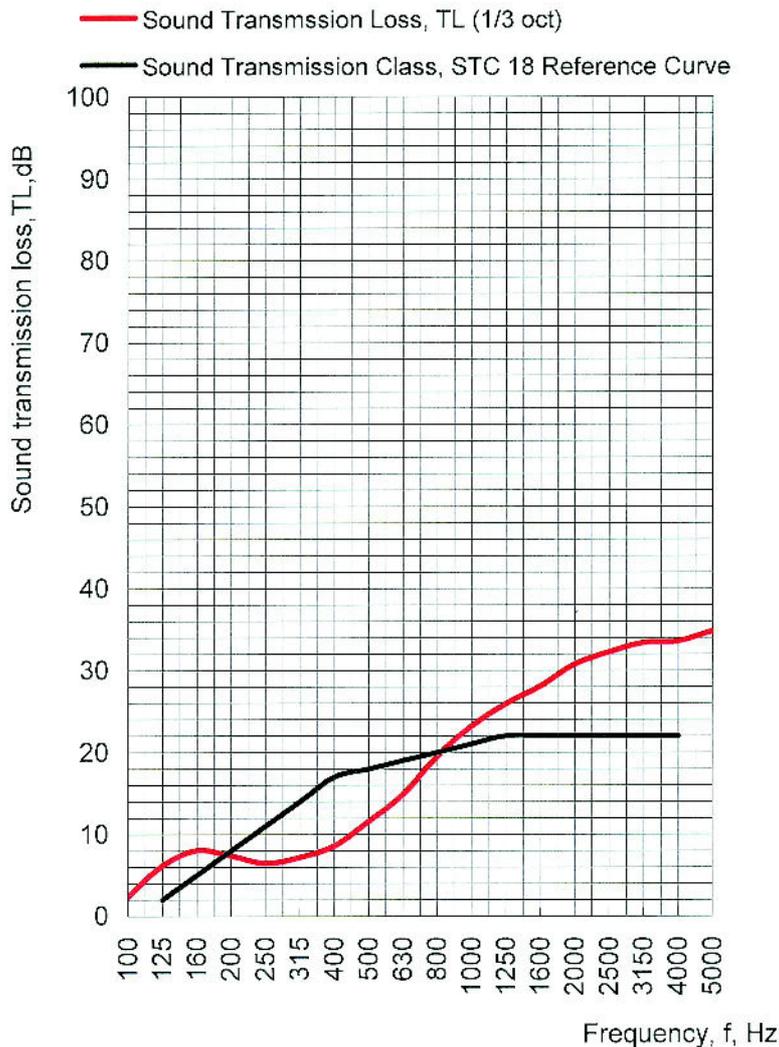


Figure 1. Sound transmission loss against Frequency

5.4 The single number rating of sound transmission class (STC) In accordance with ASTM E413-10 of the tested specimen is given below:

Description	Sound Transmission Class, STC
SilentUP® Retractable Noise Barrier	STC 18

Prepared by: *Tang Cheuk Hang*
Tang Cheuk Hang
 Quality Manager
 WN / MT / KW / JL

Endorsed by: *Ng Yan Wa*
Ng Yan Wa
 Laboratory Manager
 (Approved Signatory)

- END -

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 APJ16-034-RP001(STC) Page 6 of 9



Appendix List

- | | |
|-------------------|--|
| Appendix 1 | Details of Test Specimen
(Drawing supplied by the Client) |
| Appendix 2 | Photographic Records |

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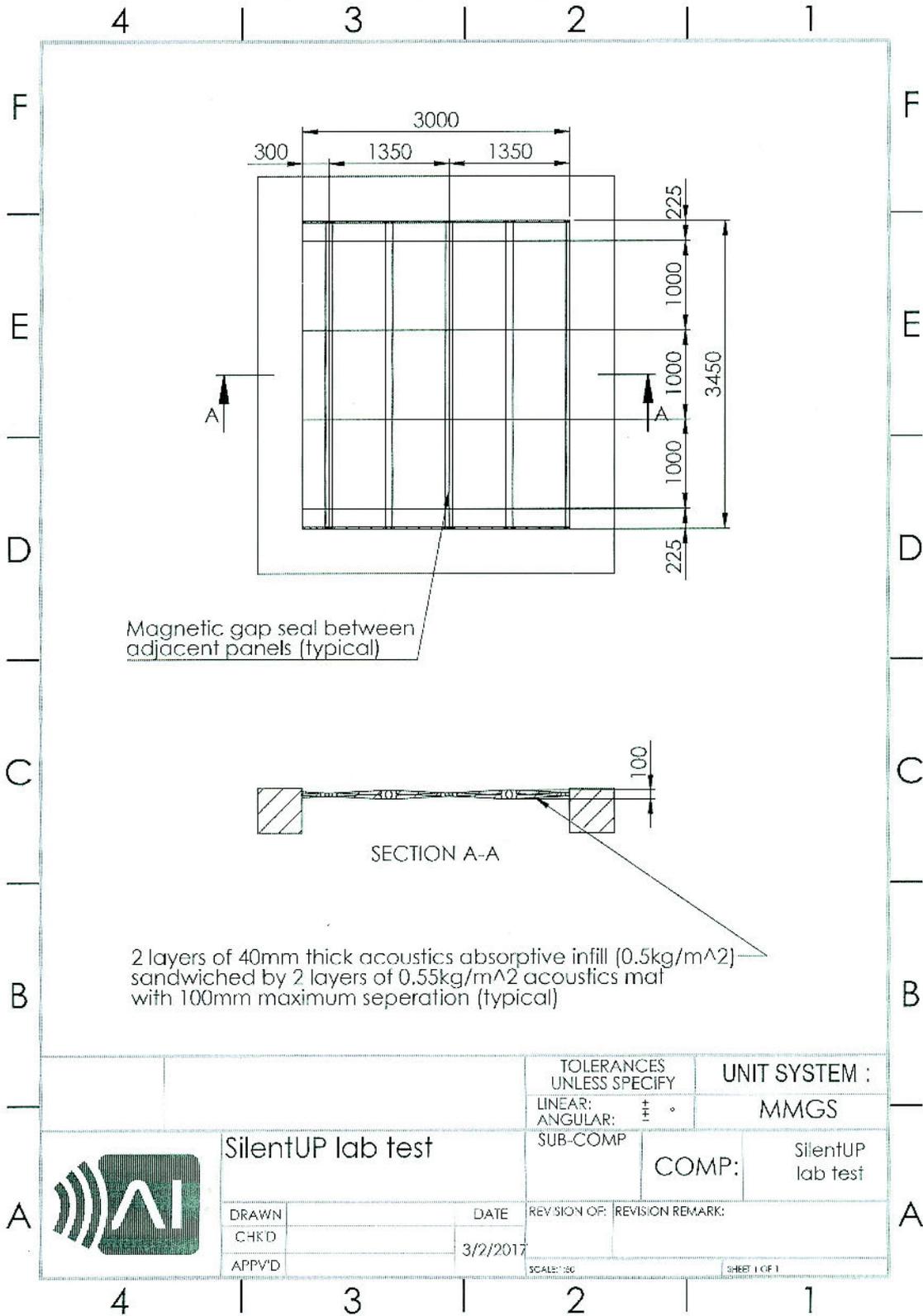
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APJ16-034-RP001(STC)

Page 7 of 9

Appendix 1

Details of Test Specimen (Drawing supplied by the Client)

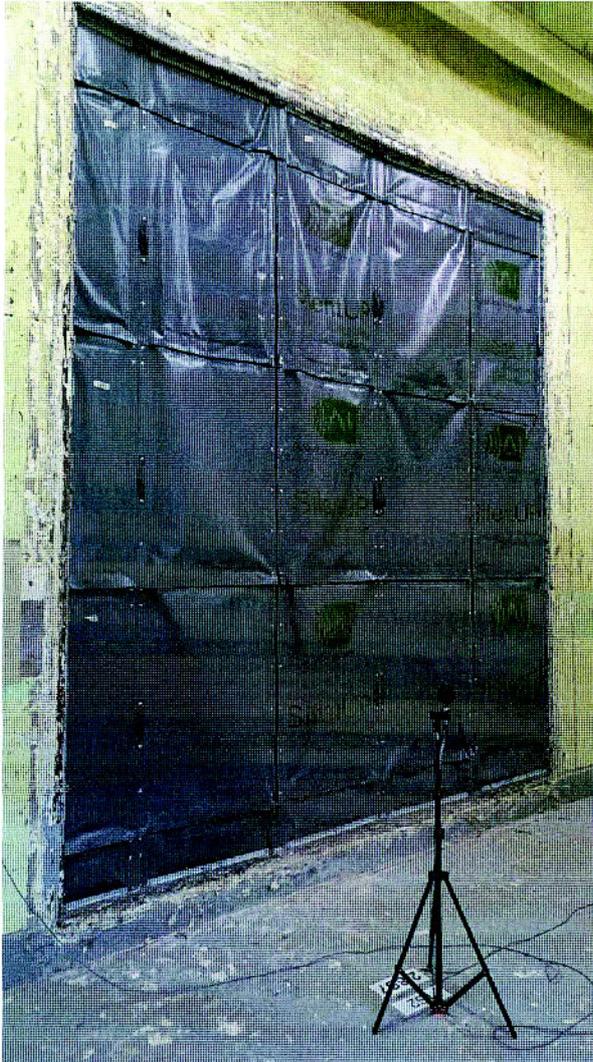


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 APJ16-034-RP001(STC)

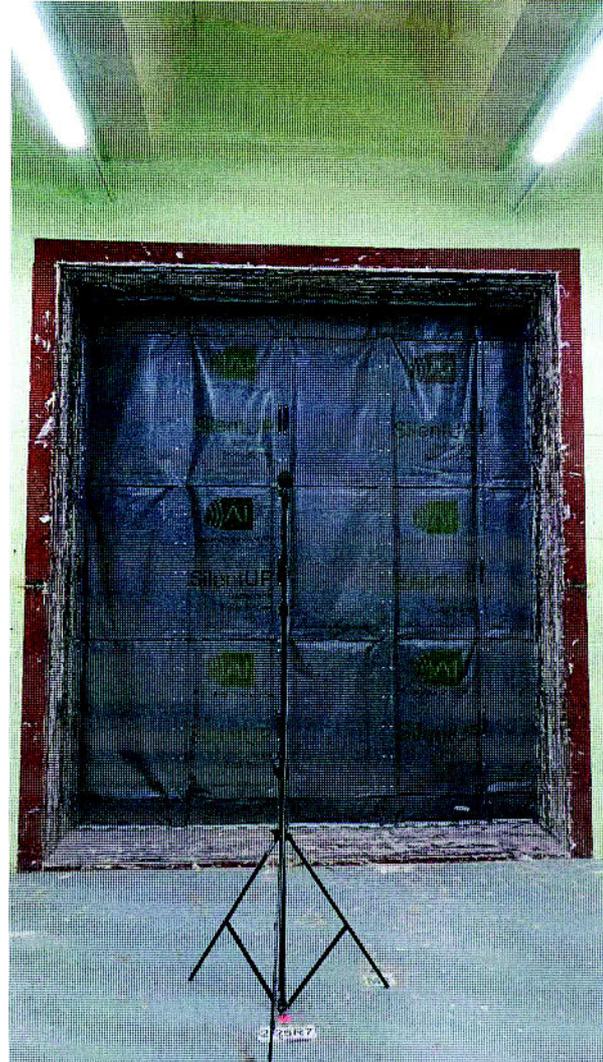


Appendix 2

Photographic Records

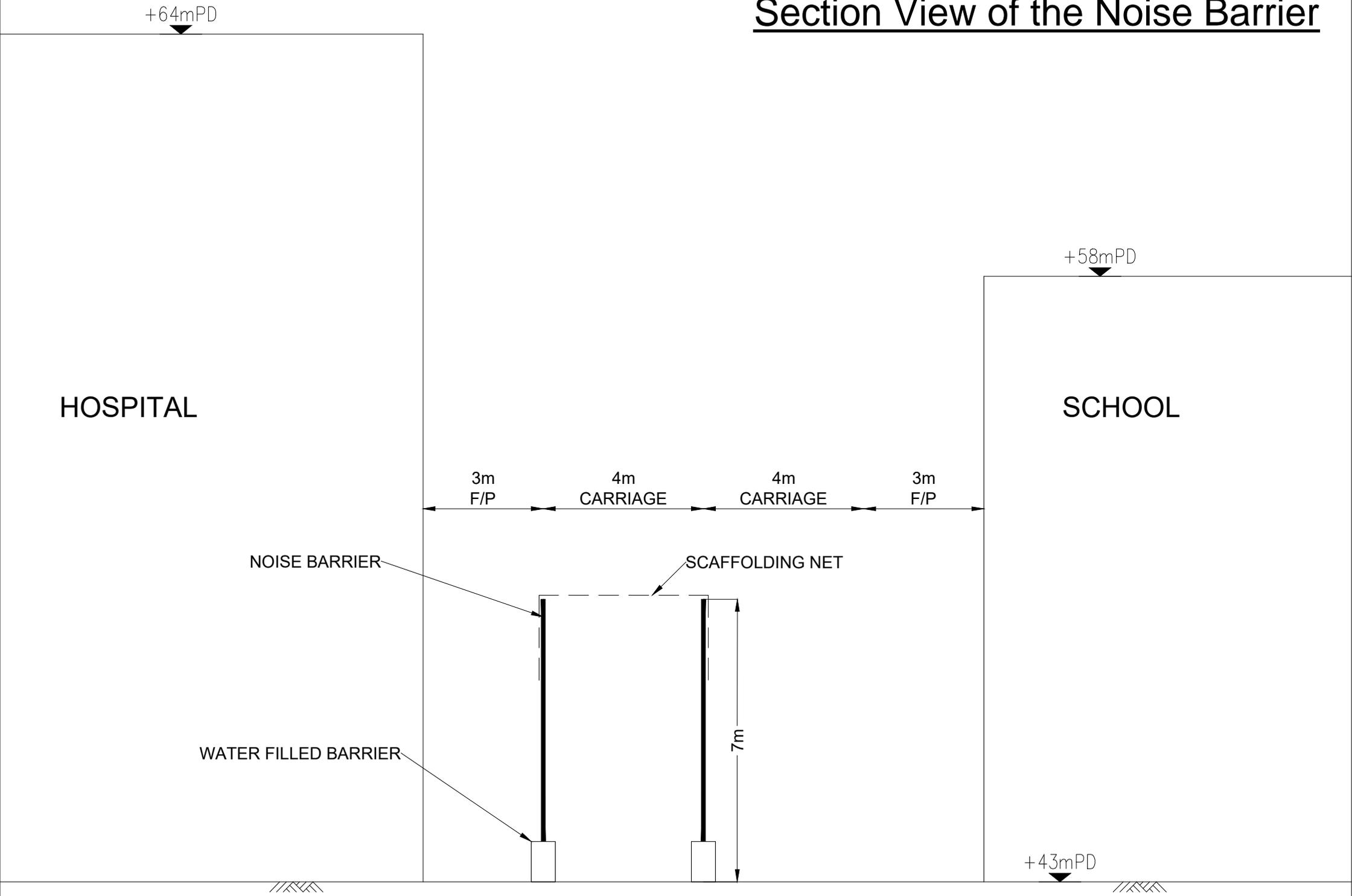


Measurement set-up (Source room)

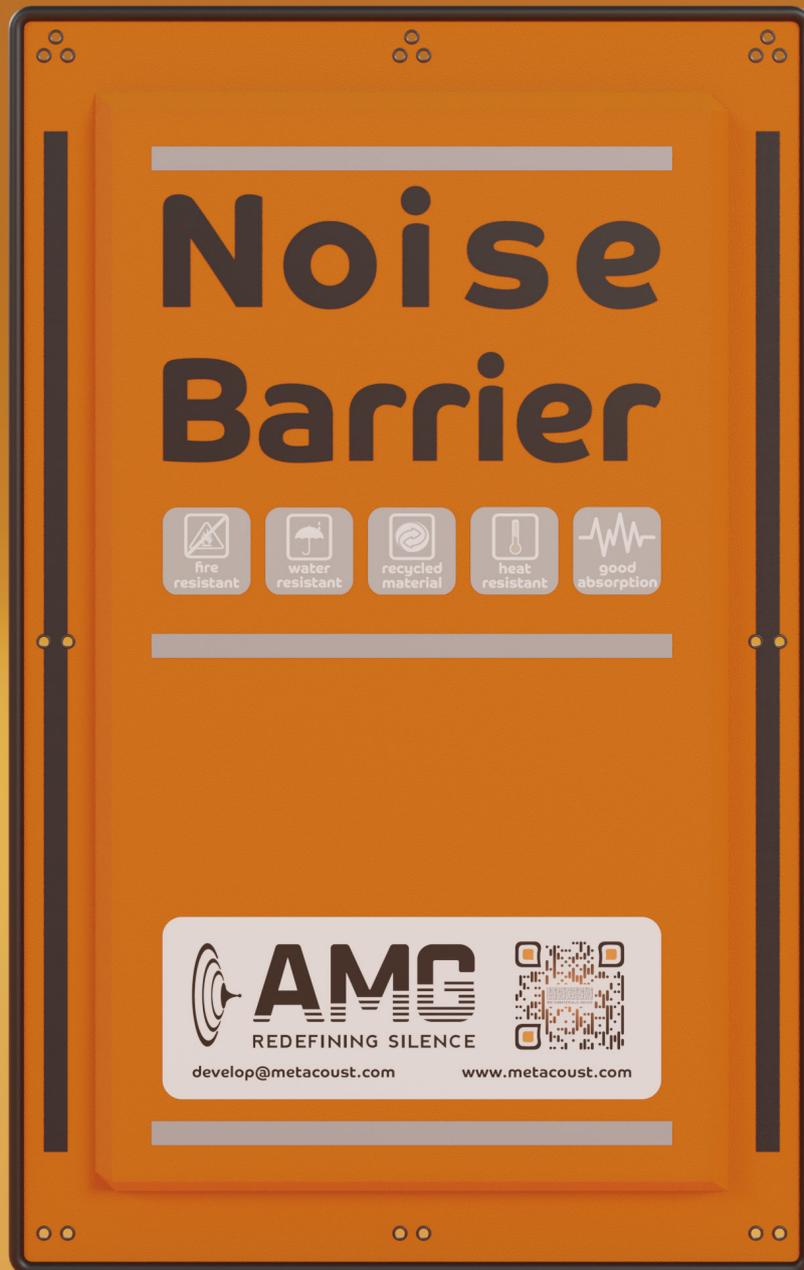


Measurement set-up (Receiving room)

Section View of the Noise Barrier

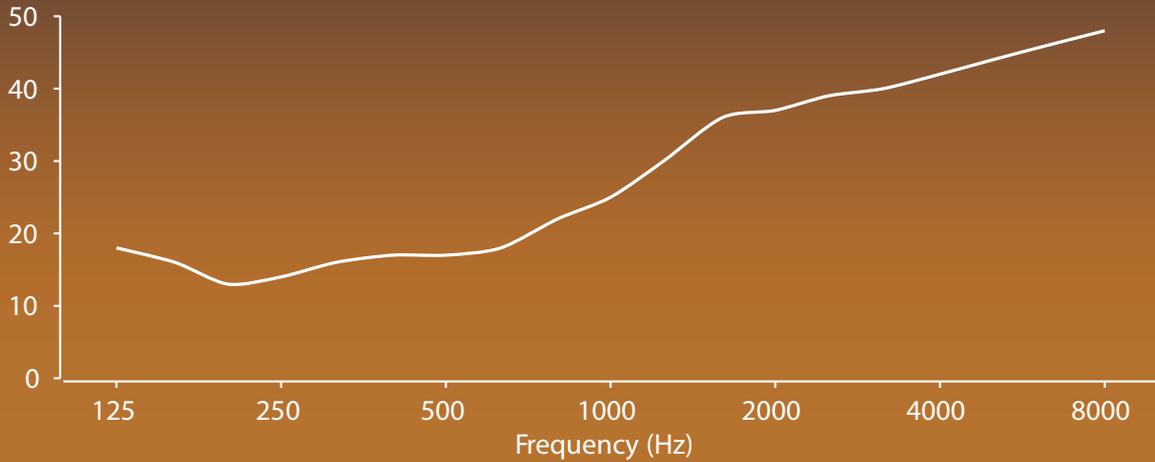


NOISE BARRIER



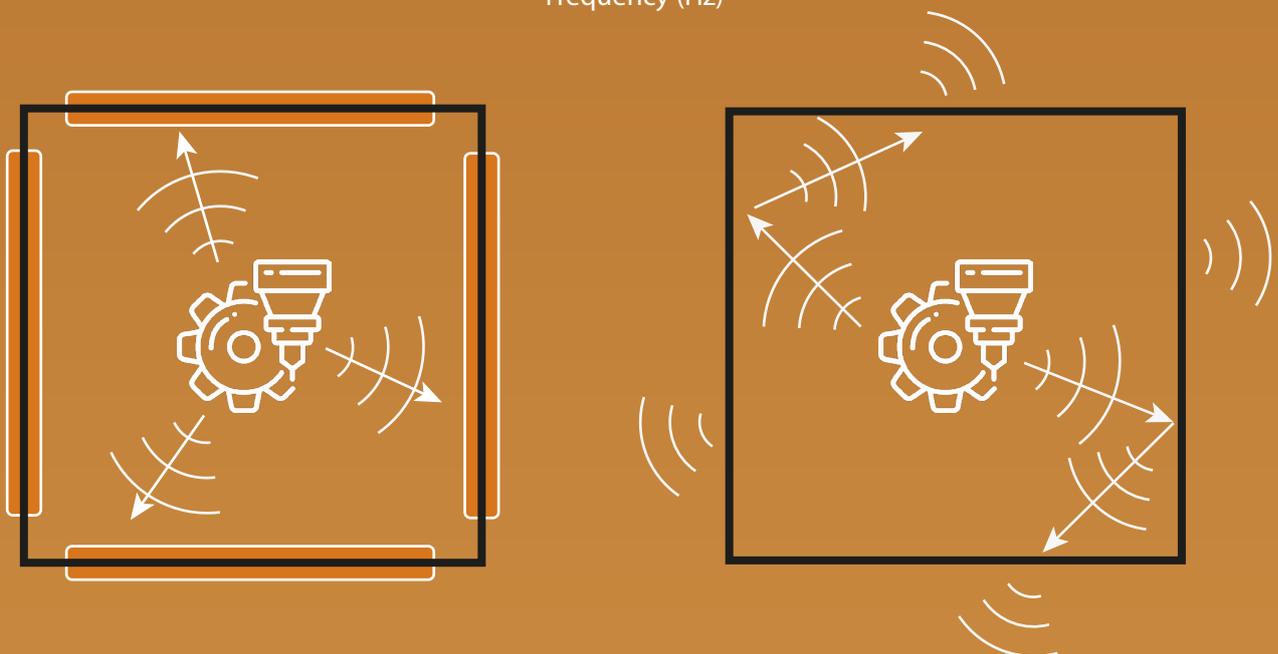
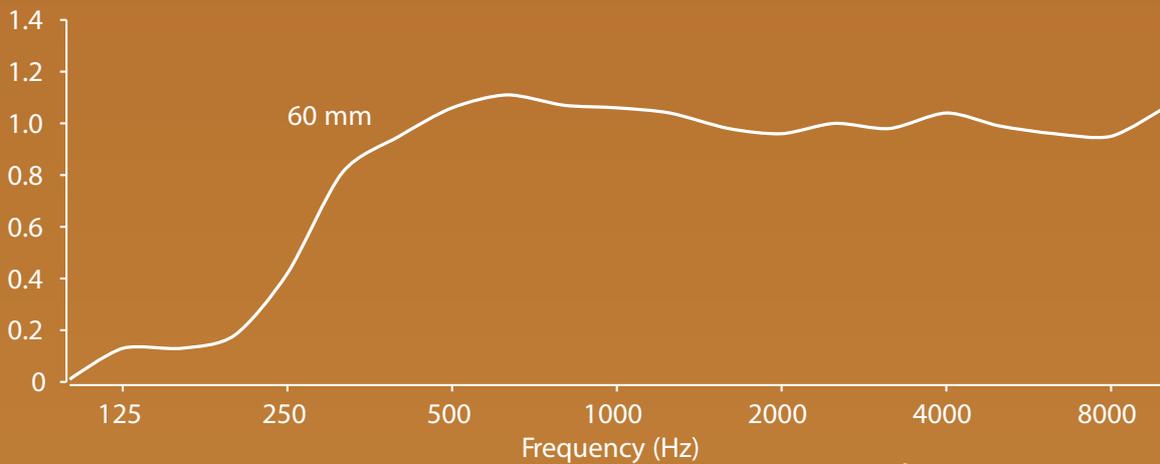
AMG noise barrier isn't just blocking noise from one way to another as conventional noise barrier does, but also absorbing noise to prevent creating huge echo in the surrounded area.

Transmission loss



The core of AMG noise barrier uses 60 mm thick metamaterials to perform high absorption in wide range frequency and better than conventional noise barrier.

Absorption coefficient



AMG noise barrier absorb machinery or construction noise.

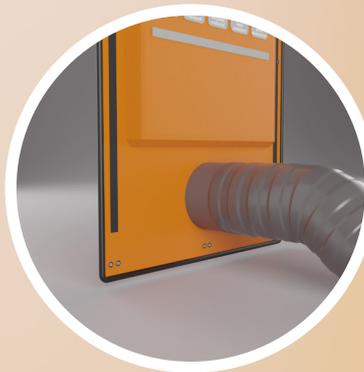
Conventional noise barrier does not absorb noise and create echo.



Easy assemble with hook



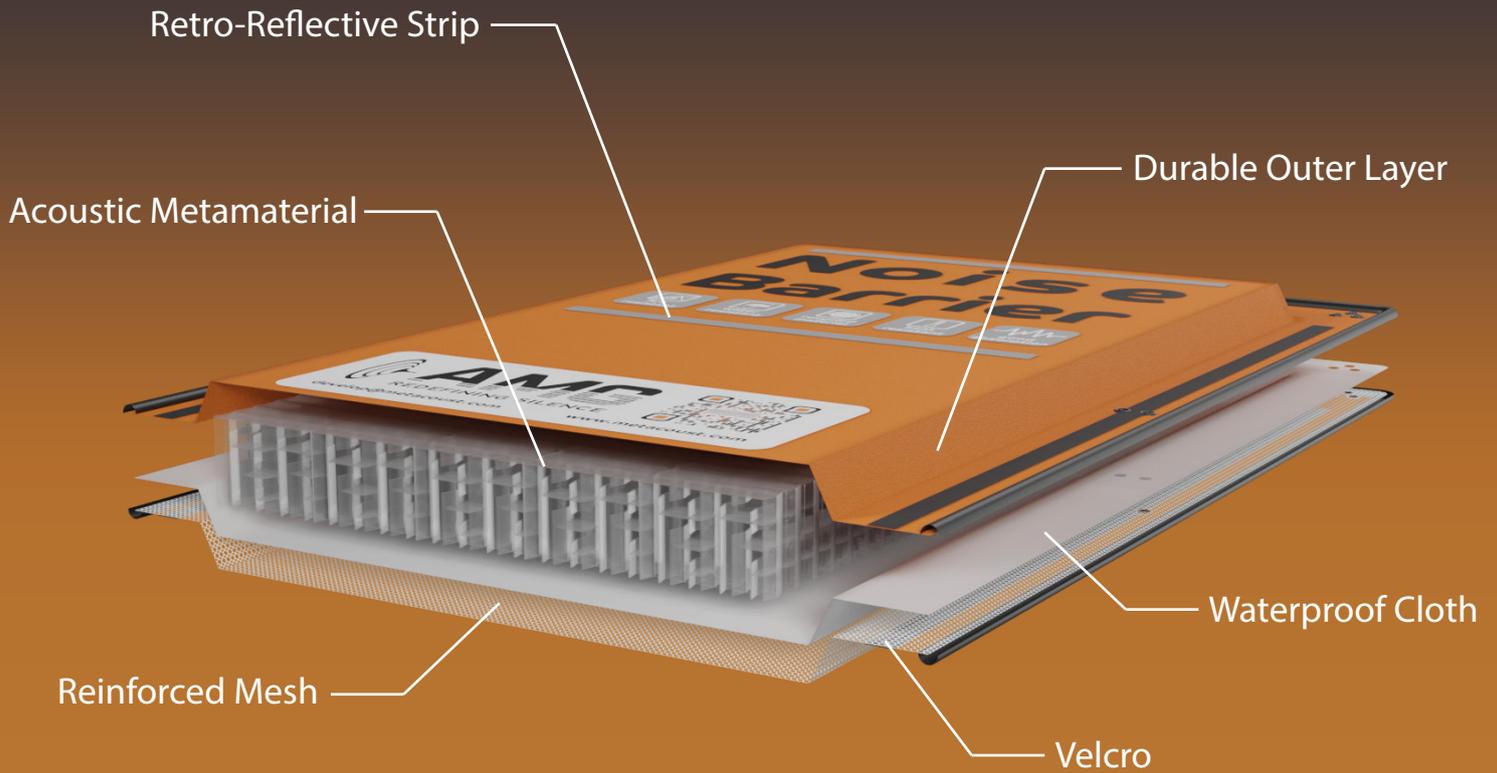
Monitoring window



Ventilation port



Velcro to stabilise



Advanced Sound Absorption

Using metamaterial technology, perform an outstanding noise absorption



Unrivalled Noise Attenuation

Maximum noise reduction can be over 40dBA, the average noise reduction is about 26 dBA



Highly Durable

UV, cold, dust, wear, high temperature resistant



Waterproof

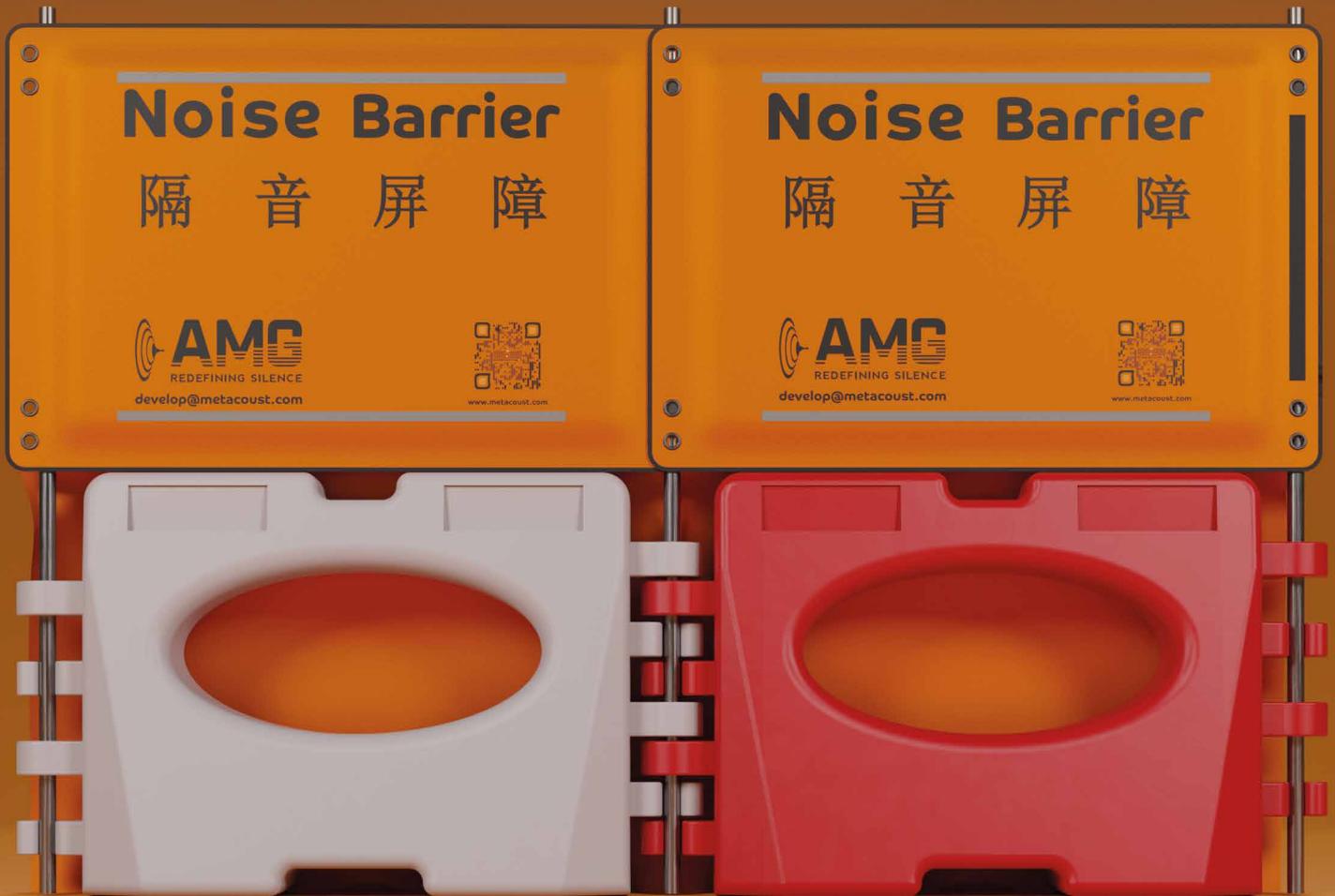
Allow gentle wash



Easy Installation

Easily hooked onto the column and fixed by sticking each other with velcro

Model	P60	P100
STC	23	28
NRC	0.85	1.0
Thickness	60mm	100mm
Width	1000 mm	
Height	1600 mm/1900 mm	
Density	4 kg/m ²	7 kg/m ²
Safety Feature	Retro-Reflective Strip	
Cleaning	Gentle Flush	
Installation	Velcro Connection	
Colour	Orange	



Velcro straps



Velcro connection



Extra coverage

STC	23
NRC	0.85
Noise Absorption	Max: 1 Average: 0.9
Height	1200 mm
Width	1500 mm
Thickness	60 mm
Module Weight	7.3 kg
Safety Feature	Retro-Reflective Strip
Cleaning	Gentle Flush
Installation	Velcro Connection Velcro Straps
Colour	Customisable



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TESTING
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检测报告

TEST REPORT

证书编号
Certificate No. SSD202300133

第 1 页, 共 7 页
Page of

委托方
Client Lumi 科技有限公司

委托方联络信息
Contact Information 广东省佛山市顺德区大良智谷城3号, 南方智谷7楼

样品名称
Description AMG 隔声屏障隔声检测
AMG Acoustic Barrier

型号/规格
Model/Type AMG-BR-T55

制造厂
Manufacturer Acoustic Metamaterials Group Ltd.

出厂编号
Serial No. AMG-BR-T55-T01

样品管理编号
Sample No. ——

接收日期
Date of Receipt 2023 年 02 月 28 日
Y M D

结论
Conclusion 见检测结果
Shown in the results of Test

检测日期
Date of Test 2023 年 02 月 28 日
Y M D

批准人
Approved Signatory 李敏毅

核 验
Reviewed by 李广智

检 测
Tested by 陈华

证书专用章
Stamp



扫一扫查真伪

实验室地址: 广东省东莞市石排镇东园大道南庙边王路段1号 邮政编码: 523343
 电话: (8620)86594172 传真: (8620)86590743 投诉电话: (8620)36611242 E-mail: scm@scm.com.cn
 Add: No.1, Miaobianwang Section, Dongyuan Road South, Shipai Town, Dongguan, Guangdong.
 Post Code: 523343 Tel: (8620)86594172 Fax: (8620)86590743 Complaint Tel: (8620)36611242
 证书真伪查询: www.scm.com.cn; cert.scm.com.cn Certificate AuthenticityIdentify: www.scm.com.cn; cert.scm.com.cn



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说明

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DIRECTIONS

第 2 页, 共 7 页
Page of

1. 本中心是国家市场监督管理总局在华南地区设立的国家法定计量检定机构, 本中心的质量管理体系符合 ISO/IEC 17025:2017 标准的要求。

This laboratory is the National Legal Metrological Verification Institution in southern China set up by the State Administration for Market Regulation. The quality system is in accordance with ISO/IEC 17025:2017.

2. 本中心所出具的数据均可溯源至国家计量基准和/或国际单位制 (SI)。

All data issued by this laboratory are traceable to national primary standards and/or International System of Units (SI).

3. 检测地点、环境条件:

Place and environmental conditions of the test:

地点 二基地声学检测中心

温度 22 °C

相对湿度 36 %

Place

Temperature

R.H.

4. 本次检测的技术依据:

Reference documents for the test:

ASTM E 90-2009 实验室测量建筑物隔离物和构件空气中声传输损失的试验方法 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements

ASTM E 413-2016 隔音材料等级的分类 Classification for Rating Sound Insulation

5. 本次检测所使用的主要计量标准器具:

Major standards of measurement used in the test:

设备名称/型号规格 Name of Equipment /Model/Type	编号 Serial No.	证书号/有效期/溯源单位 Certificate No./Due Date /Traceability to	计量特性 Metrological Characteristic
建筑声学测量系统 Architectural Acoustics Measuring System /2270	3029483	SXE202231085 /2023-11-23 /本中心	声压级: $U = (0.4 \sim 1.0) \text{dB} (k = 2)$; 混响时间: $U_{\text{rel}} = 1\% (k = 2)$ Sound Pressure Level: $U = (0.4 \sim 1.0) \text{dB} (k = 2)$; Reverberation time: $U_{\text{rel}} = 1\% (k = 2)$
声校准器 Sound Level Calibrator /4231	3004157	SSD202200720 /2023-03-01 /本中心	1 级 Grade 1

注: 1. 本报告检测结果只与受检测项目有关。The results relate only to the items tested.

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3. “委托方”、“委托方联络信息”由委托方提供, “制造厂”、“型号规格”、“出厂编号”以及“设备编号”为被测对象上标注; 委托方对上面内容如有异议, 须在收到证书后二十个工作日内提出。

The information Client and Contact Information are provided by client, and the Manufacturer, Model/Type, Serial No. and Equipment No. are marked on the items. Client shall submit any objection within 20 working days after receiving the certificate for the information above.

4. 本次检测日期视为发布日期。The test date is the date of issue of the report.



170021112938



检测结果

RESULTS OF TEST

证书编号: SSD202300133
Certification No.

原始记录编号: 2202300133
Record No.

第 3 页, 共 7 页
Page of

一、检测原理

Test procedures

依据标准 《ASTM E 90-09 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements》等相关规范在实验室进行检测; 其传声损失计算按如下公式进行:

The testing shall be conducted in accordance with standard of ASTM E 90-09; calculate the sound transmission loss with the following formula:

$$TL(f) = L_s(f) - L_r(f) + 10 \log_{10} S/A_R(f)$$

式中:

$TL(f)$ ——传声损失, 单位为分贝 (dB);

Transmission loss, dB

$L_s(f)$ ——声源室内平均声压级, 单位为分贝 (dB);

Average sound pressure level in the source room, dB

$L_r(f)$ ——接收室内平均声压级, 单位为分贝 (dB);

Average sound pressure level in the receiving room, dB

S ——试件面积, 单位为平方米 (m^2);

Area of test specimen that is exposed in the receiving room, m^2

$A_R(f)$ ——接收室内吸声量, 单位为平方米 (m^2);

Sound absorption of the receiving room with the test specimen in place, m^2



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证书编号: SSD202300133
Certification No.

原始记录编号: 2202300133
Record No.

第 4 页, 共 7 页
Page of

二、隔声屏障检测示图

Sample figure



图 1. 样品检测安装图
Figure 1. Sample figure



170021112938



检测结果

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证书编号: SSD202300133
Certification No.

原始记录编号: 2202300133
Record No.

第 5 页, 共 7 页
Page of

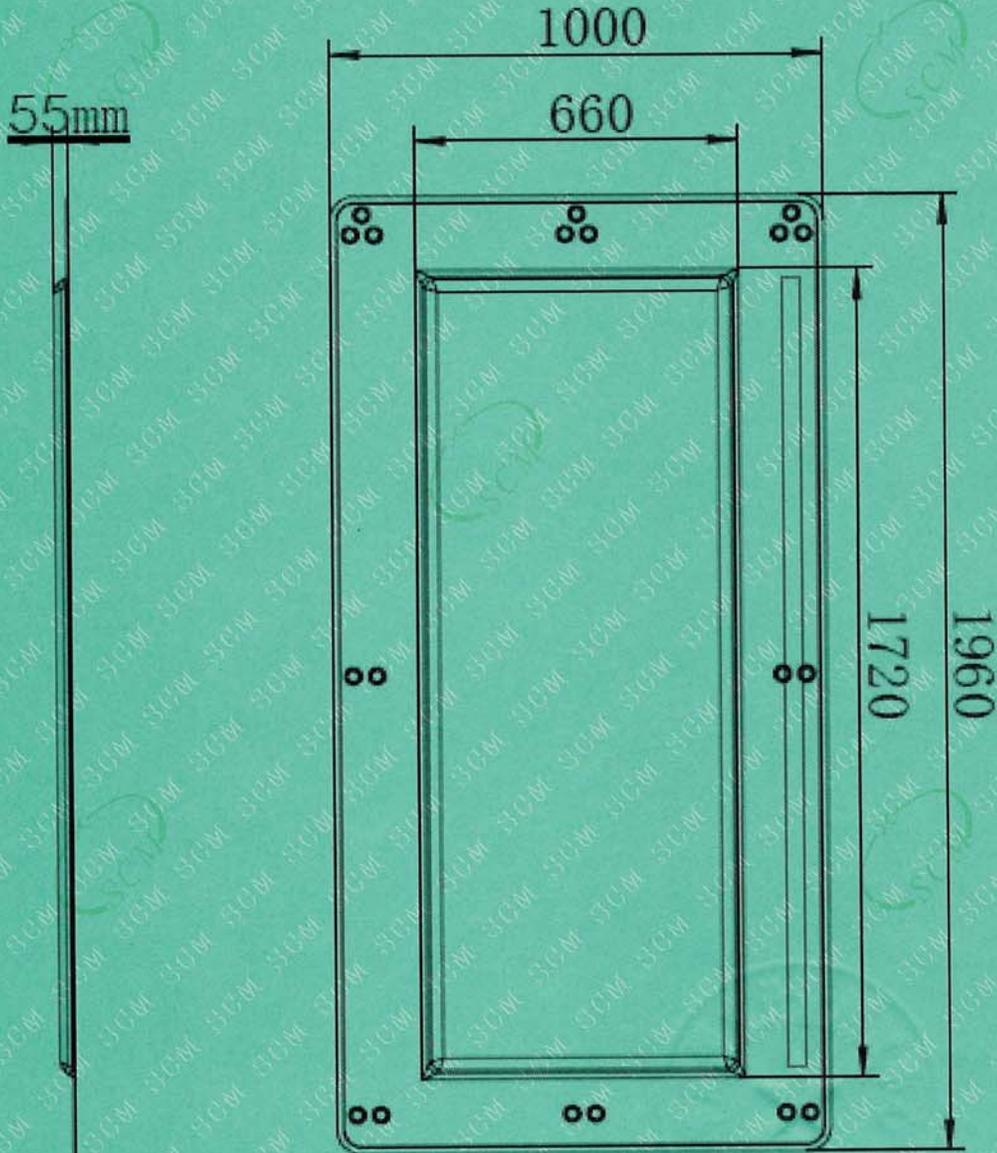


图 2. 样品尺寸图

Figure 2. Sample size drawing



170021112938



检测结果

RESULTS OF TEST

证书编号: SSD202300133
Certification No.

原始记录编号: 2202300133
Record No.

第 6 页, 共 7 页
Page of

三、检测结果

Test result

表一 Table 1

<p>检测样品信息</p> <p>Test sample information</p>	<p>检测说明: 样品为 Lumi 科技有限公司提供的尺寸为 1000 mm (宽) × 1960 mm (高) AMG 隔声屏障, 中间主体部分尺寸为 660 mm (宽) × 1720 mm (高) × 55 mm (厚)。样品整体采用翻边设计并带有圆形扣件, 用于相互连接及安装固定。隔音屏障的前饰面材料为防水阻燃透气布+阻燃网格, 后饰面为高密度阻燃帆布, 内部为 AMG 超材料吸音单元。样品安装检测和结构尺寸见图 1、图 2。样品主体部分按客户要求安装在实验室洞口测试, 边沿与墙面的间隙以水泥进行密封处理, 检测时实验室门全关闭。</p> <p>Test description: The sample is provided and installed by Lumi Technology Co.,Ltd.The overall size of Sound barrier was 1000 mm (width) × 1960 mm(height). The size of the middle body is 660 mm (width) × 1720 mm (height) × 55mm (thickness) . The whole sample is flanged design with round fastener for interconnecting and fixing. The front of the noise barrier is made of waterproof and flame-retardant breathable cloth + flame-retardant mesh, the back is made of high-density flame-retardant canvas, and the inside is AMG super-material sound-absorbing unit. Sample installation, inspection and structural dimensions are shown in Figure 1 and Figure 2. The main part of the sample is installed in the laboratory cavity to test according to customer's requirement. The gap between the sample edge and the wall surface is sealed with cement. The middle main part is installed in the test opening, and the filler wall is multi-layer composite walls,While testing , the laboratory's doors are all closed.</p>
<p>检测项目</p> <p>Test item</p>	<p>AMG 隔声屏障的声学性能检测</p> <p>Acoustic Performance Testing of AMG acoustic barrier</p>



170021112938



检测结果

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Certification No.

原始记录编号: 2202300133
Record No.

第 7 页, 共 7 页
Page of

续表一 Continued Table 1

检测结果 Result	频率 f (Hz) Frequency	传声损失 TL (dB) Transmission loss
	100	19
	125	18
	160	16
	200	13
	250	14
	315	16
	400	17
	500	17
	630	18
	800	22
	1000	25
	1250	30
	1600	36
	2000	37
	2500	39
	3150	40
	4000	42
	5000	44
	6300	46
	8000	48
	10000	50

Transmission Loss-Frequency Curve

—◆— Characteristic curve for sample —■— Reference curve

样品的隔声特性曲线
Characteristic curve for sample

$STC = 23$

Contract No. 21/WSD/21

Relocation of Diamond Hill Fresh Water and Salt Water Reservoirs to Caverns

Appendix E – Implementation Schedule of Proposed Mitigation Measures

Implementation Schedule of Mitigation Measures

CNMP/ EIA Ref.	Proposed Mitigation Measures	Target PME	Implemented by	Location	Period	Requirements or Standard to be achieved
EIA S4.8.1	The contractor should limit the pipe section to be constructed by open cut method in a length of no more than 30 m at any one time when works are in close proximity to NSRs. Each work front along the proposed watermain laying should be separated by a clearance distance of at least 60 m.	All PME to be operated for watermain laying works	Main Contractor	All construction area for watermain laying works	Apr 2023 – Oct 2027	TM-EIAO
Paragraph 2, S3.2 of CNMP	The use of noise barrier for certain PME could generally, provide a 5 dB(A) reduction for movable PME and 10 dB(A) for stationary PME. The barrier material shall have a superficial surface density of not less than 10 kg/m ² and have no opening or gaps. Sound-absorbent lining inside the enclosure should be at least 25 mm thick.	Asphalt paver, excavator etc.	Main Contractor	All areas of the Project	Apr 2023 – Oct 2027	Annex 5, TM-EIAO
Paragraph 2, S3.2 of CNMP	Noise enclosure lined with absorptive materials shall be provided at the tunnel portal to mitigate the noise from tunnel/cavern construction. The enclosure is a gap free enclosure with acoustic doors for vehicular access purpose. The acoustic doors shall remain closed throughout the construction period. The sheet material mass of the noise enclosure should be at least 10 kg/m ² and sound-absorbent lining inside the enclosure should be at least 25 mm thick.	All PME to be operated within the cavern	Main Contractor	Tunnel Portal	Apr 2023 – Oct 2027	<ul style="list-style-type: none"> EIAO-TM A Practical Guide for the Reduction of Noise from Construction Works
EIA S4.8.4	Provision of movable noise barriers of 3m or above in	Refer to table 4.1	Main	All areas of	Apr 2023 –	TM-EIAO

CNMP/ EIA Ref.	Proposed Mitigation Measures	Target PME	Implemented by	Location	Period	Requirements or Standard to be achieved
	height and with a short-cantilevered section on the top with skid footing should be used and located within a few meters of stationary plant and mobile plant such that the line of sight to the NSR is blocked by the barriers.		Contractor	the Project	Oct 2027	
EIA S4.8.4	Noise barrier/enclosure should be inspected and maintained regularly. The contractor should design and provide details of the temporary noise barriers and noise enclosure to the Engineer for approval.	Asphalt paver, excavator etc.	Main Contractor	All areas of the Project	Apr 2023 – Oct 2027	TM-EIAO
EIA S 4.8.9	<p>Good Site Management Practices</p> <ul style="list-style-type: none"> • Only well-maintained plant should be operated on-site and plant will be serviced regularly during the construction phase; • Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction phase; • Mobile plant, if any, should be sited away from NSRs; • Machines and plant (such as trucks) that may be in intermittent use should be shut down between work periods or will be throttled down to a minimum; • Plant known to emit noise strongly in one direction should be orientated so that the noise is directed away from the nearby NSRs; • Material stockpiles and other structures should be 	All PME	Main Contractor	All areas of the Project	Apr 2023 – Oct 2027	Annex 5, TM-EIAO

CNMP/ EIA Ref.	Proposed Mitigation Measures	Target PME	Implemented by	Location	Period	Requirements or Standard to be achieved
	<p>effectively utilised in screening noise from on-site construction activities;</p> <ul style="list-style-type: none"> • The contractor should devise, arrange methods of working and carrying out the works in such manner as to minimise noise impacts on the surrounding environment, and should provide experienced personnel with suitable training to ensure that all these measures are implemented properly; and; • The contractor should minimise construction noise exposure to the school (especially during examination periods) as much as possible. The contractor should liaise with the school and Examination Authority to ascertain the exact dates and times of all examination periods during the course of the contract and to avoid noisy activities during these periods 					
EIA S 4.8.9	<p>Use of quiet PME is considered to be a practicable means to mitigate the construction noise impact. Quiet plant is defined as a PME having actual SWL lower than the value specified in the GW-TM.</p>	Refer to table 2.2	Main Contractor	All areas of the Project	Apr 2023 – Oct 2027	Annex 5, TM-EIAO

Contract No. 21/WSD/21

Relocation of Diamond Hill Fresh Water and Salt Water Reservoirs to Caverns

Appendix F – Concrete Lorry Mixer Sound Power Level Measurement Report

**Contract No. 21/WSD/21 Relocation of Diamond Hill Fresh Water and
Salt Water Service Reservoirs to Caverns**

**Sound Power Level (SWL) Measurement Report of Concrete Lorry Mixer
(CLM) (LFCDKE5P6S1058661)**

Report No.: 25339-6

For
Chun Wo – Sinohydro Joint Venture
27/F, Tower A,
83 King Lam Street, Cheung Sha Wan,
Kowloon, Hong Kong

Approved by:



Mr. CHENG Chun Hei, Morgan
CEng, MHKIOA (M278), MHKIQEP (PM0205),
BEAM Pro (NB) (BP2017-0112), MIMechE (80095707)

Prepared by: CN / DT

6 October 2025

Disclaimer

This report is prepared to Chun Wo – Sinohydro Joint Venture (CWSJV) and is given for its sole benefit in relation to and pursuant to Contract No. 21/WSD/21 Relocation of Diamond Hill Fresh Water and Salt Water Service Reservoirs to Caverns and may not be disclosed to, quoted to or relied upon by any person other than CWSJV without our prior written consent. No person (other than CWSJV) into whose possession a copy of this report comes may reply on this report without our express written consent and CWSJV may not rely on it for any purpose other than as described above.



Table of Content

1. Measurement Information.....	1
2. Introduction.....	1
3. Instrumentation	3
4. SWL Measurement Methodology	3
4.1. Measurement Standard and Determination of SWL	3
4.2. Measurement Conditions.....	3
4.3. Reference Box and Measurement Surface	4
5. Measurement Results	5
5.1. Background Noise Measurement Results	5
5.2. SWL Measurement Results	6
6. Conclusion	7

List of Appendices

Appendix A: Specifications of the CLM.....	8
Appendix B: Calibration Certificates.....	9
Appendix C: Measurement Photos	15
Appendix D: Expanded Measurement Uncertainty	16



1. Measurement Information

Date	: 30 September 2025, 17:00 to 18:00 hours
Personnel	: Conducted by Chris Ng, James Yeung and Calvin Yu, supervised by Dragon Tsui of Wilson Ho and Associates Limited (WHAL), assisted by Don Ho of Chun Wo – Sinohydro Joint Venture
Site	: CWSJV Workshop near Po Kak Tsai Road, Kwan Tei
Standard	: <i>ISO 3746:2010 Acoustics - Determination of sound power levels and sound energy levels of noise sources using sound pressure - Survey method using an enveloping measurement surface over a reflecting plane</i>
Manufacturer	: Sany
Model	: SYM5310GJB1F3
Vehicle	: LFCDKE5P6S1058661
Identification Number (VIN)	

2. Introduction

A China VI Vehicle Emission Standards Concrete Lorry Mixer (CLM) (LFCDKE5P6S1058661, **Photo 1**, specifications in **Appendix A**) will be used to transport and discharge concrete in the subjected site (**Figure 1**) during restricted hours. The CLM will transport concrete inside the Q1 Tunnel and Q2 Tunnel, discharge concrete near the tunnel faces for shotcreting works, and will not leave the site area. The dimensions of the CLM are 9.7m (L) x 2.5m (W) x 4.0m (H).

Sound Power Level (SWL) measurement of the CLM was conducted according to *ISO 3746:2010* for noise assessment for CNP application. Two operation modes, i.e. travelling and discharging mode, were tested, same as real operation. The major noise source of the CLM was identified to be the diesel engine. This report presents the SWL measurement results of the CLM.

21/WSD/21 Relocation of Diamond Hill Fresh Water and Salt Water Service Reservoirs to Caverns
Sound Power Level (SWL) Measurement Report of Concrete Lorry Mixer (CLM) (LFCDKE5P6S1058661)

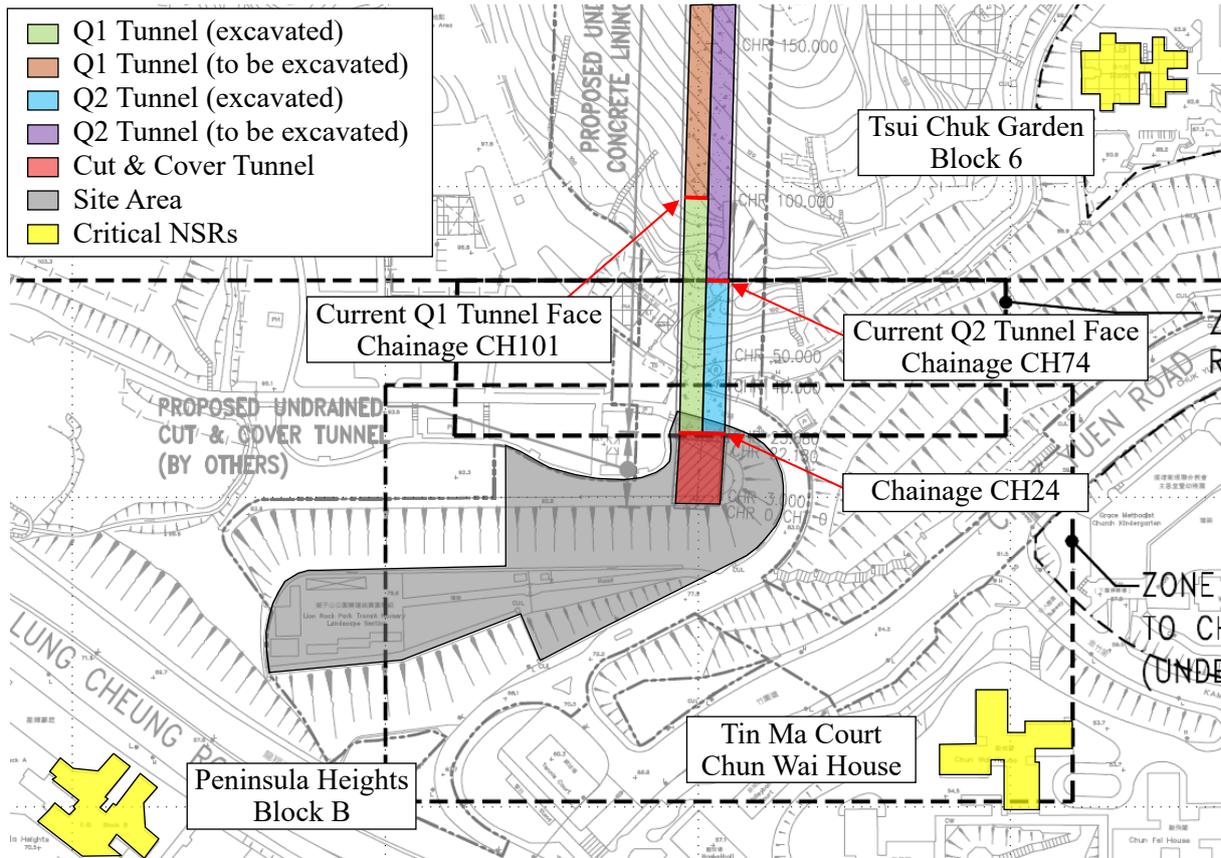


Figure 1: Site Plan with Critical NSRs



Photo 1: Concrete Lorry Mixer (LFCDKE5P6S1058661)



3. Instrumentation

Field calibration of sound level meters (conform to *IEC 61672 (2013)* Class 1) was conducted using an acoustic calibrator (conforms to *IEC 60942 (2018)* Class 1) before and after measurement (**Table 1**). The field calibration confirmed that there was no shift on the sensitivity of the sound level meters at the calibration frequency. The calibration certificates of the sound level meters and the acoustic calibrator are shown in **Appendix B** for reference.

Table 1: Measurement Equipment

Measurement Equipment	Brand Name & Model No.	Serial No.	Calibration Expiry
Sound Level Meter	Svantek – SVAN958	20890	27 Aug 2027
Sound Level Meter	Svantek – SVAN977A	69787	22 Jan 2027
Acoustic Calibrator	Svantek – SV35	44797	17 Feb 2026

4. SWL Measurement Methodology

4.1. Measurement Standard and Determination of SWL

The test followed *ISO 3746:2010 Acoustics - Determination of sound power levels and sound energy levels of noise sources using sound pressure - Survey method using an enveloping measurement surface over a reflecting plane*. The SWL of the CLM was determined by summation of its background-corrected Sound Pressure Level (SPL_{avg}) and its Area Correction (AC) with subtraction of the environmental factor (K_{2A}).

$$SWL = SPL_{avg} + AC - K_{2A}$$

SPL_{avg} : Energy average of background-corrected Sound Pressure Level among 8 points around the CLM.

AC : Area correction of the CLM = $10 \log$ (measurement surface area).

K_{2A} : Environmental correction factor was not applied due to measurement in open area.

4.2. Measurement Conditions

SWL measurement of the CLM was conducted in an open area in the CWSJV workshop in Kwan Tei. Two operation modes were tested, as described in **Table 2**. During the noise measurement, the CLM was fully loaded with concrete and the engine was operated at its rated speed, same as the real operation conditions. All other noisy PME's affecting the noise measurement were switched off.

Table 2: Description of Operation Modes

Operation Mode	Description
Travelling	Travelling forward at 8kph (site speed limit) with full load of concrete, with the mixer drum rotating.
Discharging	Discharging concrete with full load of concrete, with the mixer drum rotating at ~4-5rpm.

4.3. Reference Box and Measurement Surface

A schematic concept of measurement methodology is presented in **Figure 2** and **Figure 3**. SWL measurement was conducted with a parallelepiped measurement surface. The dimensions of the reference box were 9.7m (L) x 2.5m (W) x 4.0m (H). The measurement distance was 3m from the reference box. Measurements were conducted at 8 points around the CLM. $L_{Aeq,15s}$ was measured at each measurement point. The measurement photos are shown in **Appendix C**.

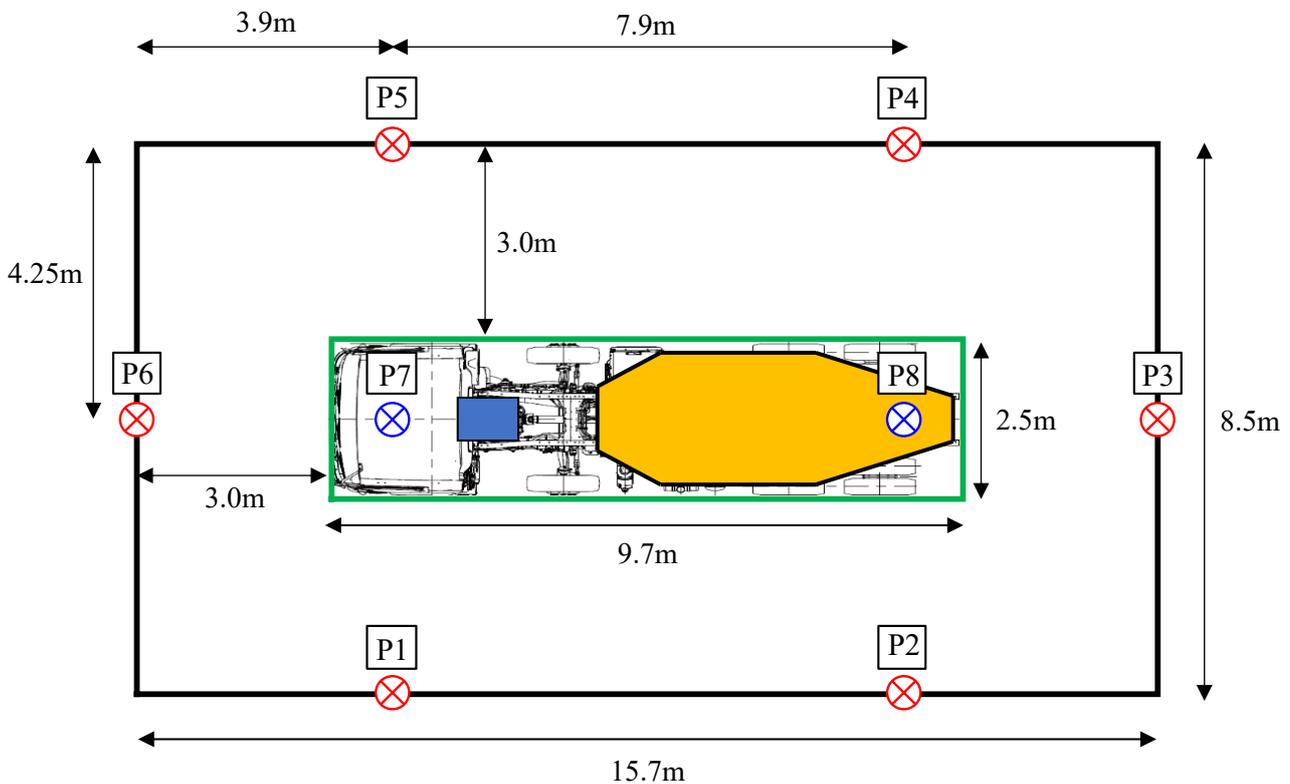
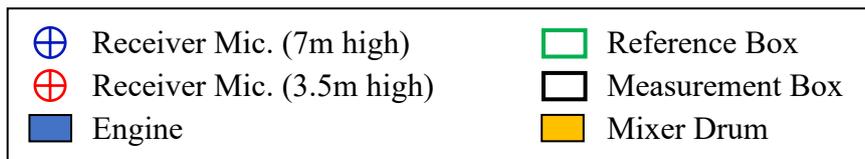


Figure 2: SWL Measurement Points around the CLM (top view)

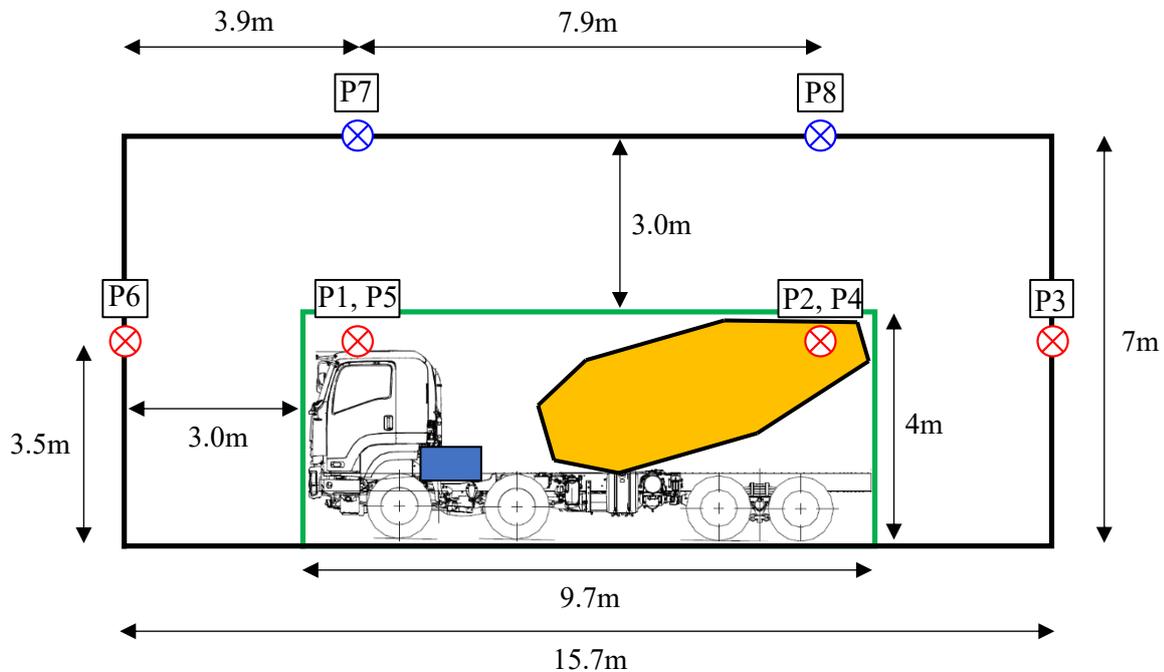
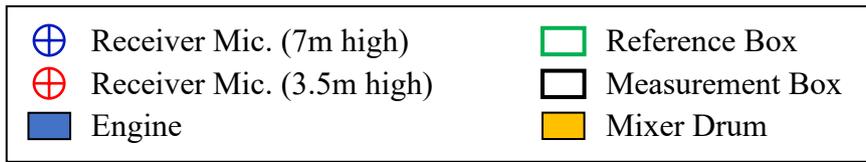


Figure 3: SWL Measurement Points around the CLM (side view)

5. Measurement Results

5.1. Background Noise Measurement Results

Background noise measurement was conducted when the CLM was switched off. For conservative approach, background noise correction was conducted with the minimum background $L_{eq,15s}$ (Table 3).

Table 3: Background Noise Measurement Results, $L_{eq,15s}$, dB(A)

Background Noise Level $L_{eq,15s}$, dB(A)				Minimum B/G, dB(A)
41.5	40.6	40.8	41.1	40.6



5.2. SWL Measurement Results

The SWLs of the CLM were measured to be 103.1dB(A) and 98.6dB(A) for travelling and discharging mode respectively, as shown in **Table 4** and **Table 5**. The expanded measurement uncertainty is shown in **Appendix D**.

Table 4: SWL Measurement Results of CLM for Travelling Mode, $L_{eq,15s}$, dB(A)

Area Correction					
Dimensions of Reference Box, m			Dimensions of Measurement Box, m		
-	-	-	Measurement Distance, d	3.0	
Length, l_1	9.7		$a = 0.5l_1 + d$	7.9	
Width, l_2	2.5		$b = 0.5l_2 + d$	4.3	
Height, l_3	4.0		$c = l_3 + d$	7.0	
Measurement Surface Area, $S = 4(ab+bc+ca)$, m^2				472.3	
Area Correction, $AC = 10\log(S)$, dB				26.7	
Environmental Correction K_{2A}					
Since measurement was conducted in an open area, environmental correction factor was not applied.				0.0	
Measured Noise Level in $L_{eq,15s}$, dB(A)					
Point	Location Description	$L_{eq,15s}$	B/G	B/G Corrected	Remark
1	Side Surface	77.1	40.6	77.1	
2		77.2	40.6	77.2	
3	Back Surface	74.2	40.6	74.2	
4	Side Surface	77.3	40.6	77.3	
5		78.4	40.6	78.4	
6	Front Surface	73.7	40.6	73.7	
7	Top Surface	76.0	40.6	76.0	
8		74.9	40.6	74.9	
Average B/G Corrected Noise Level, L_{pA} :				76.4	
Sound Power Level, $SWL = L_{pA} + AC - K_{2A}$, dB(A)				103.1	



Table 5: SWL Measurement Results of CLM for Discharging Mode, $L_{eq,15s}$, dB(A)

Area Correction					
Dimensions of Reference Box, m			Dimensions of Measurement Box, m		
-	-	-	Measurement Distance, d		3.0
Length, l_1	9.7		$a = 0.5l_1 + d$		7.9
Width, l_2	2.5		$b = 0.5l_2 + d$		4.3
Height, l_3	4.0		$c = l_3 + d$		7.0
Measurement Surface Area, $S = 4(ab+bc+ca)$, m^2					472.3
Area Correction, $AC = 10\log(S)$, dB					26.7
Environmental Correction K_{2A}					
Since measurement was conducted in an open area, environmental correction factor was not applied.					0.0
Measured Noise Level in $L_{eq,15s}$, dB(A)					
Point	Location Description	$L_{eq,15s}$	B/G	B/G Corrected	Remark
1	Side Surface	73.6	40.6	73.6	
2		73.1	40.6	73.1	
3	Back Surface	70.1	40.6	70.1	
4	Side Surface	71.8	40.6	71.8	
5		72.2	40.6	72.2	
6	Front Surface	68.5	40.6	68.5	
7	Top Surface	70.4	40.6	70.4	
8		73.0	40.6	73.0	
Average B/G Corrected Noise Level, L_{pA} :					71.9
Sound Power Level, $SWL = L_{pA} + AC - K_{2A}$, dB(A)					98.6

6. Conclusion

Sound Power Level (SWL) measurement of the CLM (LFCDKE5P6S1058661) was conducted according to *ISO 3746:2010* for two operation modes, i.e. travelling and discharging mode, same as real operation. The SWLs were measured to be 103.1dB(A) and 98.6dB(A) for travelling and discharging mode respectively.

For conservative approach, SWL of **103dB(A)** is proposed for the CLM (LFCDKE5P6S1058661) for noise assessment in CNP application.



Appendix A: Specifications of the CLM

 **SANY** 三一汽车制造有限公司 制造
SANY AUTOMOBILE MANUFACTURING CO.,LTD. MADE

混凝土搅拌运输车
Concrete Truck Mixer

品牌 Brand 三一 WMI LFC VIN LFCDKE5P6S1058661

整车型号 Vehicle Model SYM5310GJB1F3 搅动容量 Agitator Capacity 7.99 m³

底盘型号 Chassis Model SYM1310T1F 整车整备质量 Complete Vehicle Gross Mass 13000 kg

乘坐人数 Number Of Passengers 2人 最大允许总质量 Max. Permission Gross Mass 31000 kg

发动机型号 Engine Model D09C6-320E3 装载质量 Loading Mass 17870 kg

发动机额定功率/转速 Engine Rated Power/Speed 235 kW / 1900 r/min

发动机最大净功率/转速 Engine Maximum Net Power/Speed 229 kW / 1900 r/min

外廓尺寸(长×宽×高) Overall Dimension(L×W×H) 9680mmX2520mmX3960mm

制造年月 Manufacture Date 2025-05 出厂编号 Number 25GJ1041008989H

中国 制造 / Made in China

MT050401



Appendix B: Calibration Certificates

Cert F1: Calibration Certificate of Sound Level Meter SVAN958 (SN: 20890)



CALIBRATION CERTIFICATE

Certificate Information																
Date of Issue	28-Aug-2025															
Certificate Number	MLCN253086S															
Customer Information																
Company Name	Wilson Ho and Associates Limited															
Address	Unit 601, Block A, Shatin Industrial Centre, Yuen Shun Circuit, Shatin, NT															
Equipment-under-Test (EUT)																
Description	Sound & Vibration Analyser															
Manufacturer	Svantek															
Model Number	SVAN 958															
Serial Number	20890															
Equipment Number	--															
Calibration Particular																
Date of Calibration	28-Aug-2025															
Calibration Equipment	4231(MLTE008) / AV230083 / 6-Jun-2026															
Calibration Procedure	MLCG00, MLCG15															
Calibration Conditions	<table border="1"> <tr> <td>Laboratory</td> <td>Temperature</td> <td>23 °C ± 5 °C</td> </tr> <tr> <td></td> <td>Relative Humidity</td> <td>55% ± 25%</td> </tr> <tr> <td>EUT</td> <td>Stabilizing Time</td> <td>Over 3 hours</td> </tr> <tr> <td></td> <td>Warm-up Time</td> <td>10 minutes</td> </tr> <tr> <td></td> <td>Power Supply</td> <td>Internal battery</td> </tr> </table>	Laboratory	Temperature	23 °C ± 5 °C		Relative Humidity	55% ± 25%	EUT	Stabilizing Time	Over 3 hours		Warm-up Time	10 minutes		Power Supply	Internal battery
Laboratory	Temperature	23 °C ± 5 °C														
	Relative Humidity	55% ± 25%														
EUT	Stabilizing Time	Over 3 hours														
	Warm-up Time	10 minutes														
	Power Supply	Internal battery														
Calibration Results	Calibration data were detailed in the continuation pages.															
Approved By & Date																
	 K.O. Lo 28-Aug-2025															
Statements																
<ul style="list-style-type: none"> * Calibration equipment used for this calibration are traceable to national / international standards. * The results on this Calibration Certificate only relate to the values measured at the time of the calibration and the uncertainties quoted will not include allowance for the EUT long term drift, variation with environmental changes, vibration and shock during transportation, overloading, mishandling, misuse, and the capacity of any other laboratory to repeat the measurement. * MaxLab Calibration Centre Limited shall not be liable for any loss or damage resulting from the use of the EUT. * The copy of this Certificate is owned by MaxLab Calibration Centre Limited. No part of this Certificate may be reproduced without the prior written approval of MaxLab Calibration Centre Limited. 																



**21/WSD/21 Relocation of Diamond Hill Fresh Water and Salt Water Service Reservoirs to Caverns
Sound Power Level (SWL) Measurement Report of Concrete Lorry Mixer (CLM) (LFCDKE5P6S1058661)**

Cert F1: Calibration Certificate of Sound Level Meter SVAN958 (SN: 20890) (cont.)



Certificate No. MLCN253086S

Calibration Data						
Channel / Mode	Filter / Detector	Range	EUT Reading	Standard Reading	EUT Error	Calibration Uncertainty
CH4 / Sound	A / FAST (1 kHz Input)	105 dB	94.0 dB	94.0 dB	0.0 dB	0.2 dB
		130 dB	94.0 dB	94.0 dB	0.0 dB	0.2 dB
			114.0 dB	114.0 dB	0.0 dB	0.2 dB
	C / FAST (1 kHz Input)	105 dB	94.0 dB	94.0 dB	0.0 dB	0.2 dB
		130 dB	94.0 dB	94.0 dB	0.0 dB	0.2 dB
			114.0 dB	114.0 dB	0.0 dB	0.2 dB
	LIN / FAST (1 kHz Input)	105 dB	94.0 dB	94.0 dB	0.0 dB	0.2 dB
		130 dB	94.0 dB	94.0 dB	0.0 dB	0.2 dB
			114.0 dB	114.0 dB	0.0 dB	0.2 dB
	A / SLOW (1 kHz Input)	105 dB	94.0 dB	94.0 dB	0.0 dB	0.2 dB
		130 dB	114.0 dB	114.0 dB	0.0 dB	0.2 dB
	C / SLOW (1 kHz Input)	105 dB	94.0 dB	94.0 dB	0.0 dB	0.2 dB
		130 dB	114.0 dB	114.0 dB	0.0 dB	0.2 dB
	LIN / SLOW (1 kHz Input)	105 dB	94.0 dB	94.0 dB	0.0 dB	0.2 dB
		130 dB	114.0 dB	114.0 dB	0.0 dB	0.2 dB
	A / IMPULSE (1 kHz Input)	105 dB	94.0 dB	94.0 dB	0.0 dB	0.2 dB
		130 dB	114.0 dB	114.0 dB	0.0 dB	0.2 dB
	C / IMPULSE (1 kHz Input)	105 dB	94.0 dB	94.0 dB	0.0 dB	0.2 dB
		130 dB	114.0 dB	114.0 dB	0.0 dB	0.2 dB
	LIN / IMPULSE (1 kHz Input)	105 dB	94.0 dB	94.0 dB	0.0 dB	0.2 dB
		130 dB	114.0 dB	114.0 dB	0.0 dB	0.2 dB

- END -

Calibrated By : Danilo Cobrador
Date : 28-Aug-2025

Checked By : K.O. Lo
Date : 28-Aug-2025

Page 2 of 2

萬儀校正中心有限公司
MaxLab Calibration Centre Limited
香港新界葵涌華星街16-18號保盈工業大廈9樓B室

Unit B, 9/F., Baldwin Industrial Bldg., 16-18 Wah Sing Street, Kwai Chung, N.T., Hong Kong Tel: (852) 2116 1380 Fax: (852) 2264 6480 Email: info@maxlab.com.hk



Cert F2: Calibration Certificate of Sound Level Meter SVAN977A (SN: 69787)



CALIBRATION CERTIFICATE

Certificate Information		
Date of Issue	23-Jan-2025	Certificate Number MLCN250181S
Customer Information		
Company Name	Wilson Accoustics Limited	
Address	Unit 601, Block A, Shatin Industrial Centre, Yuen Shun Circuit, Shatin, N. T., Hong Kong	
Equipment-under-Test (EUT)		
Description	Sound & Vibration Analyser	
Manufacturer	Svantek	
Model Number	SVAN 977A	
Serial Number	69787	
Equipment Number	--	
Calibration Particular		
Date of Calibration	23-Jan-2025	
Calibration Equipment	4231(MLTE008) / AV230083 / 6-Jun-2026	
Calibration Procedure	MLCG00, MLCG15	
Calibration Conditions	Laboratory	Temperature 23 °C ± 5 °C Relative Humidity 55% ± 25%
	EUT	Stabilizing Time Over 3 hours Warm-up Time 10 minutes Power Supply Internal battery
Calibration Results	Calibration data were detailed in the continuation pages.	
Approved By & Date		
		K.O. Lo 23-Jan-2025
Statements		
<ul style="list-style-type: none"> * Calibration equipment used for this calibration are traceable to national / international standards. * The results on this Calibration Certificate only relate to the values measured at the time of the calibration and the uncertainties quoted will not include allowance for the EUT long term drift, variation with environmental changes, vibration and shock during transportation, overloading, mishandling, misuse, and the capacity of any other laboratory to repeat the measurement. * MaxLab Calibration Centre Limited shall not be liable for any loss or damage resulting from the use of the EUT. * The copy of this Certificate is owned by MaxLab Calibration Centre Limited. No part of this Certificate may be reproduced without the prior written approval of MaxLab Calibration Centre Limited. 		



**21/WSD/21 Relocation of Diamond Hill Fresh Water and Salt Water Service Reservoirs to Caverns
Sound Power Level (SWL) Measurement Report of Concrete Lorry Mixer (CLM) (LFCDKE5P6S1058661)**

Cert F2: Calibration Certificate of Sound Level Meter SVAN977A (SN: 69787) (cont.)



Certificate No. MLCN250181S

<i>Calibration Data</i>						
Weighting / Time	Range	EUT Reading	Standard Reading	EUT Error	Calibration Uncertainty	
A / FAST (1 kHz Input)	LOW	94.0 dB	94.0 dB	0.0 dB	0.2 dB	
		114.0 dB	114.0 dB	0.0 dB	0.2 dB	
	HIGH	94.0 dB	94.0 dB	0.0 dB	0.2 dB	
		114.0 dB	114.0 dB	0.0 dB	0.2 dB	
C / FAST (1 kHz Input)	LOW	94.0 dB	94.0 dB	0.0 dB	0.2 dB	
		114.0 dB	114.0 dB	0.0 dB	0.2 dB	
	HIGH	94.0 dB	94.0 dB	0.0 dB	0.2 dB	
		114.0 dB	114.0 dB	0.0 dB	0.2 dB	
Z / FAST (1 kHz Input)	LOW	94.0 dB	94.0 dB	0.0 dB	0.2 dB	
		114.0 dB	114.0 dB	0.0 dB	0.2 dB	
	HIGH	94.0 dB	94.0 dB	0.0 dB	0.2 dB	
		114.0 dB	114.0 dB	0.0 dB	0.2 dB	
A / SLOW (1 kHz Input)	LOW (22-123)	94.0 dB	94.0 dB	0.0 dB	0.2 dB	
	HIGH (30-140)	114.0 dB	114.0 dB	0.0 dB	0.2 dB	
C / SLOW (1 kHz Input)	LOW (22-123)	94.0 dB	94.0 dB	0.0 dB	0.2 dB	
	HIGH (30-140)	114.0 dB	114.0 dB	0.0 dB	0.2 dB	
Z / SLOW (1 kHz Input)	LOW (22-123)	94.0 dB	94.0 dB	0.0 dB	0.2 dB	
	HIGH (30-140)	114.0 dB	114.0 dB	0.0 dB	0.2 dB	
A / IMPULSE (1 kHz Input)	LOW (22-123)	94.0 dB	94.0 dB	0.0 dB	0.2 dB	
	HIGH (30-140)	114.0 dB	114.0 dB	0.0 dB	0.2 dB	
C / IMPULSE (1 kHz Input)	LOW (22-123)	94.0 dB	94.0 dB	0.0 dB	0.2 dB	
	HIGH (30-140)	114.0 dB	114.0 dB	0.0 dB	0.2 dB	
Z / IMPULSE (1 kHz Input)	LOW (22-123)	94.0 dB	94.0 dB	0.0 dB	0.2 dB	
	HIGH (30-140)	114.0 dB	114.0 dB	0.0 dB	0.2 dB	

- END -

Calibrated By : Danilo Cobrador
Date : 23-Jan-2025

Checked By : K.O. Lo
Date : 23-Jan-2025

Page 2 of 2

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Cert F3: Calibration Certificate of Acoustic Calibrator SV35 (SN: 44797)



CALIBRATION CERTIFICATE

Certificate Information																
Date of Issue	18-Feb-2025															
Certificate Number	MLCN250426S															
Customer Information																
Company Name	Wilson Accoustics Limited															
Address	Unit 601, Block A, Shatin Industrial Centre, Yuen Shun Circuit, Shatin, N. T., Hong Kong															
Equipment-under-Test (EUT)																
Description	Acoustic Calibrator															
Manufacturer	Svantek															
Model Number	SV 35															
Serial Number	44797															
Equipment Number	--															
Calibration Particular																
Date of Calibration	18-Feb-2025															
Calibration Equipment	4231(MLTE008) / AV230083 / 6-Jun-26 1357(MLTE190) / MLEC24/05/02 / 24-May-25															
Calibration Procedure	MLCG00, MLCG15															
Calibration Conditions	<table border="1"> <tr> <td>Laboratory</td> <td>Temperature</td> <td>23 °C ± 5 °C</td> </tr> <tr> <td></td> <td>Relative Humidity</td> <td>55% ± 25%</td> </tr> <tr> <td>EUT</td> <td>Stabilizing Time</td> <td>Over 3 hours</td> </tr> <tr> <td></td> <td>Warm-up Time</td> <td>Not applicable</td> </tr> <tr> <td></td> <td>Power Supply</td> <td>Internal battery</td> </tr> </table>	Laboratory	Temperature	23 °C ± 5 °C		Relative Humidity	55% ± 25%	EUT	Stabilizing Time	Over 3 hours		Warm-up Time	Not applicable		Power Supply	Internal battery
Laboratory	Temperature	23 °C ± 5 °C														
	Relative Humidity	55% ± 25%														
EUT	Stabilizing Time	Over 3 hours														
	Warm-up Time	Not applicable														
	Power Supply	Internal battery														
Calibration Results	Calibration data were detailed in the continuation pages. All calibration results were within EUT specification.															
Approved By & Date																
	 K.O. Lo 18-Feb-2025															
Statements																
<ul style="list-style-type: none"> * Calibration equipment used for this calibration are traceable to national / international standards. * The results on this Calibration Certificate only relate to the values measured at the time of the calibration and the uncertainties quoted will not include allowance for the EUT long term drift, variation with environmental changes, vibration and shock during transportation, overloading, mishandling, misuse, and the capacity of any other laboratory to repeat the measurement. * MaxLab Calibration Centre Limited shall not be liable for any loss or damage resulting from the use of the EUT. * The copy of this Certificate is owned by MaxLab Calibration Centre Limited. No part of this Certificate may be reproduced without the prior written approval of MaxLab Calibration Centre Limited. 																



Cert F3: Calibration Certificate of Acoustic Calibrator SV35 (SN: 44797) (cont.)



Certificate No. MLCN250426S

Calibration Data				
EUT Setting	Standard Reading	EUT Error	Calibration Uncertainty	EUT Specification
94 dB	93.7 dB	0.3 dB	0.15 dB	± 0.3 dB
114 dB	113.8 dB	0.2 dB	0.15 dB	± 0.3 dB

- END -

Calibrated By : Kenneth Ku
Date : 18-Feb-25

Checked By : K.O. Lo
Date : 18-Feb-25

Page 2 of 2

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香港新界葵涌華星街 16-18 號保盈工業大廈 9 樓 B 室

Unit B, 9/F., Baldwin Industrial Bldg., 16-18 Wah Sing Street, Kwai Chung, N.T., Hong Kong Tel: (852) 2116 1380 Fax: (852) 2264 6480 Email: info@maxlab.com.hk

Appendix C: Measurement Photos

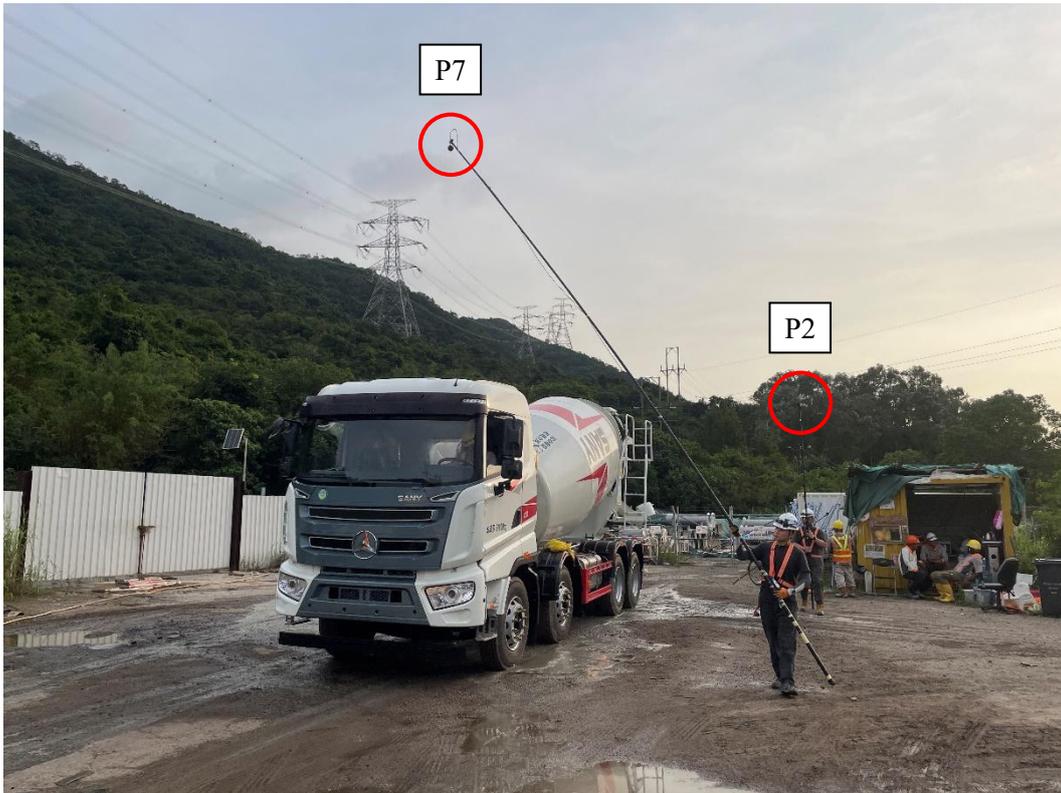


Photo C1: Receiver Microphones at Point 2 and Point 7 for Travelling Mode

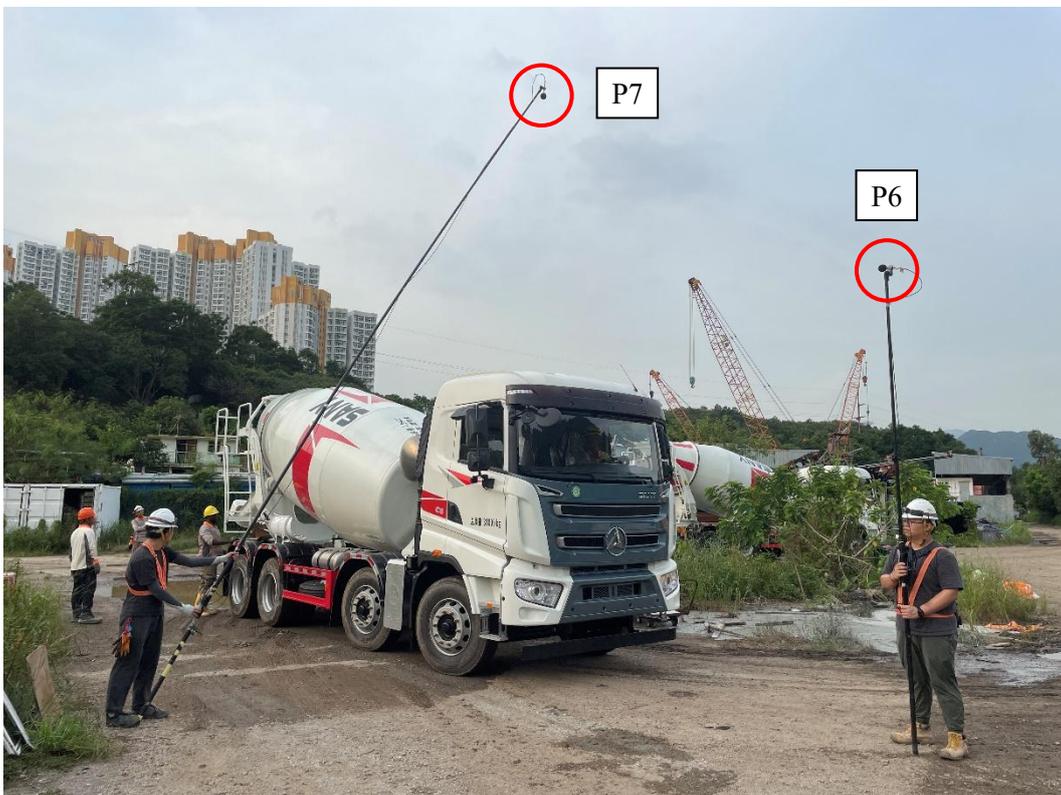


Photo C2: Receiver Microphones at Point 6 and Point 7 for Discharging Mode



Appendix D: Expanded Measurement Uncertainty

Reproducibility		Instability of Operation & Mounting Conditions	
Standard Deviation, σ_{R0} , dB	3	Standard Deviation, σ_{omc} , dB	0.5
Total Standard Deviation, $\sigma_{tot} = (\sigma_{R0}^2 + \sigma_{omc}^2)^{1/2}$, dB		Expanded Measurement Uncertainty, $U = k\sigma_{tot}$, dB	
3		6.1	

- Notes:
1. $\sigma_{R0} = 3$, for a noise source which emits sound without significant tones.
 2. $\sigma_{omc} = 0.5$, for the sound power which has only a small variation with time and measurement procedure is defined properly, a value of 0.5 dB for σ_{omc} can apply.
 3. $k = 2$, for a normal distribution of measured values, there is 95% confidence that the true value lies within the range ($L_W - U$) to ($L_W + U$).
 4. The SWL as stated in this report was measured in worst-case operation. Expanded Measurement Uncertainty, U , is not required to add to the measured SWL.

Contract No. 21/WSD/21

Relocation of Diamond Hill Fresh Water and Salt Water Reservoirs to Caverns

Appendix G - Relevant School Examination Calendar

NSR 14 Our Lady's College
School Calendar 2025 – 2026

2025	Cycle	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Date	Events
S E P	1	1	2	3	4	5	6	1	2-9	School Opening Ceremony 開學禮 Special Timetable 特別時間表 School Opening Mass 開學彌撒
	1/2	7	8	9	10	11	12	13	3	
	2/3	14	15	16	17	18	19	20	19	S6 Parents' Night 中六家長晚會
	3/4	21	22	23	24	25	26	27		
	4	28	29	30						
O C T	4				+1	2	3	4	1	National Day 國慶日
	4/5	5	6	+7	8	9▲	10	11	7	The day following Mid-Autumn Festival 中秋節翌日
	5/6	12	13	14	15	16	17	18	15-28 22	S6 Pre-Mock Exam 中六模擬畢業試 Staff Development Day-PM (Special Timetable) 教師發展日-下午 (特別時間表)
	6	19	20	21	22	23	24	25	22-28 23-28	S3 Term Test 中三測驗日 S1, 2, 4, 5 Term Test 中一、二、四、五測驗日
	6/7	26	27	28	+29	30	31		29	Chung Yeung Festival 重陽節
N O V								1		
	7	2	3	4	5	6	7	8	7	Sports Day 陸運會
	7/8	9	10	11	12	13	14	15	14	S4 Parents' Night 中四家長晚會
	8/9	16	17	18▲	19	20	21	22	22 24	Parents' Day & PTA AGM 家長日暨家長教師會會員大會 School Holiday after Parents' Day 家長日後學校假期
	9/10	23	24	25	26	27	28	29	29	School Information Day 學校資訊日
D E C	10	1	2	3	4	5	6	1	8	School Holiday after School Information Day 學校資訊日後學校假期 School Holiday after Legislative Council Election 立法會選舉後學校假期
	10/11	7	8	9	10	11	12	13	11	School Picnic 學校旅行
	11	14	15	16	17▲	18	19	20	12 19	Staff Development Day 教師發展日 Christmas Celebration 聖誕慶祝活動
		21	22	23	24	+25	+26	27	22/12-1/1	Christmas and New Year Holidays 聖誕及新年假期
		28	29	30	31					
2026	J A N	11				+1	2	3	5	Special Timetable 特別時間表 S1-S5 First Term Exam 中一至中五第一段考
12		4	5	6	7	8	9	10	6-16	
		11	12	13	14	15	16	17		
12		18	19	20	21	22	23	24		
13		25	26▲	27	28	29	30	31	30	St. John Bosco Mass & Thanksgiving Day 聖若望鮑思高神父彌撒及感恩日
F E B	13/14	1	2	3	4	5	6	7	2-13 7	S6 Mock Exam 中六畢業試 Parents' Day for Distribution of Report Cards (S1-S5) 家長日-派發成績表(中一至中五)
	14/15	8	9	10	11	12	13	14	16-24	Chinese New Year Holidays 農曆新年假期
		15	16	+17	+18	+19	20	21		
	15	22	23	24	25	26	27	28		

+ Public Holiday 公眾假期

▲ Activity Day (Special Timetable) 活動日(特別時間表)

Catholic & Salesian Liturgical Celebrations 天主教及慈幼大家庭禮儀慶節

Advent 將臨期 30/11-24/12

Christmas 聖誕節 25/12

Lent 四旬期 18/2-4/4

Easter 復活節 5/4

St. John Bosco

St. Mary Mazzarello

Mary Help of Christians (School Feast Day)

FMA Foundation Day

聖若望鮑思高

聖瑪沙利露

聖母進教之佑 (校慶日)

母佑會創會日

31/1

13/5

24/5

5/8

2026	Cycle	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Date	Events
M A R	15/16	1	2 ⁶	3 ¹	4 ²	5 [▲] ³	6 ⁴	7	6	S3 Parents' Night 中三家長晚會
	16/17	8	9 ⁵	10 ⁶	11 ¹	12 ²	13 ³	14		
	17/18	15	16 ⁴	17 ⁵	18 ⁶	19 ¹	20 ²	21		
	18	22	23 ³	24 ⁴	25 ⁵	26	27	28	25 25-31	Staff Development Day-PM (Special Timetable) 教師發展日-下午 (特別時間表) S3 Term Test 中三測驗日
		29	30	31					26-31	S1, 2, 4, 5 Term Test 中一、二、四、五測驗日
A P R					1	2	+3	+4	1 2-11	Whole Day Activity Day 整天活動日 Easter Holidays 復活節假期
		5	+6	+7	8	9	10	11	6	The Day following Ching Ming Festival 清明節翌日
	18/19	12	13 ⁶	14 ¹	15 ²	16 ³	17 ⁴	18	8/4-4/5	HKDSE 香港中學文憑考試
	19/20	19	20 ⁵	21 ⁶	22 ¹	23 ²	24 ³	25		
	20/21	26	27 ⁴	28 ⁵	29 ⁶	30 ¹			28 or 29	S3 TSA (Speaking) 中三全港性系統評估 (說話) (4/5: Fallback Date 後備日)
M A Y							+1	2	1	Labour Day 勞動節
	21	3	4 ²	5 ³	6 ⁴	7 ⁵	8 ⁶	9	6	Staff Development Day-PM (Special Timetable) 教師發展日-下午 (特別時間表)
	21/22	10	11 ¹	12 ²	13 ³	14 ⁴	15 ⁵	16	18 21	Catholic School Teachers' Day 天主教學校教師日 Mary Help of Christians Mass 聖母進教之佑瞻禮彌撒
	22/23	17	18	19 ⁶	20 ¹	21 ²	22 ³	23	22 22/5-4/6	Speech Day-PM 畢業禮-下午 Exam Preparation Days (Special Timetable) 考試預備日 (特別時間表)
	23/24	24	+25	26 ⁴	27 ⁵	28 ⁶	29 ¹	30	25 27	The Day following the Birthday of the Buddha 佛誕翌日 Staff Development Day-PM 教師發展日-下午
	31									
J U N	24		1 ²	2 ³	3 ⁴	4 ⁵	5	6	5-17	S1-S5 Final Exam 中一至中五年終試
		7	8	9	10	11	12	13		
		14	15	16	17	18	+19	20	17-18 18-23	S3 TSA (Written) 中三全港性系統評估 (紙筆) (24/5: Fallback Date 後備日) Exam Paper Review 核對試卷
		21	22	23	24	25	26	27	19	Tuen Ng Festival 端午節
		28	29	30						
J U L				+1	2	3	4		1 2-10	HKSAR Establishment Day 香港特別行政區成立紀念日 Post Exam Activities 試後活動
		5	6	7	8	9	10	11	7	Allocation Results (SSPA) Release 公布派位結果 (中學學位分配)
		12	13	14	15	16	17	18	9-10 10	Pre-S1 Registration 中一新生註冊 S6 Parents' Night 中六家長晚會
		19	20	21	22	23	24	25	13 14	End of Term Assembly & Distribution of Report Cards 散學禮及派發成績表 Pre-S1 HK Attainment Test 中一人學前香港學科測驗
		26	27	28	29	30	31		15 16	HKDSE Results Release 公布香港中學文憑考試成績 Commencement of Summer Vacation 暑假開始
A U G								1		
		2	3	4	5	6	7	8		
		9	10	11	12	13	14	15		
		16	17	18	19	20	21	22		
		23	24	25	26	27	28	29		
		30	31							

聖文德書院 2025-2026 學年度行事曆

2025 九月							2026 三月						
日	一	二	三	四	五	六	日	一	二	三	四	五	六
	1▲	2	3	4	5	6	1	2	3	4	5	6	7
7	8	9	10	11	12	13	8	9	10	11	12	13	14
14	15	16	17	18	19	20	15	16	17	18	19	20	21▲
21	22	23	24	25	26	27	22	23	24	25	26	27	28
28	29	30					29	30	31				

2025 十月							2026 四月						
日	一	二	三	四	五	六	日	一	二	三	四	五	六
			1	2	3	4				1	2	3	4
5	6●	7	8	9	10	11	5	6	7	8	9	10	11
12	13▲	14▲	15	16	17	18	12	13	14	15	16	17	18
19	20	21	22	23	24	25	19	20	21	22	23	24	25
26	27	28	29	30	31		26	27	28	29	30		

2025 十一月							2026 五月						
日	一	二	三	四	五	六	日	一	二	三	四	五	六
						1						1	2
2	3	4	5	6	7	8	3	4	5	6	7	8	9
9	10	11	12	13	14	15	10	11	12	13	14	15	16
16	17	18	19	20	21	22▲	17	18●	19	20	21	22	23
23	24	25	26	27	28	29	24	25	26	27	28	29	30
30							31						

2025 十二月							2026 六月						
日	一	二	三	四	五	六	日	一	二	三	四	五	六
	1	2	3	4	5	6		1	2	3	4	5	6
7	8	9	10	11	12	13	7	8	9	10	11	12	13
14	15	16	17	18▲	19▲	20	14	15	16	17	18	19	20
21	22	23	24	25	26	27	21	22	23	24	25▲	26▲	27
28	29	30	31				28	29▲	30▲				

2026 一月							2026 七月						
日	一	二	三	四	五	六	日	一	二	三	四	五	六
				1	2	3				1	2▲	3▲	4
4	5	6	7	8	9	10	5	6▲	7▲	8▲	9▲	10▲	11
11	12	13	14	15	16	17▲	12	13▲	14▲	15▲	16	17	18
18	19	20	21	22	23	24	19	20	21	22	23	24	25
25	26	27	28	29	30	31	26	27	28	29	30	31	

2026 二月							2026 八月						
日	一	二	三	四	五	六	日	一	二	三	四	五	六
1	2	3	4	5	6	7							1
8	9	10	11	12	13	14	2	3	4	5	6	7	8
15	16	17	18	19	20	21	9	10	11	12	13	14	15
22	23	24	25	26	27	28	16	17	18	19	20	21	22

NSR 26 中華基督教會基慈小學
2025-2026年度校曆表_上學期(cycle)

年/月	星期						循環 周次	備註 / 事項
	日	一	二	三	四	五		
2025年								
九月	31	1	2	3	4	5	6	5/9 天文學習晚會
	7	8	9	10	11	12	13	1 8/9 開始全日上課 13/9教育主日(上午)
	14	15	16	17	18	19	20	2
	21	22	23	24	25	26	27	3
	28	29	30	1	2	3	4	4 1/10 國慶日假期 6/10小一及小六防疫注射
十月	5	6	7	8	9	10	11	7/10 中秋節翌日假期 11/10 中小學銜接交流座談會
	12	13	14	15	16	17	18	5 15/10 九北水運會 17/10家教會周年大會及升中講座
	19	20	21	22	23	24	25	6 24/10 教師發展日
	26	27	28	29	30	31	1	29/10 重陽節
十一月	2	3	4	5	6	7	8	7 7/11 旅行日
	9	10	11	12	13	14	15	8 10/11 一至六年級流感防疫注射
	16	17	18	19	20	21	22	9 21/11 區會陸運會
	23	24	25	26	27	28	29	24-28/11一年級主題式學習、二至六年級評估一 26/11評估溫習日；29/11 基慈陸運會
	30	1	2	3	4	5	6	1/12 一至六年級戶外學習日 5/12 九北陸運會；5/12 升中講座
十二月	7	8	9	10	11	12	13	10 7/12 校友重聚日 8/12 立法會換屆選舉翌日假期
	14	15	16	17	18	19	20	11 18/12 一至六年級流感防疫注射 19/12 聖誕節崇拜及聯歡活動
	21	22	23	24	25	26	27	22/12 - 1/1 聖誕及新年假期
	28	29	30	31	1	2	3	3/1 六年級家長日
2026年								
一月	4	5	6	7	8	9	10	12 8-9/1五年級同根同心內地交流
	11	12	13	14	15	16	17	1 16/1 下學期開始 17/1 一至五年級家長日

- ① = 循環日
- E = 學校活動
- A = 測考
- S = 特別上學日
- 中 = 中默
- 英 = 英默

中華基督教會基慈小學
2025-2026年度校曆表_下學期(cycle)

年/月	星期							循環 周次	備註/事項
2026年	日	一	二	三	四	五	六		
一月	11	12 ^③	13 ^④	14 ^⑤	15 ^⑥	16 ^①	17 ^E	1	16/1 下學期開始 17/1 一至五年級家長日
	18	19 ^②	20 ^③	21 ^④	22 ^⑤	23 ^⑥	24		
	25	26 ^{中①}	27 ^②	28 ^③	29 ^④	30 ^⑤	31	2	
二月	1	2	3 ^⑥	4 ^①	5 ^②	6 ^{英③}	7	3	2/2 教師發展日
	8	9 ^④	10 ^⑤	11 ^⑥	12 ^{中①}	13 ^E	14	4	13/2 中華文化日
	15	16	17	18	19	20	21		16/2-25/2 農曆新年假期
	22	23	24	25	26 ^②	27 ^{英③}	28 ^E		28/2 步行籌款
三月	1	2 ^④	3 ^⑤	4 ^⑥	5 ^①	6 ^②	7	5	
	8	9 ^③	10 ^④	11 ^⑤	12 ^A	13 ^A	14		12-17/3 二至六年級評估二 12-17/3 一年級主題式學習
	15	16 ^A	17 ^A	18 ^E	19 ^⑥	20 ^①	21	6	18/3 一、四年級校外科學探索活動；二、三、五、六年級STEAM DAY
	22	23 ^②	24 ^③	25 ^④	26 ^⑤	27 ^⑥	28		23/3 區會水運會 24-27/3 境外交流
	29	30 ^①	31 ^②	1 ^E	2	3	4	7	1/4 復活節崇拜及小四福音活動
四月	5	6	7	8	9	10 ^③	11		2-9/4 復活節假期；7/4 清明節翌日假期 10/4 升中選校座談會
	12	13 ^④	14 ^⑤	15 ^⑥	16 ^{中①}	17	18	8	17/4 教師發展日 18/4 區會模範生頒獎典禮
	19	20 ^②	21 ^{英③}	22 ^④	23 ^⑤	24 ^⑥	25		22-24/4 小六畢業營
	26	27 ^{中①}	28 ^②	29 ^③	30 ^④	1	2	9	1/5 勞動節
五月	3	4 ^⑤	5 ^⑥	6 ^①	7 ^②	8 ^{英③}	9	10	6-7/5 三年級TSA視聽資訊及說話評估
	10	11 ^④	12 ^⑤	13 ^⑥	14 ^{中①}	15 ^②	16	11	
	17	18 ^{英③}	19 ^④	20 ^⑤	21 ^E	22 ^E	23		21/5 區會聯合畢業禮 22/5 基慈競技日
	24	25	26 ^⑥	27 ^①	28 ^②	29 ^③	30	12	25/5 佛誕 29/5 小一及小六防疫注射
	31	1 ^④	2 ^⑤	3 ^⑥	4 ^A	5 ^A	6		4-9/6 二至六年級評估三 4-9/6 一年級模擬評估
六月	7	8 ^A	9 ^A	10 ^E	11 ^E	12 ^E	13		10/6 運動推廣日 11/6 一、四年級戶外學習
	14	15 ^S	16 ^S	17 ^S	18 ^S	19	20		15-16/6 三年級TSA紙筆評估 19/6 端午節
	21	22 ^E	23 ^E	24 ^E	25 ^S	26 ^S	27		22-24/6 跨學科專題研習
	28	29 ^S	30 ^S	1	2 ^S	3 ^S	4 ^E		1/7 特區成立紀念日 4/7 小六畢業禮
七月	5	6 ^E	7 ^S	8 ^S	9 ^S	10 ^S	11		6/7 小六畢業聚餐 10/7 小一至小五結業禮；13/7-31/8 暑假

① = 循環日

E = 學校活動

A = 測考

S = 特別上學日

中 = 中默

英 = 英默

學生校曆表(2025-2026)

(學段一及學段二)

學段	日期	星期						假期	校務及活動	備註(教師)
		日	一	二	三	四	五			
學段一	9		1 ㊟	2 ㊟	3 ㊟	4 ㊟	5 ㊟	6	(1)開學日	(1-5)開學首五天 (1-26)派發小一人學申請表
	7	7	8 Day1	9 Day2	10 Day3	11 Day4	12 Day5	13	(13及14)火車之旅	(8)循環周開始
	14	14	15 Day6	16 Day1	17 Day2	18 Day3	19	(15)火車之旅補假	(19)核對小五下學期考成績 (18-26)小一自行分配學位報名(電子平台)	
	21	21	22 Day4	23 Day5	24 Day6	25 Day1	26 Day2	27		(22)第一期課後活動開始 (22-26)小一自行分配學位報名(紙本)
	28	28	29 Day3	30 Day4						
	10				1 Day5	2 Day6	3	4	(1)國慶日	
	5	5	6 Day1	7 Day2	8 Day3	9 Day4	10	11	(7)中秋節翌日	(6)遞交小一人學申請表(紙本) (10)遞交小一人學申請表(電子平台)
	12	12	13 Day5	14 Day6	15 Day1	16 Day2	17	18	(14)黃大仙誕假期 (15)九龍北區水運會 <small>(15)小一至小六家長座談會及小五、小六學生升中講座</small>	
	19	19	20 Day3	21 Day4	22 Day5	23 Day6	24 Day1	25		(21)黃大仙誕職員聯歡晚宴
	26	26	27 Day2	28 Day3	29 Day4	30 Day5	31		(29)重陽節	(31)領取中學學位分配辦法簡介單張
學段二	11						1		(1)小四日營	
	2	2	3 Day6	4 Day1	5 Day2	6 Day3	7 Day4	8	(4-19)術科及分卷考試 (8)聯校教師發展日	(7)接種流感疫苗(第一劑)
	9	9	10 Day5	11 Day6	12 Day1	13 Day2	14 Day3	15		
	16	16	17 Day4	18 Day5	19 Day6	20 ㊟	21 ㊟	22	(20-25)小二至小六 學段一考試	
	23	23	24 ㊟	25 ㊟	26 Day1	27 Day2	28 Day3	29		(24)公布小一自行分配學位名單 (26,27)小一註冊、(28)小一備取生註冊
	30	30								
	12		1 Day4	2 Day5	3 Day6	4 Day1	5 Day2	6	(5)九龍北區田徑比賽	(1)遞交小一收錄學生名單至教育局 與領取《中一自行分配學位申請表》及相關文件
	7	7	8 Day3	9 Day4	10 Day5	11 Day6	12 Day1	13	(8)選舉翌日假期	
	14	14	15 Day1	16 Day2	17 Day3	18 Day4	19 Day5	20		(19)小六家長日(晚上)
	21	21	22 ㊟	23 ㊟	24 ㊟	25 ㊟	26 ㊟	27	(23/12-1/1)聖誕及新年	(22)聖誕聯歡
28	28	29 ㊟	30 ㊟	31 ㊟						
1				1 Day5	2 Day6		3	(2)教師發展日		
4	4	5 Day6	6 Day1	7 Day2	8 Day3	9 Day4	10	(10)小一至小五家長日及購買課本	(4)遞交小六學段一考試成績資料、遞交兩網派位申請(第一批) (5) 遞交兩網派位(第二批)	
11	11	12 Day5	13 Day6	14 Day1	15 Day2	16 Day3	17	(16)陸運會翌日假期	(15)可立陸運會 (19-25) 小一統一派位選校(電子平台) (24,25) 小一統一派位選校(紙本)	
18	18	19 Day2	20 Day3	21 Day4	22 Day5	23 Day6	24	(21-23)綜合活動周及小六教育營 (24)小六運通技巧工作坊		
25	25	26 Day4	27 Day5	28 Day6	29 Day1	30 Day2	31			
2										
1	1	2 Day3	3 Day4	4 Day5	5 Day6	6 Day1	7		(2)第二期課後活動開始 (4)核對小六學段一考試成績	
8	8	9 Day2	10 Day3	11 Day4	12 Day5	13 Day6	14	(11/2-11/3)術科及分卷考試 (13)中華文化日		
15	15	16 Day1	17 Day2	18 Day3	19 Day4	20 Day5	21	(16/2-25/2)農曆新年	(17)農曆年初一	
22	22	23 Day5	24 Day6	25 Day1	26 Day2	27 Day3	28			
3										
1	1	2 Day2	3 Day3	4 Day4	5 Day5	6 Day6	7		(3)遞交兩網派位申請(最後一批)	
8	8	9 Day1	10 Day2	11 Day3	12 Day4	13 Day5	14	(12/3-17/3)小二至小六學段二考試		
15	15	16 Day5	17 Day6	18 Day1	19 Day2	20 Day3	21			
22	22	23 Day1	24 Day2	25 Day3	26 Day4	27 Day5	28	(27)教師發展日		
29	29	30 Day5	31 Day6							

2025 至 2026 學年上學期 (9 月 1 日至 1 月 3 日)

月份	周次	星期						假期/評考	備註
		日	一	二	三	四	五		
2025 9 月	1	31	1	2	3	4	5	6	1-3 開學周(13:10 放學) 4-12 開學適應(13:45 放學) 2 學生拍照 6 學校願景家長會暨分班家長會 15 起全日上課 26 小一成長日
	2	7	8	9	10	11	12	13	
	3	14	15	16	17	18	19	20	
	4	21	22	23	24	25	26	27	
	5	28	29	30					
10 月	5				X	2	3	4	1 國慶日假期 6 教師發展日假期 7 中秋節翌日假期 9 疫苗接種 (P1 & P6) 14 拍攝班相及 P6 畢業照 23 P1-P6 流感疫苗接種 24 P6 家長升中選校晚會 25 P1-6 家長日 1 29 重陽節假期
	6	5	X	X	8	9	10	11	
	7	12	13	14	15	16	17	18	
	8	19	20	21	22	23	24	25	
	9	26	27	28	X	30	31		
11 月	9							1	4 Special Friday 上午為星期五時間表 7 學校旅行 15 浸聯會步行籌款 24, 25, 27, 28 (1130 放學) P2-5 上學期考試 P6 考試(2 nd 呈分) 24-28 P1 特別時間表 26 P2-P6 在家溫習日
	10	2	3	4	5	6	7	8	
	11	9	10	11	12	13	14	15	
	12	16	17	18	19	20	21	22	
	13	23	24	25	26	27	28	29	
12 月	14	30	1	2	3	4	5	6	1-2 補考日 3 P1-P6 流感疫苗接種 (補打或需要打兩針) 11-12 STEAM 戶外學習日 18 P6 家長升中選校晚會 19 聖誕感恩崇拜聯歡會 (13:45 放學) 8 立法會選舉翌日假期 22/12-1/1 聖誕及新年假期
	15	7	X	9	10	11	12	13	
	16	14	15	16	17	18	19	20	
	17	21	22	23	24	25	26	27	
	18	28	29	30	31				
2026 1 月	18				X	2	3	2 教師發展日假期	

2025 至 2026 年度下學期 (1 月 4 日至 7 月 11 日) 2025-12 版本

月份	周次	星期							假期/評考	備註
		日	一	二	三	四	五	六		
2026 1月	1	4	5	6	7	8	9	10	19 家長會補假	17 P1-6 分級家長會 19-21 (高小報名) 梅州河源交流團 30 P3-P4 DS Pitching Day
	2	11	12	13	14	15	16	17		
	3	18	19	20	21	22	23	24		
	4	25	26	27	28	29	30	31		
2月	5	1	2	3	4	5	6	7	11/2-21/2 農曆新年假期	2 疫苗注射 (P1, 5女, 6女) 5 P5 DS Pitching Day 10 中國文化日(13:45 放學)
	6	8	9	10	11	12	13	14		
	7	15	16	17	18	19	20	21		
	8	22	23	24	25	26	27	28		
3月	9	1	2	3	4	5	6	7	9/3-13/3 P6 考試(3 rd 呈分試) P6 11:45 放學 16,17 P6 補考日	11-14 (P5 全體)北京歷史文化及自然科學探索 24 Special Friday 26-30 (高小報名)韓國遊學團 27 復活節佈道會 (13:45 放學)
	10	8	9	10	11	12	13	14		
	11	15	16	17	18	19	20	21		
	12	22	23	24	25	26	27	28		
4月	13	29	30	31	1	2	3	4	30/3-9/4 復活節假期 10 教師發展日假期	17 P6 升中選校會 25 P1-6 家長日 2
	14	5	6	7	8	9	10	11		
	15	12	13	14	15	16	17	18		
	16	19	20	21	22	23	24	25		
5月	17	26	27	28	29	30	1	2	27 家長日補假 1 勞動節假期 25 佛誕翌日假期	30 天虹閱讀日 6, 7 P3TSA 中視聽中英說話 8 P5 家長升中簡介晚會 9 家教會活動日 15 校運會
	18	3	4	5	6	7	8	9		
	19	10	11	12	13	14	15	16		
	20	17	18	19	20	21	22	23		
	21	24	25	26	27	28	29	30		
6月	22	31	1	2	3	4	5	6	1/6-5/6 (1130 放學) P2 -5 下學期評考 P5 1 st 呈分試 1,2,4,5 評考日 8,9 補考日 19 端午節補假 22 成果展補假	由 8/6 至 10/7, 13:45 放學 3-5 P6 福音營 15/6 起 試後活動 15-16 P3 TSA 紙筆評估 20 DS 成果展(全日)
	23	7	8	9	10	11	12	13		
	24	14	15	16	17	18	19	20		
	25	21	22	23	24	25	26	27		
7月	26	28	29	30	1	2	3	4	1 回歸日假期 13/7-31/8 暑假	2 畢業禮綵排(P1-P5 放假) 3 畢業禮感恩崇拜 7 升中放榜 9 P1-P5 結業禮 10 學年歡送日(11:30 放學)
	27	5	6	7	8	9	10	11		
		12	13	14	15	16	17	18		