Building Coupling Loss (BCF)

Building Type		Limit	Building Coupling Loss (dB)					
			16 Hz	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz
1	Large Masonry Building on Pile	Lower	**-6**	**-7**	**-11**	**-13**	**-14**	**-12**
2	Large Masonry Building on Spread Footings	Lower	**-12**	**-14**	**-14**	**-13**	**-11**	**-10**
3	1 to 2 Storey Residential	Lower	**-4**	**-5**	**-5**	**-4**	**-3**	**-1**
4	Building Foundation on Rock Layer		**0**	**0**	**0**	**0**	**0**	**0**

Note(s):
1) Reference: Saurenman, H., Nelson, J., Wilson, G. 1982, Handbook of Urban Rail Noise and Vibration Control, US Department of Transportation Urban Mass Transportation Administration (Figure 8.12)
2) For conservative assessment, the lower limit adjustment factors (**BOLD**) will be used in the study

Building Vibration Response (BVR)

Building Structure Attenuation (BSA) [1]

	Building Structure Attenuation (BSA)					
	16 Hz	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz
Floor Attenuation Factor, dB	0	0	0	0	0	0

Building Structure Resonance (BSR) [2]

	Building Structure Resonance (BSR)					
	16 Hz	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz
Floor Attenuation Factor, dB	6	6	6	6	6	6

Building Vibration Response (BVR) at Ground Floor

	Building Vibration Response (BVR)					
	16 Hz	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz
Building Vibration Response, dB	6	6	6	6	6	6

Building Structure Attenuation (BSA) [1]

	Building Structure Attenuation (BSA)					
	16 Hz	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz
Floor Attenuation Factor, dB	2	2	2	2	2	2

Building Structure Resonance (BSR) [2]

	Building Structure Resonance (BSR)					
	16 Hz	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz
Floor Attenuation Factor, dB	6	6	6	6	6	6

Building Vibration Response (BVR) at First Floor

	Building Vibration Response (BVR)					
	16 Hz	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz
Building Vibration Response, dB	4	4	4	4	4	4

Note(s):
1) Reference: Saurenman, H., Nelson, J., Wilson, G. 1982, Handbook of Urban Rail Noise and Vibration Control, US Department of Transportation Urban Mass Transportation Administration (Figure 8.12)

2) Reference: Hanson, C., Towers, D., Meister, L. 2006, Transit Noise and Vibration Impact Assessment Final Report, US Department of Transportation Urban Mass Transportation Administration.

Building Vibration Response (BVR)

Building Structure Attenuation (BSA) [1]

	Building Structure Attenuation (BSA)					
	16 Hz	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz
Floor Attenuation Factor, dB	4	4	4	4	4	4

Building Structure Resonance (BSR) [2]

	Building Structure Resonance (BSR)					
	16 Hz	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz
Floor Attenuation Factor, dB	6	6	6	6	6	6

Building Vibration Response (BVR) at Second Floor

	Building Vibration Response (BVR)					
	16 Hz	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz
Building Vibration Response, dB	2	2	2	2	2	2

Building Structure Attenuation (BSA) [1]

	Building Structure Attenuation (BSA)					
	16 Hz	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz
Floor Attenuation Factor, dB	6	6	6	6	6	6

Building Structure Resonance (BSR) [2]

	Building Structure Resonance (BSR)					
	16 Hz	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz
Floor Attenuation Factor, dB	6	6	6	6	6	6

Building Vibration Response (BVR) at Third Floor

	Building Vibration Response (BVR)					
	16 Hz	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz
Building Vibration Response, dB	0	0	0	0	0	0

Note(s):
1) Reference: Saurenman, H., Nelson, J., Wilson, G. 1982, Handbook of Urban Rail Noise and Vibration Control, US Department of Transportation Urban Mass Transportation Administration (Figure 8.12)

2) Reference: Hanson, C., Towers, D., Meister, L. 2006, Transit Noise and Vibration Impact Assessment Final Report, US Department of Transportation Urban Mass Transportation Administration.

Building Vibration Response (BVR)

Building Structure Attenuation (BSA) [1]

	Building Structure Attenuation (BSA)					
	16 Hz	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz
Floor Attenuation Factor, dB	8	8	8	8	8	8

Building Structure Resonance (BSR) [2]

	Building Structure Resonance (BSR)					
	16 Hz	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz
Floor Attenuation Factor, dB	6	6	6	6	6	6

Building Vibration Response (BVR) at Forth Floor

	Building Vibration Response (BVR)					
	16 Hz	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz
Building Vibration Response, dB	-2	-2	-2	-2	-2	-2

Building Structure Attenuation (BSA) [1]

	Building Structure Attenuation (BSA)					
	16 Hz	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz
Floor Attenuation Factor, dB	10	10	10	10	10	10

Building Structure Resonance (BSR) [2]

	Building Structure Resonance (BSR)					
	16 Hz	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz
Floor Attenuation Factor, dB	6	6	6	6	6	6

Building Vibration Response (BVR) at Fifth Floor

	Building Vibration Response (BVR)					
	16 Hz	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz
Building Vibration Response, dB	-4	-4	-4	-4	-4	-4

Note(s):
1) Reference: Saurenman, H., Nelson, J., Wilson, G. 1982, Handbook of Urban Rail Noise and Vibration Control, US Department of Transportation Urban Mass Transportation Administration (Figure 8.12)

2) Reference: Hanson, C., Towers, D., Meister, L. 2006, Transit Noise and Vibration Impact Assessment Final Report, US Department of Transportation Urban Mass Transportation Administration.

Conversion from Vibration to Noise (CTN)

	Octave Band Centre Frequency (Hz)					
	16	31.5	63	125	250	500
K_{rad} (dB)	0.0	0.0	0.0	0.0	0.0	0.0
A weighting correction	-56.7	-39.4	-26.2	-16.1	-8.6	-3.2
CTN (for vibration), dB	**-56.7**	**-39.4**	**-26.2**	**-16.1**	**-8.6**	**-3.2**

For L_v vibration level reference to 1 μ in/s

Reverberant Sound Pressure Level, L_A (dBA) = L_v (VdB ref 1μ in/s) + CTN

CTN = K rad + A-weighting Correction

Conversion Factors for Multiple Vibration Sources

No. of Equipments Used Concurrently	Multiple Source Correction, dB(A)
1	0
2	3
3	5
4	6
5	7
>=6	*

Note(*): Multiple Source Correction, dB(A), for no. of equipments used concurrently more than or equal to 6 should be determined by standard acoustic principle.

Conversion Factors for Construction Equipments

Construction Equipments	Construction Site	Vibration (RMS) at Reference Distance of 5.5m from source (mm/s)
Drilling Rig	Salisbury Road Overrun Tunnel	0.536
Hydraulic Breaker	TST site	0.298
Handheld Breaker	New World Centre site	0.279

Ref: Appendix 7-1 of Kowloon Southern Link EIA Report

Conversion from Hydraulic Breaker to Handheld Breaker, dB(A)
= 20 x Log (Virbation (RMS) of Handheld Breaker/ Vibration (RMS) of Hydraulic Breaker)
= 20 x Log (0.279/0.298)
= -0.6 dB(A)

Conversion from Hydraulic Breaker to Drilling Rig, dB(A)
= 20 x Log (Vibration (RMS) of Drilling Rig/ Vibration (RMS) of Hydraulic Breaker)
= 20 x Log (0.536/0.298)
= +5.1 dB(A)

NSR ID.:	SLH	Island Shangri-La Hotel							Building Type:	1
Location:	ADM	NSR distance:	8.0 m							
		Assessment Floor:	4/F							
Items	Description									
					Octave Band Frequency, Hz					
					16	31.5	63	125	250	500
a)	Source Vibratory Velocity		mm/s	=	0.05886	0.06816	0.06195	0.05033	0.06225	0.12091
	(Based on site measurement with an excavator-mounted breaker operating at distance Ro=5.5m)									
b)	Source Vibratory Velocity		in/s	=	2.32E-03	2.68E-03	2.44E-03	1.98E-03	2.45E-03	4.76E-03
c)	Vibration Velocity (ref. 10^-6 in/s)		20 log (V/Vref) dB	=	67	69	68	66	68	74
d)	Distance Attenuation		-20 log (r/ro)							
	r=	8.0 m	dB	=	-3	-3	-3	-3	-3	-3
e)	Soil Damping Loss		dB	=	0	0	0	0	0	0
	(Assume zero as through the Rock)									
f)	Building Coupling Loss		dB	=	-6	-7	-11	-13	-14	-12
g)	Building Vibration Response		dB	=	-2	-2	-2	-2	-2	-2
h)	Conversion from Vibration to Noise		dB	=	-56.7	-39.4	-26.2	-16.1	-8.6	-3.2
i)	Multiple Vibration Soures (C_{multi})		dB	=	0	0	0	0	0	0
j)	Predicted Noise Level for Hydraulic Breaker (c+d+e+f+g+h+i)		dB(A)	=	-1	17	25	32	40	53
								Predicted Noise Level for Hydraulic Breaker		**53.3 dB(A)**
								Corrected Noise Level for Handheld Breaker		**52.8 dB(A)**
								Corrected Noise Level for Drill Rig		**58.4 dB(A)**

NSR ID.:	RP	Regent on the Park							Building Type:	1
Location:	ADM	NSR distance:	87.9 m							
		Assessment Floor:	1/F							
Items	Description									
					Octave Band Frequency, Hz					
					16	31.5	63	125	250	500
a)	Source Vibratory Velocity		mm/s	=	0.05886	0.06816	0.06195	0.05033	0.06225	0.12091
	(Based on site measurement with an excavator-mounted breaker operating at distance Ro=5.5m)									
b)	Source Vibratory Velocity		in/s	=	2.32E-03	2.68E-03	2.44E-03	1.98E-03	2.45E-03	4.76E-03
c)	Vibration Velocity (ref. 10^-6 in/s)		20 log (V/Vref) dB	=	67	69	68	66	68	74
d)	Distance Attenuation		-20 log (r/ro)							
	r=	87.9 m	dB	=	-24	-24	-24	-24	-24	-24
e)	Soil Damping Loss		dB	=	0	0	0	0	0	0
	(Assume zero as through the Rock)									
f)	Building Coupling Loss		dB	=	-6	-7	-11	-13	-14	-12
g)	Building Vibration Response		dB	=	4	4	4	4	4	4
h)	Conversion from Vibration to Noise		dB	=	-56.7	-39.4	-26.2	-16.1	-8.6	-3.2
i)	Multiple Vibration Soures (C_{multi})		dB	=	0	0	0	0	0	0
j)	Predicted Noise Level for Hydraulic Breaker (c+d+e+f+g+h+i)		dB(A)	=	-15	2	10	17	25	38
								Predicted Noise Level for Hydraulic Breaker		**38.5 dB(A)**
								Corrected Noise Level for Handheld Breaker		**37.9 dB(A)**
								Corrected Noise Level for Drill Rig		**43.6 dB(A)**

NSR ID.:	NLH	Jockey Club New Life Hotsel							Building Type:	1	
Location:	ADM	NSR distance:	156.6 m								
		Assessment Floor:	1/F								
Items	Description										
						Octave Band Frequency, Hz					
						16	31.5	63	125	250	500
a)	Source Vibratory Velocity		mm/s	=		0.05886	0.06816	0.06195	0.05033	0.06225	0.12091
	(Based on site measurement with an excavator-mounted breaker operating at distance Ro=5.5m)										
b)	Source Vibratory Velocity		in/s	=		2.32E-03	2.68E-03	2.44E-03	1.98E-03	2.45E-03	4.76E-03
c)	Vibration Velocity (ref. 10^-6 in/s)		20 log (V/Vref) dB	=		67	69	68	66	68	74
d)	Distance Attenuation		-20 log (r/ro)								
	r=	156.6 m	dB	=		-29	-29	-29	-29	-29	-29
e)	Soil Damping Loss		dB	=		0	0	0	0	0	0
	(Assume zero as through the Rock)										
f)	Building Coupling Loss		dB	=		-6	-7	-11	-13	-14	-12
g)	Building Vibration Response		dB	=		4	4	4	4	4	4
h)	Conversion from Vibration to Noise		dB	=		-56.7	-39.4	-26.2	-16.1	-8.6	-3.2
i)	Multiple Vibration Soures (C_{multi})		dB	=		0	0	0	0	0	0
j)	Predicted Noise Level for Hydraulic Breaker (c+d+e+f+g+h+i)		dB(A)	=		-20	-3	5	12	20	33
									Predicted Noise Level for Hydraulic Breaker		**33.5 dB(A)**
									Corrected Noise Level for Handheld Breaker		**32.9 dB(A)**
									Corrected Noise Level for Drill Rig		**38.6 dB(A)**

NSR ID.:	CIS	Carmel School							Building Type:	1	
Location:	ADM	NSR distance:	162.3 m								
		Assessment Floor:	G/F								
Items	Description										
						Octave Band Frequency, Hz					
						16	31.5	63	125	250	500
a)	Source Vibratory Velocity		mm/s	=		0.05886	0.06816	0.06195	0.05033	0.06225	0.12091
	(Based on site measurement with an excavator-mounted breaker operating at distance Ro=5.5m)										
b)	Source Vibratory Velocity		in/s	=		2.32E-03	2.68E-03	2.44E-03	1.98E-03	2.45E-03	4.76E-03
c)	Vibration Velocity (ref. 10^-6 in/s)		20 log (V/Vref) dB	=		67	69	68	66	68	74
d)	Distance Attenuation		-20 log (r/ro)								
	r=	162.3 m	dB	=		-29	-29	-29	-29	-29	-29
e)	Soil Damping Loss		dB	=		0	0	0	0	0	0
	(Assume zero as through the Rock)										
f)	Building Coupling Loss		dB	=		-6	-7	-11	-13	-14	-12
g)	Building Vibration Response		dB	=		6	6	6	6	6	6
h)	Conversion from Vibration to Noise		dB	=		-56.7	-39.4	-26.2	-16.1	-8.6	-3.2
i)	Multiple Vibration Soures (C_{multi})		dB	=		0	0	0	0	0	0
j)	Predicted Noise Level for Hydraulic Breaker (c+d+e+f+g+h+i)		dB(A)	=		-19	-1	7	13	22	35
									Predicted Noise Level for Hydraulic Breaker		**35.2 dB(A)**
									Corrected Noise Level for Handheld Breaker		**34.6 dB(A)**
									Corrected Noise Level for Drill Rig		**40.3 dB(A)**

NSR ID.:	ILS	Island School								Building Type:	1
Location:	ADM	NSR distance:	175.2 m								
		Assessment Floor:	G/F								
Items	Description										
						Octave Band Frequency, Hz					
						16	31.5	63	125	250	500
a)	Source Vibratory Velocity		mm/s	=		0.05886	0.06816	0.06195	0.05033	0.06225	0.12091
	(Based on site measurement with an excavator-mounted breaker operating at distance Ro=5.5m)										
b)	Source Vibratory Velocity		in/s	=		2.32E-03	2.68E-03	2.44E-03	1.98E-03	2.45E-03	4.76E-03
c)	Vibration Velocity (ref. 10^-6 in/s)		20 log (V/Vref) dB	=		67	69	68	66	68	74
d)	Distance Attenuation		-20 log (r/ro)								
	r=	175.2 m	dB	=		-30	-30	-30	-30	-30	-30
e)	Soil Damping Loss		dB	=		0	0	0	0	0	0
	(Assume zero as through the Rock)										
f)	Building Coupling Loss		dB	=		-6	-7	-11	-13	-14	-12
g)	Building Vibration Response		dB	=		6	6	6	6	6	6
h)	Conversion from Vibration to Noise		dB	=		-56.7	-39.4	-26.2	-16.1	-8.6	-3.2
i)	Multiple Vibration Soures (C_{multi})		dB	=		0	0	0	0	0	0
j)	Predicted Noise Level for Hydraulic Breaker		dB(A)	=		-19	-2	6	13	21	34
	(c+d+e+f+g+h+i)										
									Predicted Noise Level for Hydraulic Breaker		**34.5 dB(A)**
									Corrected Noise Level for Handheld Breaker		**34.0 dB(A)**
									Corrected Noise Level for Drill Rig		**39.6 dB(A)**

NSR ID.:	GOV	Non Departmental Quarters								Building Type:	1
Location:	ADM	NSR distance:	175.7 m								
		Assessment Floor:	1/F								
Items	Description										
						Octave Band Frequency, Hz					
						16	31.5	63	125	250	500
a)	Source Vibratory Velocity		mm/s	=		0.05886	0.06816	0.06195	0.05033	0.06225	0.12091
	(Based on site measurement with an excavator-mounted breaker operating at distance Ro=5.5m)										
b)	Source Vibratory Velocity		in/s	=		2.32E-03	2.68E-03	2.44E-03	1.98E-03	2.45E-03	4.76E-03
c)	Vibration Velocity (ref. 10^-6 in/s)		20 log (V/Vref) dB	=		67	69	68	66	68	74
d)	Distance Attenuation		-20 log (r/ro)								
	r=	175.7 m	dB	=		-30	-30	-30	-30	-30	-30
e)	Soil Damping Loss		dB	=		0	0	0	0	0	0
	(Assume zero as through the Rock)										
f)	Building Coupling Loss		dB	=		-6	-7	-11	-13	-14	-12
g)	Building Vibration Response		dB	=		4	4	4	4	4	4
h)	Conversion from Vibration to Noise		dB	=		-56.7	-39.4	-26.2	-16.1	-8.6	-3.2
i)	Multiple Vibration Soures (C_{multi})		dB	=		0	0	0	0	0	0
j)	Predicted Noise Level for Hydraulic Breaker		dB(A)	=		-21	-4	4	11	19	32
	(c+d+e+f+g+h+i)										
									Predicted Noise Level for Hydraulic Breaker		**32.5 dB(A)**
									Corrected Noise Level for Handheld Breaker		**31.9 dB(A)**
									Corrected Noise Level for Drill Rig		**37.6 dB(A)**

NSR ID	Description	Land Use	Existing/ Planned NSR	No. of Floor	Assessment Floor	mPD	Ground-borne Noise Criteria, dB(A)	Activity	Distance (m)			No. of Hydraulic Breakers used on site	Multiple Source correction, dB(A)	No. of Hand-held Breakers used on site	Multiple Source correction, dB(A)	No. of Rock Drills/ Drilling Rig used on site	Multiple Source correction, dB(A)	Ground-borne Noise Impact from Hyraulic Breakers, dB(A)	Ground-borne Noise Impact from Hand-held Breakers, dB(A)	Ground-borne Noise Impact from Rock Drill/ Drilling Rig, dB(A)	Ground-borne Noise of each Activity, dB(A)
							Daytime		Horizontal	Vertical	Slant										
Hong Kong Park & Tunnel																					
SLH	Island Shangri-La Hotel	Hotel	Existing	27	4/F	58.7	65	6 7	0.0 0.0	8.0 8.0	8.0 8.0	1 1	0 0	2 2	3 3	1 1	0 0	53 53	56 56	58 58	61 61
RP	Regent on the Park	Residential	Existing	35	1/F	67.4	65	6 7	24.0 24.0	84.6 84.6	87.9 87.9	1 1	0 0	2 2	3 3	1 1	0 0	39 39	41 41	44 44	46 46
NLH	Jockey Club New Life Hostel	Hostel	Existing	4	1/F	83.8	65	6 7	115.5 115.5	105.7 105.7	156.6 156.6	1 1	0 0	2 2	3 3	1 1	0 0	34 34	36 36	39 39	41 41
CIS	Carmel School	Educational	Existing	3	G/F	135.6	60	6 7	6.0 6.0	162.2 162.2	162.3 162.3	1 1	0 0	2 2	3 3	1 1	0 0	35 35	38 38	40 40	43 43
ILS	Island School	Educational	Existing	5	G/F	147.2	60	6 7	0.0 0.0	175.2 175.2	175.2 175.2	1 1	0 0	2 2	3 3	1 1	0 0	35 35	37 37	40 40	42 42
GOV	Non Departmental Quarters	Educational	Existing	11	1/F	171.6	65	6 7	0.0 0.0	175.7 175.7	175.7 175.7	1 1	0 0	2 2	3 3	1 1	0 0	33 33	35 35	38 38	40 40

Note: The vertical distance is measured between the SIL(E) tunnel and the pile foundation of NSRs, except SLH which is measured between the SCL overrun tunnel and the pile foundation.

NSR ID.:	SPPS	St's Paul Co-educational Primary School							Building Type:	1
Location:	Nam Fung	NSR distance:	60.0 m							
		Assessment Floor:	1/F							
Items	Description									
					Octave Band Frequency, Hz					
					16	31.5	63	125	250	500
a)	Source Vibratory Velocity		mm/s	=	0.05886	0.06816	0.06195	0.05033	0.06225	0.12091
	(Based on site measurement with an excavator-mounted breaker operating at distance Ro=5.5m)									
b)	Source Vibratory Velocity		in/s	=	2.32E-03	2.68E-03	2.44E-03	1.98E-03	2.45E-03	4.76E-03
c)	Vibration Velocity (ref. 10^-6 in/s)		20 log (V/Vref) dB	=	67	69	68	66	68	74
d)	Distance Attenuation		-20 log (r/ro)							
	r=	60.0 m	dB	=	-21	-21	-21	-21	-21	-21
e)	Soil Damping Loss		dB	=	0	0	0	0	0	0
	(Assume zero as through the Rock)									
f)	Building Coupling Loss		dB	=	-6	-7	-11	-13	-14	-12
g)	Building Vibration Response		dB	=	4	4	4	4	4	4
h)	Conversion from Vibration to Noise		dB	=	-56.7	-39.4	-26.2	-16.1	-8.6	-3.2
i)	Multiple Vibration Soures (C_{multi})		dB	=	0	0	0	0	0	0
j)	Predicted Noise Level for Hydraulic Breaker		dB(A)	=	-12	5	14	20	28	42
	(c+d+e+f+g+h+i)									
								Predicted Noise Level for Hydraulic Breaker		**41.8 dB(A)**
								Corrected Noise Level for Drill Rig		**46.9 dB(A)**

NSR ID	Description	Land Use	Existing/ Planned NSR	No. of Floor	Assessment Floor	Ground-borne Noise Criteria, dB(A)	Activity	Distance (m)			No. of Hydraulic Breakers used on site	Multiple Source correction, dB(A)	No. of Hand-held Breakers used on site	Multiple Source correction, dB(A)	No. of Rock Drills/ Drilling Rig used on site	Multiple Source correction, dB(A)	Ground-borne Noise Impact from Hyraulic Breakers, dB(A)	Ground-borne Noise Impact from Hand-held Breakers, dB(A)	Ground-borne Noise Impact from Rock Drill/ Drilling Rig, dB(A)	Ground-borne Noise of each Activity, dB(A)
						Daytime		Horizontal	Vertical	Slant										
Nam Fung Portal																				
SPSS	St's Paul Co-educational Primary School	Educational	Existing	7	1/F	60	4	60.0	0.0	60.0	0	0	0	0	4	6	0	0	53	53

NSR ID.:	SWT1	Sham Wan Towers - Tower 1							Building Type:	1	
Location:	Sham Wan	NSR distance:	37.5 m								
		Assessment Floor:	1/F + 2 level podium								
Items	Description										
					Octave Band Frequency, Hz						
					16	31.5	63	125	250	500	
a)	Source Vibratory Velocity		mm/s	=	0.05886	0.06816	0.06195	0.05033	0.06225	0.12091	
	(Based on site measurement with an excavator-mounted breaker operating at distance Ro=5.5m)										
b)	Source Vibratory Velocity		in/s	=	2.32E-03	2.68E-03	2.44E-03	1.98E-03	2.45E-03	4.76E-03	
c)	Vibration Velocity (ref. 10^-6 in/s)		20 log (V/Vref) dB	=	67	69	68	66	68	74	
d)	Distance Attenuation		-20 log (r/ro)								
	r=	37.5 m	dB	=	-17	-17	-17	-17	-17	-17	
e)	Soil Damping Loss		dB	=	0	0	0	0	0	0	
	(Assume zero as through the Rock)										
f)	Building Coupling Loss		dB	=	-6	-7	-11	-13	-14	-12	
g)	Building Vibration Response		dB	=	0	0	0	0	0	0	
h)	Conversion from Vibration to Noise		dB	=	-56.7	-39.4	-26.2	-16.1	-8.6	-3.2	
i)	Multiple Vibration Soures (C_{multi})		dB	=	0	0	0	0	0	0	
j)	Predicted Noise Level for Hydraulic Breaker		dB(A)	=	-12	6	14	20	29	42	
	(c+d+e+f+g+h+i)										
								Predicted Noise Level for Hydraulic Breaker		**41.9 dB(A)**	
								Corrected Noise Level for Drill Rig		**47.0 dB(A)**	

NSR ID	Description	Land Use	Existing/ Planned NSR	No. of Floor	Assessment Floor	Ground-borne Noise Criteria, dB(A)	Activity	Distance (m)			No. of Hydraulic Breakers used on site	Multiple Source correction, dB(A)	No. of Hand-held Breakers used on site	Multiple Source correction, dB(A)	No. of Rock Drills/ Drilling Rig used on site	Multiple Source correction, dB(A)	Ground-borne Noise Impact from Hyraulic Breakers, dB(A)	Ground-borne Noise Impact from Hand-held Breakers, dB(A)	Ground-borne Noise Impact from Rock Drill/ Drilling Rig, dB(A)	Ground-borne Noise of each Activity, dB(A)
						Daytime		Horizontal	Vertical	Slant										
Cut and Cover Work near Sham Wan																				
SWT1	Sham Wan Towers - Tower 1	Residential	Existing	43	1/F	65	5	37.5	0.0	37.5	0	0	0	0	2	3	0	0	50	50

NSR ID.:	YOC1	Yue On Court - Pik On House (Block C)							Building Type:	4
Location:	LET	NSR distance:	34.7 m							
		Assessment Floor:	1/F							
Items	Description									
					Octave Band Frequency, Hz					
					16	31.5	63	125	250	500
a)	Source Vibratory Velocity		mm/s	=	0.05886	0.06816	0.06195	0.05033	0.06225	0.12091
	(Based on site measurement with an excavator-mounted breaker operating at distance Ro=5.5m)									
b)	Source Vibratory Velocity		in/s	=	2.32E-03	2.68E-03	2.44E-03	1.98E-03	2.45E-03	4.76E-03
c)	Vibration Velocity (ref. 10^-6 in/s)		20 log (V/Vref) dB	=	67	69	68	66	68	74
d)	Distance Attenuation		-20 log (r/ro)							
	r=	34.7 m	dB	=	-16	-16	-16	-16	-16	-16
e)	Soil Damping Loss		dB	=	0	0	0	0	0	0
	(Assume zero as through the Rock)									
f)	Building Coupling Loss		dB	=	0	0	0	0	0	0
g)	Building Vibration Response		dB	=	4	4	4	4	4	4
h)	Conversion from Vibration to Noise		dB	=	-56.7	-39.4	-26.2	-16.1	-8.6	-3.2
i)	Multiple Vibration Soures (C_{multi})		dB	=	0	0	0	0	0	0
j)	Predicted Noise Level for Hydraulic Breaker (c+d+e+f+g+h+i)		dB(A)	=	-1	17	30	38	47	58
								Predicted Noise Level for Hydraulic Breaker		**58.7 dB(A)**
								Corrected Noise Level for Drill Rig		**63.8 dB(A)**

NSR ID.:	YOC2	Yue On Court - Tse On House (Block D)							Building Type:	4
Location:	LET	NSR distance:	35.8 m							
		Assessment Floor:	1/F							
Items	Description									
					Octave Band Frequency, Hz					
					16	31.5	63	125	250	500
a)	Source Vibratory Velocity		mm/s	=	0.05886	0.06816	0.06195	0.05033	0.06225	0.12091
	(Based on site measurement with an excavator-mounted breaker operating at distance Ro=5.5m)									
b)	Source Vibratory Velocity		in/s	=	2.32E-03	2.68E-03	2.44E-03	1.98E-03	2.45E-03	4.76E-03
c)	Vibration Velocity (ref. 10^-6 in/s)		20 log (V/Vref) dB	=	67	69	68	66	68	74
d)	Distance Attenuation		-20 log (r/ro)							
	r=	35.8 m	dB	=	-16	-16	-16	-16	-16	-16
e)	Soil Damping Loss		dB	=	0	0	0	0	0	0
	(Assume zero as through the Rock)									
f)	Building Coupling Loss		dB	=	0	0	0	0	0	0
g)	Building Vibration Response		dB	=	4	4	4	4	4	4
h)	Conversion from Vibration to Noise		dB	=	-56.7	-39.4	-26.2	-16.1	-8.6	-3.2
i)	Multiple Vibration Soures (C_{multi})		dB	=	0	0	0	0	0	0
j)	Predicted Noise Level for Hydraulic Breaker (c+d+e+f+g+h+i)		dB(A)	=	-2	17	29	38	47	58
								Predicted Noise Level for Hydraulic Breaker		**58.4 dB(A)**
								Corrected Noise Level for Drill Rig		**63.5 dB(A)**

NSR ID.:	YOC4	Yue On Court - Shan On House (Block F)								Building Type:	4
Location:	LET	NSR distance:	12.2 m								
		Assessment Floor:	1/F								
Items	Description										
					Octave Band Frequency, Hz						
					16	31.5	63	125	250	500	
a)	Source Vibratory Velocity		mm/s	=	0.05886	0.06816	0.06195	0.05033	0.06225	0.12091	
	(Based on site measurement with an excavator-mounted breaker operating at distance Ro=5.5m)										
b)	Source Vibratory Velocity		in/s	=	2.32E-03	2.68E-03	2.44E-03	1.98E-03	2.45E-03	4.76E-03	
c)	Vibration Velocity (ref. 10^-6 in/s)		20 log (V/Vref) dB	=	67	69	68	66	68	74	
d)	Distance Attenuation		-20 log (r/ro)								
	r=	12.2 m	dB	=	-7	-7	-7	-7	-7	-7	
e)	Soil Damping Loss		dB	=	0	0	0	0	0	0	
	(Assume zero as through the Rock)										
f)	Building Coupling Loss		dB	=	0	0	0	0	0	0	
g)	Building Vibration Response		dB	=	4	4	4	4	4	4	
h)	Conversion from Vibration to Noise		dB	=	-56.7	-39.4	-26.2	-16.1	-8.6	-3.2	
i)	Multiple Vibration Soures (C_{multi})		dB	=	0	0	0	0	0	0	
j)	Predicted Noise Level for Hydraulic Breaker (c+d+e+f+g+h+i)		dB(A)	=	8	26	39	47	56	67	
								Predicted Noise Level for Hydraulic Breaker		**67.8 dB(A)**	
								Corrected Noise Level for Drill Rig		**72.9 dB(A)**	

NSR ID.:	SPC	Aberdeen Baptist Lui Ming Choi College								Building Type:	4
Location:	LET	NSR distance:	47.9 m								
		Assessment Floor:	1/F								
Items	Description										
					Octave Band Frequency, Hz						
					16	31.5	63	125	250	500	
a)	Source Vibratory Velocity		mm/s	=	0.05886	0.06816	0.06195	0.05033	0.06225	0.12091	
	(Based on site measurement with an excavator-mounted breaker operating at distance Ro=5.5m)										
b)	Source Vibratory Velocity		in/s	=	2.32E-03	2.68E-03	2.44E-03	1.98E-03	2.45E-03	4.76E-03	
c)	Vibration Velocity (ref. 10^-6 in/s)		20 log (V/Vref) dB	=	67	69	68	66	68	74	
d)	Distance Attenuation		-20 log (r/ro)								
	r=	47.9 m	dB	=	-19	-19	-19	-19	-19	-19	
e)	Soil Damping Loss		dB	=	0	0	0	0	0	0	
	(Assume zero as through the Rock)										
f)	Building Coupling Loss		dB	=	0	0	0	0	0	0	
g)	Building Vibration Response		dB	=	4	4	4	4	4	4	
h)	Conversion from Vibration to Noise		dB	=	-56.7	-39.4	-26.2	-16.1	-8.6	-3.2	
i)	Multiple Vibration Soures (C_{multi})		dB	=	0	0	0	0	0	0	
j)	Predicted Noise Level for Hydraulic Breaker (c+d+e+f+g+h+i)		dB(A)	=	-4	14	27	35	44	56	
								Predicted Noise Level for Hydraulic Breaker		**55.9 dB(A)**	
								Corrected Noise Level for Drill Rig		**61.0 dB(A)**	

NSR ID.:	LMCC	St Peter's Catholic Primary School								Building Type:	4
Location:	LET	NSR distance:	56.0 m								
		Assessment Floor:	1/F								
Items	Description										
						Octave Band Frequency, Hz					
						16	31.5	63	125	250	500
a)	Source Vibratory Velocity		mm/s	=		0.05886	0.06816	0.06195	0.05033	0.06225	0.12091
	(Based on site measurement with an excavator-mounted breaker operating at distance Ro=5.5m)										
b)	Source Vibratory Velocity		in/s	=		2.32E-03	2.68E-03	2.44E-03	1.98E-03	2.45E-03	4.76E-03
c)	Vibration Velocity (ref. 10^-6 in/s)		20 log (V/Vref) dB	=		67	69	68	66	68	74
d)	Distance Attenuation		-20 log (r/ro)								
	r=	56.0 m	dB	=		-20	-20	-20	-20	-20	-20
e)	Soil Damping Loss		dB	=		0	0	0	0	0	0
	(Assume zero as through the Rock)										
f)	Building Coupling Loss		dB	=		0	0	0	0	0	0
g)	Building Vibration Response		dB	=		4	4	4	4	4	4
h)	Conversion from Vibration to Noise		dB	=		-56.7	-39.4	-26.2	-16.1	-8.6	-3.2
i)	Multiple Vibration Soures (C_{multi})		dB	=		0	0	0	0	0	0
j)	Predicted Noise Level for Hydraulic Breaker (c+d+e+f+g+h+i)		dB(A)	=		-6	13	25	34	43	54
									Predicted Noise Level for Hydraulic Breaker		**54.6 dB(A)**
									Corrected Noise Level for Drill Rig		**59.6 dB(A)**

NSR ID.:	LDN	Lei Tung Lutheran Day Nursery (G/F of Tung Mau House)								Building Type:	4
Location:	LET	NSR distance:	56.3 m								
		Assessment Floor:	G/F								
Items	Description										
						Octave Band Frequency, Hz					
						16	31.5	63	125	250	500
a)	Source Vibratory Velocity		mm/s	=		0.05886	0.06816	0.06195	0.05033	0.06225	0.12091
	(Based on site measurement with an excavator-mounted breaker operating at distance Ro=5.5m)										
b)	Source Vibratory Velocity		in/s	=		2.32E-03	2.68E-03	2.44E-03	1.98E-03	2.45E-03	4.76E-03
c)	Vibration Velocity (ref. 10^-6 in/s)		20 log (V/Vref) dB	=		67	69	68	66	68	74
d)	Distance Attenuation		-20 log (r/ro)								
	r=	56.3 m	dB	=		-20	-20	-20	-20	-20	-20
e)	Soil Damping Loss		dB	=		0	0	0	0	0	0
	(Assume zero as through the Rock)										
f)	Building Coupling Loss		dB	=		0	0	0	0	0	0
g)	Building Vibration Response		dB	=		6	6	6	6	6	6
h)	Conversion from Vibration to Noise		dB	=		-56.7	-39.4	-26.2	-16.1	-8.6	-3.2
i)	Multiple Vibration Soures (C_{multi})		dB	=		0	0	0	0	0	0
j)	Predicted Noise Level for Hydraulic Breaker (c+d+e+f+g+h+i)		dB(A)	=		-4	15	27	36	45	56
									Predicted Noise Level for Hydraulic Breaker		**56.5 dB(A)**
									Corrected Noise Level for Drill Rig		**61.6 dB(A)**

NSR ID.:	CMA	CMA Lei Tung Child Care Centre (G/F of Tung Hing House)							Building Type:	4
Location:	LET	NSR distance:	66.8 m							
		Assessment Floor:	G/F							
Items	Description									
					Octave Band Frequency, Hz					
					16	31.5	63	125	250	500
a)	Source Vibratory Velocity		mm/s	=	0.05886	0.06816	0.06195	0.05033	0.06225	0.12091
	(Based on site measurement with an excavator-mounted breaker operating at distance Ro=5.5m)									
b)	Source Vibratory Velocity		in/s	=	2.32E-03	2.68E-03	2.44E-03	1.98E-03	2.45E-03	4.76E-03
c)	Vibration Velocity (ref. 10^-6 in/s)		20 log (V/Vref) dB	=	67	69	68	66	68	74
d)	Distance Attenuation		-20 log (r/ro)							
	r=	66.8 m	dB	=	-22	-22	-22	-22	-22	-22
e)	Soil Damping Loss		dB	=	0	0	0	0	0	0
	(Assume zero as through the Rock)									
f)	Building Coupling Loss		dB	=	0	0	0	0	0	0
g)	Building Vibration Response		dB	=	6	6	6	6	6	6
h)	Conversion from Vibration to Noise		dB	=	-56.7	-39.4	-26.2	-16.1	-8.6	-3.2
i)	Multiple Vibration Soures (C_{multi})		dB	=	0	0	0	0	0	0
j)	Predicted Noise Level for Hydraulic Breaker (c+d+e+f+g+h+i)		dB(A)	=	-5	13	26	34	43	55
								Predicted Noise Level for Hydraulic Breaker		**55.0 dB(A)**
								Corrected Noise Level for Drill Rig		**60.1 dB(A)**

NSR ID.:	AKPS	Apleichau Kaifong Primary School							Building Type:	4
Location:	LET	NSR distance:	54.3 m							
		Assessment Floor:	1/F							
Items	Description									
					Octave Band Frequency, Hz					
					16	31.5	63	125	250	500
a)	Source Vibratory Velocity		mm/s	=	0.05886	0.06816	0.06195	0.05033	0.06225	0.12091
	(Based on site measurement with an excavator-mounted breaker operating at distance Ro=5.5m)									
b)	Source Vibratory Velocity		in/s	=	2.32E-03	2.68E-03	2.44E-03	1.98E-03	2.45E-03	4.76E-03
c)	Vibration Velocity (ref. 10^-6 in/s)		20 log (V/Vref) dB	=	67	69	68	66	68	74
d)	Distance Attenuation		-20 log (r/ro)							
	r=	54.3 m	dB	=	-20	-20	-20	-20	-20	-20
e)	Soil Damping Loss		dB	=	0	0	0	0	0	0
	(Assume zero as through the Rock)									
f)	Building Coupling Loss		dB	=	0	0	0	0	0	0
g)	Building Vibration Response		dB	=	4	4	4	4	4	4
h)	Conversion from Vibration to Noise		dB	=	-56.7	-39.4	-26.2	-16.1	-8.6	-3.2
i)	Multiple Vibration Soures (C_{multi})		dB	=	0	0	0	0	0	0
j)	Predicted Noise Level for Hydraulic Breaker (c+d+e+f+g+h+i)		dB(A)	=	-5	13	26	34	43	54
								Predicted Noise Level for Hydraulic Breaker		**54.8 dB(A)**
								Corrected Noise Level for Drill Rig		**59.9 dB(A)**

NSR ID	Description	Land Use	Existing/ Planned NSR	No. of Floor	Assessment Floor	mPD	Ground-borne Noise Criteria, dB(A)	Activity	Distance (m)			No. of Hydraulic Breakers used on site	Multiple Source correction, dB(A)	No. of Hand-held Breakers used on site	Multiple Source correction, dB(A)	No. of Rock Drills/ Drilling Rig used on site	Multiple Source correction, dB(A)	Ground-borne Noise Impact from Hyraulic Breakers, dB(A)	Ground-borne Noise Impact from Hand-held Breakers, dB(A)	Ground-borne Noise Impact from Rock Drill/ Drilling Rig, dB(A)	Ground-borne Noise of each Activity, dB(A)
							Daytime		Horizontal	Vertical	Slant										
LET Station																					
YOC1	Yue On Court - Pik On House (Block C)	Residential	Existing	35	1/F	46.5	65	1	2.1	34.6	34.7	0	0	0	0	1	0	0	0	64	64
YOC2	Yue On Court - Tse On House (Block D)	Residential	Existing	35	1/F	46.5	65	1	0.6	35.8	35.8	0	0	0	0	1	0	0	0	64	64
YOC4	Yue On Court - Shan On House (Block F)	Residential	Existing	35	1/F	36.9	65	1	5.4	10.9	12.2	0	0	0	0	1	0	0	0	73	73
SPC	Aberdeen Baptist Lui Ming Choi College	School	Existing	8	1/F	58.0	60	1	0.0	47.9	47.9	0	0	0	0	1	0	0	0	61	61
LMCC	St Peter's Catholic Primary School	School	Existing	7	1/F	64.0	60	1	15.0	54.0	56.0	0	0	0	0	1	0	0	0	60	60
LDN	Lei Tung Lutheran Day Nursery (G/F of Tung Mau House)	Nursery	Existing	1	G/F	63.7	65	1	0.0	56.3	56.3	0	0	0	0	1	0	0	0	62	62
CMA	CMA Lei Tung Child Care Centre (G/F of Tung Hing House)	Nursery	Existing	1	G/F	69.6	65	1	0.0	66.8	66.8	0	0	0	0	1	0	0	0	60	60
AKPS	Apleichau Kaifong Primary School	School	Existing	7	1/F	68.1	60	1	0.0	54.3	54.3	0	0	0	0	1	0	0	0	60	60

NSR ID.:	SOH5	South Horizons Phase III - Mei Cheung Court (Block 20)							Building Type:	1	
Location:	SOH	NSR distance:	8.0 m								
		Assessment Floor:	1/F plus 3 level podium								
Items	Description										
					Octave Band Frequency, Hz						
					16	31.5	63	125	250	500	
a)	Source Vibratory Velocity		mm/s	=	0.05886	0.06816	0.06195	0.05033	0.06225	0.12091	
	(Based on site measurement with an excavator-mounted breaker operating at distance Ro=5.5m)										
b)	Source Vibratory Velocity		in/s	=	2.32E-03	2.68E-03	2.44E-03	1.98E-03	2.45E-03	4.76E-03	
c)	Vibration Velocity (ref. 10^-6 in/s)		20 log (V/Vref) dB	=	67	69	68	66	68	74	
d)	Distance Attenuation		-20 log (r/ro)								
	r=	8.0 m	dB	=	-3	-3	-3	-3	-3	-3	
e)	Soil Damping Loss		dB	=	0	0	0	0	0	0	
	(Assume zero as through the Rock)										
f)	Building Coupling Loss		dB	=	-6	-7	-11	-13	-14	-12	
g)	Building Vibration Response		dB	=	-2	-2	-2	-2	-2	-2	
h)	Conversion from Vibration to Noise		dB	=	-56.7	-39.4	-26.2	-16.1	-8.6	-3.2	
i)	Multiple Vibration Soures (C_{multi})		dB	=	0	0	0	0	0	0	
j)	Predicted Noise Level for Hydraulic Breaker		dB(A)	=	-1	17	25	32	40	53	
	(c+d+e+f+g+h+i)										
								Predicted Noise Level for Hydraulic Breaker		**53.3 dB(A)**	
								Corrected Noise Level for Handheld Breaker		**52.8 dB(A)**	
								Corrected Noise Level for Drill Rig		**58.4 dB(A)**	

NSR ID.:	SOH6	South Horizons Phase III - Mei Cheung Court (Block 23A)							Building Type:	1	
Location:	SOH	NSR distance:	8.0 m								
		Assessment Floor:	1/F plus 3 level podium								
Items	Description										
					Octave Band Frequency, Hz						
					16	31.5	63	125	250	500	
a)	Source Vibratory Velocity		mm/s	=	0.05886	0.06816	0.06195	0.05033	0.06225	0.12091	
	(Based on site measurement with an excavator-mounted breaker operating at distance Ro=5.5m)										
b)	Source Vibratory Velocity		in/s	=	2.32E-03	2.68E-03	2.44E-03	1.98E-03	2.45E-03	4.76E-03	
c)	Vibration Velocity (ref. 10^-6 in/s)		20 log (V/Vref) dB	=	67	69	68	66	68	74	
d)	Distance Attenuation		-20 log (r/ro)								
	r=	8.0 m	dB	=	-3	-3	-3	-3	-3	-3	
e)	Soil Damping Loss		dB	=	0	0	0	0	0	0	
	(Assume zero as through the Rock)										
f)	Building Coupling Loss		dB	=	-6	-7	-11	-13	-14	-12	
g)	Building Vibration Response		dB	=	-2	-2	-2	-2	-2	-2	
h)	Conversion from Vibration to Noise		dB	=	-56.7	-39.4	-26.2	-16.1	-8.6	-3.2	
i)	Multiple Vibration Soures (C_{multi})		dB	=	0	0	0	0	0	0	
j)	Predicted Noise Level for Hydraulic Breaker		dB(A)	=	-1	17	25	32	40	53	
	(c+d+e+f+g+h+i)										
								Predicted Noise Level for Hydraulic Breaker		**53.3 dB(A)**	
								Corrected Noise Level for Handheld Breaker		**52.8 dB(A)**	
								Corrected Noise Level for Drill Rig		**58.4 dB(A)**	

NSR ID.:	SOH7	South Horizons Phase III - Mei Cheung Court (Block 33A)							Building Type:	1	
Location:	SOH	NSR distance:	12.5 m								
		Assessment Floor:	1/F plus 4 level podium								
Items	Description										
						Octave Band Frequency, Hz					
						16	31.5	63	125	250	500
a)	Source Vibratory Velocity		mm/s	=		0.05886	0.06816	0.06195	0.05033	0.06225	0.12091
	(Based on site measurement with an excavator-mounted breaker operating at distance Ro=5.5m)										
b)	Source Vibratory Velocity		in/s	=		2.32E-03	2.68E-03	2.44E-03	1.98E-03	2.45E-03	4.76E-03
c)	Vibration Velocity (ref. 10^-6 in/s)		20 log (V/Vref) dB	=		67	69	68	66	68	74
d)	Distance Attenuation		-20 log (r/ro)								
	r=	12.5 m	dB	=		-7	-7	-7	-7	-7	-7
e)	Soil Damping Loss		dB	=		0	0	0	0	0	0
	(Assume zero as through the Rock)										
f)	Building Coupling Loss		dB	=		-6	-7	-11	-13	-14	-12
g)	Building Vibration Response		dB	=		-4	-4	-4	-4	-4	-4
h)	Conversion from Vibration to Noise		dB	=		-56.7	-39.4	-26.2	-16.1	-8.6	-3.2
i)	Multiple Vibration Soures (C_{multi})		dB	=		0	0	0	0	0	0
j)	Predicted Noise Level for Hydraulic Breaker		dB(A)	=		-7	11	19	26	34	47
	(c+d+e+f+g+h+i)										
									Predicted Noise Level for Hydraulic Breaker		**47.5 dB(A)**
									Corrected Noise Level for Handheld Breaker		**46.9 dB(A)**
									Corrected Noise Level for Drill Rig		**52.6 dB(A)**

NSR ID.:	SOH8	South Horizons Phase III - Mei Cheung Court (Block 25)							Building Type:	1	
Location:	SOH	NSR distance:	4.5 m								
		Assessment Floor:	1/F plus 4 level podium								
Items	Description										
						Octave Band Frequency, Hz					
						16	31.5	63	125	250	500
a)	Source Vibratory Velocity		mm/s	=		0.05886	0.06816	0.06195	0.05033	0.06225	0.12091
	(Based on site measurement with an excavator-mounted breaker operating at distance Ro=5.5m)										
b)	Source Vibratory Velocity		in/s	=		2.32E-03	2.68E-03	2.44E-03	1.98E-03	2.45E-03	4.76E-03
c)	Vibration Velocity (ref. 10^-6 in/s)		20 log (V/Vref) dB	=		67	69	68	66	68	74
d)	Distance Attenuation		-20 log (r/ro)								
	r=	4.5 m	dB	=		2	2	2	2	2	2
e)	Soil Damping Loss		dB	=		0	0	0	0	0	0
	(Assume zero as through the Rock)										
f)	Building Coupling Loss		dB	=		-6	-7	-11	-13	-14	-12
g)	Building Vibration Response		dB	=		-4	-4	-4	-4	-4	-4
h)	Conversion from Vibration to Noise		dB	=		-56.7	-39.4	-26.2	-16.1	-8.6	-3.2
i)	Multiple Vibration Soures (C_{multi})		dB	=		0	0	0	0	0	0
j)	Predicted Noise Level for Hydraulic Breaker		dB(A)	=		2	20	28	35	43	56
	(c+d+e+f+g+h+i)										
									Predicted Noise Level for Hydraulic Breaker		**56.3 dB(A)**
									Corrected Noise Level for Handheld Breaker		**55.8 dB(A)**
									Corrected Noise Level for Drill Rig		**61.4 dB(A)**

NSR ID.:	PBPS	Precious Blood Primary School (South Horizons)							Building Type:	1
Location:	SOH	NSR distance:	75.0 m							
		Assessment Floor:	1/F							
Items	Description									
					Octave Band Frequency, Hz					
					16	31.5	63	125	250	500
a)	Source Vibratory Velocity		mm/s	=	0.05886	0.06816	0.06195	0.05033	0.06225	0.12091
	(Based on site measurement with an excavator-mounted breaker operating at distance Ro=5.5m)									
b)	Source Vibratory Velocity		in/s	=	2.32E-03	2.68E-03	2.44E-03	1.98E-03	2.45E-03	4.76E-03
c)	Vibration Velocity (ref. 10^-6 in/s)		20 log (V/Vref) dB	=	67	69	68	66	68	74
d)	Distance Attenuation		-20 log (r/ro)							
	r=	75.0 m	dB	=	-23	-23	-23	-23	-23	-23
e)	Soil Damping Loss		dB	=	0	0	0	0	0	0
	(Assume zero as through the Rock)									
f)	Building Coupling Loss		dB	=	-6	-7	-11	-13	-14	-12
g)	Building Vibration Response		dB	=	4	4	4	4	4	4
h)	Conversion from Vibration to Noise		dB	=	-56.7	-39.4	-26.2	-16.1	-8.6	-3.2
i)	Multiple Vibration Soures (C_{multi})		dB	=	0	0	0	0	0	0
j)	Predicted Noise Level for Hydraulic Breaker		dB(A)	=	-14	3	12	18	26	40
	(c+d+e+f+g+h+i)									
								Predicted Noise Level for Hydraulic Breaker		**39.9 dB(A)**
								Corrected Noise Level for Handheld Breaker		**39.3 dB(A)**
								Corrected Noise Level for Drill Rig		**45.0 dB(A)**

NSR ID	Description	Land Use	Existing/ Planned NSR	No. of Floor	Assessment Floor	Ground-borne Noise Criteria, dB(A)	Activity	Distance (m)			No. of Hydraulic Breakers used on site	Multiple Source correction, dB(A)	No. of Hand-held Breakers used on site	Multiple Source correction, dB(A)	No. of Rock Drills/ Drilling Rig used on site	Multiple Source correction, dB(A)	Ground-borne Noise Impact from Hyraulic Breakers, dB(A)	Ground-borne Noise Impact from Hand-held Breakers, dB(A)	Ground-borne Noise Impact from Rock Drill/ Drilling Rig, dB(A)	Ground-borne Noise of each Activity, dB(A)
						Daytime		Horizontal	Vertical	Slant										
SOH Station																				
SOH5	South Horizons Phase III - Mei Cheung Court (Block 20)	Residential	Existing	40	1/F	65	5	8.0	0.0	8.0	0	0	1	0	2	3	0	53	61	62
SOH6	South Horizons Phase III - Mei Ka Court (Block 23A)	Residential	Existing	39	1/F	65	5	8.0	0.0	8.0	0	0	1	0	2	3	0	53	61	62
SOH7	South Horizons Phase IV - Cambridge Court (Block 33A)	Residential	Existing	25	1/F	65	5	12.5	0.0	12.5	0	0	1	0	2	3	0	47	56	56
SOH8	South Horizons Phase IV - Dover Court (Block 25)	Residential	Existing	35	1/F	65	5	4.5	0.0	4.5	0	0	1	0	2	3	0	56	64	65
PBPS	Precious Blood Primary School (South Horizons)	Educational	Existing	7	1/F	60	5	75.0	0.0	75.0	0	0	1	0	2	3	0	39	48	49