

Unmitigated SWLs			Mitigated SWLs						
ID ^[8]	Power Mechanical Equipment (PME)	SWL, dB(A)	ID ^{[1] [2] [3] [4] [5] [6] [7] [9] [10]}	Power Mechanical Equipment (PME)	SWL, dB(A)	Silencer, dB(A)	Enclosure, dB(A)	Barrier/ Acoustic Mat/ Soundproof Hammer Bracket, dB(A)	Total Reduction, dB(A)
CNP 003	Air compressor, air flow > 30 m3/min	104	EPD-09708	AIRMAN, PDS100S-5C5	94			-10	-10
CNP 004	Asphalt paver	109	EPD-11257	Joseph Voegele AG / Voegele Super 1603-3	104			-5	-5
CNP 021	Bar bender and cutter (electric)	90							
CNP 022	Batching plant	108						-10	-10
CNP 023	Breaker, hand-held, mass ≤ 10 kg	108	EPD-12553	TE 1000-AVR (02) 204510	99			-10	-10
CNP 028	Breaker, excavated mounted (hydraulic)	122						-10	-10
CNP 030	Bulldozer	115	EPD-07836	SHANTUI DH13K	105			-5	-5
CNP 041	Conveyor belt	90							
CNP 042	Concrete corer	117					-15		-15
CNP 044	Concrete lorry mixer	109						-5	-5
CNP 045	Concrete mixer (electric)	96						-5	-5
CNP 046	Concrete mixer (petrol)	96						-5	-5
CNP 047	Concrete pump, stationary/lorry mounted	109					-15		-15
CNP 048	Crane, mobile/barge mounted (diesel)	112	EPD-12240	Kobelco, CKS900	101			-5	-5
CNP 049	Crane, tower (electric)	95						-5	-5
CNP 050	Compactor, vibratory	105						-10	-10
CNP 065	Drill/grinder, hand-held (electric)	98						-10	-10
CNP 081	Excavator/loader, wheeled/tracked (excavator)	112	EPD-07577	KOBELCO SK135SR-2	92			-5	-5
	Excavator/loader, wheeled/tracked (loader)	112	EPD-12048	BOBCAT S450	101			-5	-5
CNP 102	Generator, silenced, 75 dB(A) at 7 m	100	EPD-00592R	AIRMAN SDG25S-3B1	90				
CNP 122	Hoist, passenger/material (electric)	95						-5	-5
CNP 162	Piling, diaphragm wall, bentonite filtering plant	105						-10	-10
CNP 163	Piling, diaphragm wall, hydraulic extractor	90							
CNP 164	Piling, larger diameter bored, grab and chisel	115	Other 002	Liebherr HS 8100 HD (grab and chisel)	107			-10	-10
CNP 165	Piling, larger diameter bored, oscillator	115	Other 003	Liebherr LB 20-230 (oscillator)	110			-10	-10
CNP 166	Piling, larger diameter bored, reverse circulation drill	100						-10	-10
CNP 167	Piling, earth auger, auger	114	Other 004	Liebherr LB 16 (auger)	104			-10	-10
CNP 168	Power pack for hand-held items of PME	100						-10	-10
CNP 170	Poker, vibratory, hand-held	113	Other 007	Poker, vibratory, hand-held (rubber head)	102			-10	-10
CNP 171	Planer, wood, hand-held (electric)	117						-10	-10
CNP 186	Roller, vibratory	108	EPD-06997	SAKAI SW502S-1	94			-5	-5
CNP 201	Saw, circular, wood	108						-10	-10
CNP 202	Saw, chain, hand-held	114	Other 008	STIHL MSA 161 T (electric chainsaw, hand-held)	94			-10	-10
CNP 203	Saw/groover, concrete (petrol)	115						-10	-10
CNP 241	Ventilation fan	108				-15			-15
CNP 281	Water pump (electric)	88				-15			-15
CNP 283	Water pump, submersible (electric)	85							
OCNP 015	Drill rig, rotary type (diesel)	110	Other 005	Liebherr LB 16 (drill rig)	104			-10	-10
OCNP 021	Grout mixer	90							
OCNP 022	Grout pump	105						-10	-10
OCNP 023	Generator, portable	100						-10	-10
OCNP 026	Piling, vibrating hammer	115	Other 001	Sheet Piler	94				
OCNP 042	Lorry, 5.5 tonne < gross vehicle weight ≤ 38 tonne	105						-5	-5
OCNP 044	Lorry, with crane/grab, 5.5 tonne < gross vehicle weight ≤ 38 tonne	105						-5	-5
OCNP 046	Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne	105						-5	-5
OCNP 047	Dump truck, with grab, 5.5 tonne < gross vehicle weight ≤ 38 tonne	105						-5	-5
Other 006	Welding Set	78							

Notes:

- [1] PME with code "EPD-XXXXX" are quiet equipment with SWLs extracted from EPD's QPME inventory.
- [2] PME with code "OCNP XXX" are referenced from EPD's guidance "Sound Power Level of Other Commonly Used PME" from https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf.
- [3] The SPL of "Other 001" (Sheet Piler) is 69 dB at 7m according to EPD website https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods/item/27-press-in-method.html.
- [4] The SWL of "Other 002" (Liebherr HS 8100 HD (grab and chisel)) is referenced from <https://www.liebherr.com/shared/media/construction-machinery/deep-foundation/pdf/liebherr-hs-8100-hs-cable-excavator-data-spec-sheet-10098997-english.pdf>.
- [5] The SWL of "Other 003" (Liebherr LB 20-230 (oscillator)) is referenced from <https://www.liebherr.com/shared/media/construction-machinery/deep-foundation/pdf/data-sheet-archive/lb-series-with-bat/liebherr-lb20-drilling-rig-data-sheet-specifications-10514153-english.pdf>.
- [6] The SWL of "Other 004" (Liebherr LB 16 (auger)) is referenced <https://www.liebherr.com/external/products/products-assets/520836fd-0553-4d7e-a0c6-e2b789acc53f-2/liebherr-lb-16-unplugged-drilling-rig-data-sheet-specifications-13610967-eng.pdf>.
- [7] The SWL of "Other 005" (Liebherr LB 16 (drill rig)) is referenced <https://www.liebherr.com/external/products/products-assets/520836fd-0553-4d7e-a0c6-e2b789acc53f-2/liebherr-lb-16-unplugged-drilling-rig-data-sheet-specifications-13610967-eng.pdf>.
- [8] The SWL of "Other 006" (Welding Set) is referenced to the Construction Noise Mitigation Management Plan for Central Kowloon Route - Kai Tak West from <https://www.epd.gov.hk/eia/register/english/permit/fep1822018/documents/cnmmp/pdf/cnmmp.pdf>.
- [9] The SWL of "Other 007" (Poker, vibratory, hand-held (rubber head)) is referenced from https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/general-building-works/item/70-quieter-construction-methods/131-prefabricated-structure.html
- [10] The SWL of "Other 008" (electric chainsaw, hand-held) is referenced from <https://www.stihl.com/STIHL-power-tools-A-great-range/Chainsaws/Cordless-power-systems-chainsaws/288757-1508/MSA-161-T-tool-only.aspx>.

Sample Calculation

NAP: PHDKSR-P3

Construction Activities: KSR Station & C&C Tunnel from Pat Heung Depot to KSR

Month: April 2025

Workfronts: Site Clearance, Preparation & Monitoring (KSR)

- Appendix 4.7: Separation distance between NAP and notional source = 230m
- Appendix 4.8: Sound Power Level = 118.6dB(A) = ~ 119dB(A)

Workfronts: D-wall, Piling and Excavation (KSR 12-33)

- Appendix 4.7: Separation distance between NAP and notional source = > 300m
- Appendix 4.8: Sound Power Level: 121dB(A)

Sound Pressure Level at NAP

$$= 119 - 20\log(230) - 8 + 3$$

$$= 66\text{dB(A)}$$