

Appendix 4.6.4 Plant inventory (Mitigated Scenario)

Advance Works

Item No.	Construction Items	Construction Methods	Equipment	Reference Code	No. of plant item	% usage	Type of Noise Control	Noise Reduction, dB(A)	Unit SWL, dB(A)	SWL, dB(A)	Total SWL, dB(A)	Max Activity SWL, dB(A)		
AWC1-i	Primary Distributor Road P1 under existing KSWH and associated interchange / Junction works connecting with KSWH, Castle Peak Road and other District Distributors (per 200 m)	1 Earthwork (Excavation and Backfill)	Backhoe	EPD-02046	1	100			101	101	107	107		
			Generator	CNP 103	1	100			95	95	95	95		
			Roller	EPD-01806	1	100			95	95	95	95		
		2 Roadwork (Laying Utilities)	Dump Truck	OCUPME-038	1	100			105	105	105	105		
			Excavator	EPD-00772	1	100			103	103	103	107		
			Truck	OCUPME-036	1	100			105	105	105	105		
		3 Roadwork (Paving)	Water pump	CNP 281	1	100			88	88	88	88		
			Concrete Lorry Mixer	CNP 044	1	70	Movable Noise Barrier	-5	109	102	106			
			Vibratory Poker	OCUPME-019	1	100	Movable Noise Barrier	-5	102	97	97			
			Generator	EPD-01692	1	100			93	93	93			
AWC1-ii	Slip Roads (Connection between Primary Distributor Road P1 and KSWH) (per 200 m)	1 Earthwork (Excavation and Backfill)	Backhoe	EPD-02046	1	100	Movable Noise Barrier	-5	101	96	106	106		
			Generator	CNP 103	1	100			95	95	95			
			Roller	EPD-01806	1	100			95	95	95			
		2 Roadwork (Laying Utilities)	Dump Truck	OCUPME-038	1	100			105	105	105			
			Excavator	EPD-00772	1	100	Movable Noise Barrier	-5	103	98	102			
			Truck	OCUPME-036	1	100	Movable Noise Barrier	-5	105	100	100			
		3 Roadwork (Paving)	Water pump	CNP 281	1	100			88	88	88			
			Concrete Lorry Mixer	CNP 044	1	70	Movable Noise Barrier	-5	109	102	105			
			Vibratory Poker	OCUPME-019	1	100	Noise Barrier	-10	102	92	92			
			Generator	EPD-01692	1	100			93	93	93			
AWC1-iii	Site formation (residential Site 2-19, 5-24, 5-26) (per about 2 ha)	1 Site Clearance	Backhoe	EPD-02046	1	100	Movable Noise Barrier	-5	101	96	111	111		
			Generator	CNP 103	1	100			95	95	95			
			Breaker, handheld	CNP 024	1	100	Noise Barrier	-10	108	98	98			
		2 Earthwork (cut)	Saw, circular, wood	CNP 201	1	100	Noise Barrier	-10	108	98	98			
			Bulldozer	CNP 030	1	100	Movable Noise Barrier	-5	115	110	110			
			Dump Truck	OCUPME-038	2	70	Movable Noise Barrier	-5	105	101	101			
		AWC1-iiid	Site development (residential Site 2-19, 5-24, 5-26) (per about 2 ha)	3 Earthwork (Fill)	Backhoe	EPD-02046	1	100			101	101	106	106
					Generator	CNP 103	1	100			95	95	95	
					Roller	EPD-01806	1	100			95	95	95	
				4 GIC Sub-Structure (per site)	Dump Truck	OCUPME-038	1	70			105	103	103	
Generator	EPD-01692				2	100			93	96	111			
Air compressor	CNP 002				2	100	Enclosure	-15	102	90	90			
Piling, Large Bored Pile	CNP 166				2	100	Movable Noise Barrier	-5	100	98	98			
AWC1-iv	Site formation (residential Site 4-20) (per about 2 ha)			1 Site Clearance	Excavator	EPD-00772	1	100	Movable Noise Barrier	-5	103	101	110	110
					Bar Bender, Cutter	CNP 021	2	100	Noise Barrier	-10	90	83	83	
					Mobile Crane	EPD-01425	1	100	Movable Noise Barrier	-5	103	98	98	
		2 Earthwork (cut)	Lorry	OCUPME-033	2	100	Movable Noise Barrier	-5	105	103	103			
			Dump Truck	OCUPME-038	2	70	Movable Noise Barrier	-5	105	101	101			
			Concrete Lorry Mixer	CNP 044	2	100	Movable Noise Barrier	-5	109	107	107			
		3 Earthwork (Fill)	Vibratory Poker	OCUPME-019	4	100	Noise Barrier	-10	102	98	98			
			Concrete pump	CNP 047	2	100	Noise Barrier	-10	109	102	102			
			Water pump	CNP 281	2	100			88	88	88			
			Generator	EPD-01692	2	100			93	96	116			
AWC1-iiid	Site development (residential Site 4-20) (per about 2 ha)	4 GIC Sub-Structure (per site)	Bar Bender, Cutter	CNP 021	1	100	Noise Barrier	-10	90	80	80			
			Mobile Crane	EPD-01425	1	100	Movable Noise Barrier	-5	103	98	98			
			Concrete Lorry Mixer	CNP 044	2	100	Movable Noise Barrier	-5	109	107	107			
		5 GIC Superstructure (per site)	Vibratory Poker	OCUPME-019	4	100	Noise Barrier	-10	102	98	98			
			Concrete pump	CNP 047	2	100	Noise Barrier	-10	109	102	102			
			Water pump	CNP 281	2	100			88	88	88			
			Generator	EPD-01692	2	100			93	96	109			
		AWC1-iv	Site formation (residential, G/C, commercial and industrial development)	1 Site Clearance	Backhoe	EPD-02046	1	100	Movable Noise Barrier	-5	101	96	106	106
					Generator	CNP 103	1	100			95	95	95	
					Breaker, handheld	CNP 024	1	100	Noise Barrier	-10	108	98	98	
2 Earthwork (cut)	Saw, circular, wood			CNP 201	1	100	Noise Barrier	-10	108	98	98			
	Bulldozer			CNP 030	1	100	Movable Noise Barrier	-5	115	110	110			
	Dump Truck			OCUPME-038	2	70	Movable Noise Barrier	-5	105	101	101			
AWC1-iiid	Site development (residential Site 4-20) (per about 2 ha)			3 Earthwork (Fill)	Backhoe	EPD-02046	1	100			101	101	106	106
					Generator	CNP 103	1	100			95	95	95	
					Roller	EPD-01806	1	100			95	95	95	
				4 GIC Sub-Structure (per site)	Dump Truck	OCUPME-038	1	70			105	103	103	
		Generator	EPD-01692		2	100			93	96	111			
		Air compressor	CNP 002		2	100	Enclosure	-15	102	90	90			
		Piling, Large Bored Pile	CNP 166		2	100	Movable Noise Barrier	-5	100	98	98			
		AWC1-iv	Site formation for residential, G/C, commercial and industrial development	1 Site Clearance	Excavator	EPD-00772	1	100	Movable Noise Barrier	-5	103	101	109	109
					Bar Bender, Cutter	CNP 021	2	100	Noise Barrier	-10	90	83	83	
					Mobile Crane	EPD-01425	1	100	Movable Noise Barrier	-5	103	98	98	
2 Earthwork (cut)	Lorry			OCUPME-033	2	100	Movable Noise Barrier	-5	105	103	103			
	Dump Truck			OCUPME-038	2	70	Movable Noise Barrier	-5	105	101	101			
	Concrete Lorry Mixer			CNP 044	2	100	Movable Noise Barrier	-5	109	107	107			
3 Earthwork (Fill)	Vibratory Poker			OCUPME-019	4	100	Noise Barrier	-10	102	98	98			
	Concrete pump			CNP 047	2	100	Noise Barrier	-10	109	102	102			
	Water pump			CNP 281	2	100			88	88	88			
	Generator			EPD-01692	2	100			93	96	109			

	areas (per about 2 ha)																	
		2 Earthwork (cut)	Breaker, handheld Dump Truck Water pump	CNP 024 OCUPME-038 CNP 281	1 4 4	50 40 100	Enclosure Movable Noise Barrier	-15 -5	108 105	90 102 88								
		3 Earthwork (Fill)	Backhoe Generator Roller Dump Truck	EPD-02046 CNP 103 EPD-01806 OCUPME-038	8 3 4 4	50 100 70 50	Movable Noise Barrier Enclosure Movable Noise Barrier	-5 -15 -5 -5	101 95 95 103	102 85 94 103	106							
AWC1-vd	Site development for residential, G.I.C. commercial and industrial development areas (per about 2 ha)	4 GIC Sub-Structure (per site)	Generator Air compressor Piling, Large Bored Pile Excavator Bar Bender, Cutter Mobile Crane Lorry Dump Truck Concrete Lorry Mixer Vibratory Poker Concrete pump Water pump	EPD-01692 CNP 002 CNP 166 EPD-00772 CNP 021 EPD-01425 OCUPME-033 OCUPME-038 CNP 044 OCUPME-019 CNP 047 CNP 281	2 2 2 2 2 1 2 2 2 4 2	100 100 100 50 100 70 50 50 50 50 100	Enclosure Enclosure Noise Barrier Movable Noise Barrier Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Noise Barrier Enclosure Noise Barrier	-10 -10 -10 -5 -10 -5 -5 -5 -10 -10	93 102 100 103 90 103 105 105 109 102 94	86 95 93 98 83 96 100 100 104 95 94	108				108			
		5 GIC Superstructure (per site)	Generator Bar Bender, Cutter Mobile Crane Concrete Lorry Mixer Vibratory Poker Concrete pump	EPD-01692 CNP 021 EPD-01425 CNP 044 OCUPME-019 CNP 047	2 1 1 2 4 2	100 100 100 70 100 70	Enclosure Noise Barrier Movable Noise Barrier Movable Noise Barrier Noise Barrier	-10 -10 -5 -5 -10	93 90 103 109 102	95 80 98 105 98 100	108						108	
AWC1-w	Two new sewage pumping stations SPS1 and SPS2 and associated rising mains	1 Site Clearance	Backhoe Generator Breaker, handheld Saw, circular, wood Bulldozer Dump Truck	EPD-02046 CNP 103 CNP 024 CNP 201 Komatsu Model D21A-B OCUPME-038	1 1 1 1 1 2	100 100 100 100 100 70	Movable Noise Barrier Noise Barrier Noise Barrier Movable Noise Barrier Movable Noise Barrier	-5 -10 -10 -5 -5	101 95 108 108 102 105	96 95 98 98 97 101	106					111		
		2 Earthwork (cut)	Excavator Generator Breaker, handheld Dump Truck Water pump	EPD-00772 CNP 103 CNP 024 OCUPME-038 CNP 281	4 1 1 2 2	100 100 100 70 100	Movable Noise Barrier Noise Barrier	-5 -10	103 108	104 98 106 91	109						109	
		3 Earthwork (Fill)	Backhoe Generator Roller Dump Truck	EPD-02046 CNP 103 EPD-01806 OCUPME-038	4 2 2 2	100 100 100 70				101 95 95 105	107 98 98 106	110						110
		4 Pumping Station Sub-Structure	Generator Air compressor Excavator Bar Bender, Cutter Mobile Crane Lorry Dump Truck Concrete Lorry Mixer Vibratory Poker Concrete pump Water pump	EPD-01692 CNP 002 EPD-00772 CNP 021 EPD-01425 OCUPME-033 OCUPME-038 CNP 044 OCUPME-019 CNP 047 CNP 281	1 2 2 2 1 2 2 2 2 2 2	100 100 100 100 100 100 100 100 100 100 100	Enclosure Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Noise Barrier Noise Barrier	-10 -5 -5 -5 -10 -10	93 102 103 103 103 102 102	93 95 101 93 98 103 95	111							111
		5 Pumping Station Superstructure	Generator Bar Bender, Cutter Mobile Crane Concrete Lorry Mixer Vibratory Poker Concrete pump	EPD-01692 CNP 021 EPD-01425 CNP 044 OCUPME-019 CNP 047	2 1 1 2 2 2	100 100 100 100 100 100	Enclosure Noise Barrier Movable Noise Barrier Movable Noise Barrier Noise Barrier	-10 -10 -5 -5 -10	93 90 103 109 102	95 80 98 107 95	109						109	
		6 Rising Mains	Excavator Truck Water pump Concrete Lorry Mixer Vibratory Poker Compactor, Vibratory Bar Bender, Cutter	EPD-00772 OCUPME-036 CNP 281 CNP 044 OCUPME-019 CNP 050 CNP 021	1 1 2 1 2 1 1	100 100 100 70 100 100 100	Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Noise Barrier	-5 -5 -5 -5 -5 -10	103 105 88 109 102 105 90	98 100 91 102 100 100 80	107						107	

Stage 1 Works

Item No.	Construction Items	Construction Methods	Equipment	Reference Code	No. of plant item	% usage	Type of Noise Control	Noise Reduction, dB(A)	Unit SWL, dB(A)	SWL, dB(A)	Total SWL, dB(A)	Max Activity SWL, dB(A)			
S1C1-i	A section of Road D1 connecting Port Back-up Use sites to Road P1 and KSWH (per 200m)	1 Earthwork (Excavation and Backfill)	Backhoe Generator Roller Dump Truck	EPD-02046 CNP 103 EPD-01806 OCUPME-038	1 1 1 1	100 100 100 100			101 95 95 105	101 95 95 105	107	113			
		2 Underpass	Lorry with Grab Air compressor Piling, Large Bored Pile Generator Concrete Lorry Mixer Excavator Vibratory Poker Compactor, Vibratory Bar Bender, Cutter Water pump	OCUPME-019 CNP 002 CNP 166 CNP 103 CNP 044 EPD-00772 OCUPME-019 CNP 050 CNP 021 CNP 281	1 2 2 1 1 1 2 1 2 2	100 100 100 100 100 100 100 100 100 100			102 102 100 95 109 103 102 105 90 91	102 105 103 107 103 103 105 105 90 91	113				
		3 Roadwork (Laying Utilities)	Excavator Truck Water pump	EPD-00772 OCUPME-036 CNP 281	1 1 1	100 100 100				103 105 88	103 105 88	107			
		4 Roadwork (Paving)	Concrete Lorry Mixer Vibratory Poker Generator Asphalt Paver Roller	CNP 044 OCUPME-019 EPD-01692 EPD-01226 EPD-01806	1 1 1 1 1	70 100 100 100 100				109 102 93 104 95	107 107 93 104 95	110			
		S1C1-ii	Site formation and site development for Port Back-up and Storage Use site (per about 2 ha)	1 Site Clearance	Backhoe Generator Breaker, handheld Saw, circular, wood Bulldozer Dump Truck	EPD-02046 CNP 103 CNP 024 CNP 201 CNP 030 OCUPME-038	1 1 1 1 1 2	100 100 100 100 100 70			101 95 108 108 115 105	101 95 108 108 115 106	117	117	
				2 Earthwork (cut)	Excavator Generator Breaker, handheld Dump Truck Water pump	EPD-00772 CNP 103 CNP 024 OCUPME-038 CNP 281	1 1 1 1 1	100 100 100 70 100			102 95 108 105 88	103 95 108 103 88	110		
				3 Earthwork (Fill)	Backhoe Generator Roller Dump Truck	EPD-02046 CNP 103 EPD-01806 OCUPME-038	1 1 1 1	100 100 100 70			101 95 95 105	101 95 95 103	106		
		S1C1-iii	Site formation and site development for Port Back-up and Storage Use site (per about 2 ha)	4 Sub-Structure (per site)	Generator Air compressor Piling, Large Bored Pile Excavator Bar Bender, Cutter Mobile Crane Lorry Dump Truck Concrete Lorry Mixer Vibratory Poker Concrete pump Water pump	EPD-01692 CNP 002 CNP 166 EPD-00772 CNP 021 EPD-01425 OCUPME-019 OCUPME-038 CNP 044 OCUPME-019 CNP 047 CNP 281	2 2 2 2 2 1 2 2 2 2 2 2	100 100 100 100 100 100 100 100 100 100 100 100			93 102 100 103 90 103 102 105 109 102 109 88	96 105 103 106 93 103 106 106 112 108 112 91	118	118	
				5 Superstructure (per site)	Generator Bar Bender, Cutter Mobile Crane Concrete Lorry Mixer Vibratory Poker Concrete pump	EPD-01692 CNP 021 EPD-01425 CNP 044 OCUPME-019 CNP 047	2 1 1 2 4 2	100 100 100 100 100 100			93 90 103 109 102 109	96 90 103 109 108 112	116		



		5	GIC Superstructure (per site)	Generator Bar Bender, Cutter Mobile Crane Concrete Lorry Mixer Vibratory Poker Concrete pump	EPD-01692 CNP 021 EPD-01425 CNP 044 OCUPME-019 CNP 047	2 1 1 2 4 2	100 100 70 100 100					93 96 90 98 109 102 109	96 90 98 105 98 102	108			
S2C1-vii		1	Site Clearance	Backhoe Generator Breaker, handheld Saw, circular, wood Bulldozer Dump Truck	EPD-02046 CNP 103 CNP 024 CNP 201 CNP 030 OCUPME-038	1 1 1 1 1 2	100 100 100 100 100 70							101 96 95 108 108 110 105	96 98 98 110 107	111	111
		2	Earthwork (cut)	Excavator Generator Breaker, handheld Dump Truck Water pump	EPD-00772 CNP 103 CNP 024 OCUPME-038 CNP 281	8 3 1 4 4	100 100 100 70 100							103 95 108 105 98	107 100 98 104 94	110	
		3	Earthwork (Fill)	Backhoe Generator Roller Dump Truck	EPD-02046 CNP 103 EPD-01806 OCUPME-038	8 3 4 4	100 100 100 70							101 95 95 105	105 100 96 104	109	
S2C1-viii		4	DCS Sub-Structure (per site)	Generator Air compressor Piling, Large Bored Pile Excavator Bar Bender, Cutter Mobile Crane Lorry Dump Truck Concrete Lorry Mixer Vibratory Poker Concrete pump Water pump	EPD-01692 CNP 002 CNP 166 EPD-00772 CNP 021 EPD-01425 OCUPME-019 OCUPME-038 CNP 044 OCUPME-019 CNP 047 CNP 281	2 2 2 2 1 2 2 2 4 2 2	100 100 100 100 100 100 100 70 100 100 100							93 102 98 103 90 83 98 102 101 107 98 102	96 90 98 101 83 98 100 105 100 102 102	111	111
		5	Laying pipelines (per 200m)	Excavator Truck Water pump Concrete Lorry Mixer Vibratory Poker Compactor, Vibratory Bar Bender, Cutter	EPD-00772 OCUPME-036 CNP 281 CNP 044 OCUPME-019 CNP 050 CNP 021	1 1 2 1 2 1 1	100 100 100 100 100 100 100							103 105 88 109 102 105 80	103 105 91 102 95 100	109	
Contract S2C2																	
S2C2-i		1	Earthwork (Excavation and Backfill)	Backhoe Generator Roller Dump Truck	EPD-02046 CNP 103 EPD-01806 OCUPME-038	1 1 1 1	100 100 100 100							101 95 95 105	101 95 95 105	107	114
		2	Roadwork (Laying Utilities)	Excavator Truck Water pump	EPD-00772 OCUPME-036 CNP 281	1 1 1	100 100 100							103 105 88	103 85 107	107	
		3	Roadwork (Paving)	Concrete Lorry Mixer Vibratory Poker Generator Asphalt Paver Roller	CNP 044 OCUPME-019 EPD-01692 EPD-01226 EPD-01806	1 1 1 1 1	100 100 100 100 100							109 102 93 104 95	107 102 93 104 95	110	
		4	Underpass	Lorry with Grab Air compressor Piling, Large Bored Pile Generator Concrete Lorry Mixer Excavator Vibratory Poker Compactor, Vibratory Bar Bender, Cutter Water pump	OCUPME-036 CNP 002 CNP 166 CNP 103 CNP 044 EPD-00772 OCUPME-019 CNP 050 CNP 021 CNP 281	1 2 2 1 1 1 2 1 1 2	100 100 100 100 100 100 100 100 100 100							105 105 103 95 109 103 102 105 105 90 88	114 105 103 95 107 103 105 105 90 91		
S2C2-ii		1	Site Clearance	Backhoe Generator Breaker, handheld Saw, circular, wood Bulldozer Dump Truck	EPD-02046 CNP 103 CNP 024 CNP 201 CNP 030 OCUPME-038	1 1 1 1 1 2	100 100 100 100 100 70							101 95 108 108 115 105	101 95 108 108 115 106	117	117
		2	Earthwork (cut)	Excavator Generator Breaker, handheld Dump Truck Water pump	EPD-00772 CNP 103 CNP 024 OCUPME-038 CNP 281	8 3 1 4 4	100 100 100 70 100							103 95 108 105 98	112 100 108 109 94	115	
		3	Earthwork (Fill)	Backhoe Generator Roller Dump Truck	EPD-02046 CNP 103 EPD-01806 OCUPME-038	8 3 4 4	100 100 100 70							101 95 95 105	110 100 101 109	113	
S2C2-iii		4	STW Sub-Structure (per site)	Generator Air compressor Excavator Bar Bender, Cutter Mobile Crane Lorry Dump Truck Concrete Lorry Mixer Vibratory Poker Concrete pump Water pump	EPD-01692 CNP 002 EPD-00772 CNP 021 EPD-01425 OCUPME-019 OCUPME-038 CNP 044 OCUPME-019 CNP 047 CNP 281	2 2 2 2 1 2 2 2 4 2 2	100 100 100 100 100 100 70 100 100 100 100							93 102 103 90 103 102 105 112 102 109 112 88	96 98 106 93 103 105 106 109 108 112 91	117	117
		5	STW Superstructure (per site)	Generator Bar Bender, Cutter Mobile Crane Concrete Lorry Mixer Vibratory Poker Concrete pump	EPD-01692 CNP 021 EPD-01425 CNP 044 OCUPME-019 CNP 047	2 1 1 2 4 2	100 100 100 100 100 100							93 90 103 112 102 109	96 90 103 108 108 112	116	
S2C2-iii		1	Site Clearance	Backhoe Generator Breaker, handheld Saw, circular, wood Bulldozer Dump Truck	EPD-02046 CNP 103 CNP 024 CNP 201 CNP 030 OCUPME-038	1 1 1 1 1 2	100 100 100 100 100 70							101 95 108 108 115 105	101 95 108 108 115 106	117	117
		2	Earthwork (cut)	Excavator Generator Breaker, handheld Dump Truck Water pump	EPD-00772 CNP 103 CNP 024 OCUPME-038 CNP 281	4 1 1 2 2	100 100 100 70 100							103 95 108 105 88	109 95 108 108 91	113	
		3	Earthwork (Fill)	Backhoe Generator Roller Dump Truck	EPD-02046 CNP 103 EPD-01806 OCUPME-038	4 2 2 2	100 100 100 70							101 95 95 105	107 98 98 106	110	
		4	Pumping Station Sub-Structure (per site)	Generator Air compressor Excavator Bar Bender, Cutter Mobile Crane Lorry Dump Truck Concrete Lorry Mixer Vibratory Poker Concrete pump Water pump	EPD-01692 CNP 002 EPD-00772 CNP 021 EPD-01425 OCUPME-019 OCUPME-038 CNP 044 OCUPME-019 CNP 047 CNP 281	1 2 2 2 1 2 2 2 2 2 2	100 100 100 100 100 100 70 100 100 100 100							93 102 103 90 103 102 105 112 102 109 112 88	93 98 106 93 103 105 106 109 108 112 91	117	
		5	Pumping Station Superstructure (per site)	Generator Bar Bender, Cutter Mobile Crane Concrete Lorry Mixer Vibratory Poker Concrete pump	EPD-01692 CNP 021 EPD-01425 CNP 044 OCUPME-019 CNP 047	2 1 1 2 2 2	100 100 100 100 100 100							93 90 103 112 102 109	96 90 103 112 105 112	116	
		6	Rising Mains (per 200m)	Excavator Truck Water pump Concrete Lorry Mixer Vibratory Poker Compactor, Vibratory Bar Bender, Cutter	EPD-00772 OCUPME-036 CNP 281 CNP 044 OCUPME-019 CNP 050 CNP 021	1 1 2 1 2 1 1	100 100 100 100 100 100 100							103 105 91 109 102 105 90	103 103 91 107 105 105 90	112	131
S2C2-iv		1	Earthwork	Excavator Generator Breaker, handheld Roller Dump Truck	EPD-00772 CNP 103 CNP 024 EPD-01806 OCUPME-038	2 2 1 2 2	100 100 70 50 100							103 95 108 105 106	108 98 108 96 106	112	131

A new TSE reservoirs and associated pumping stations and rising mains	2	Slopework (Soil Nail)	Rock Drill Generator Air compressor Grout Pump Grout Mixer Hoist, Petrol	CNP 181 CNP 103 CNP 002 OCUPME-015 OCUPME-014 CNP 123	2 2 2 2 2 2	100 70 100 30 30 100				128 131 95 102 105 90 104	131 98 103 103 88 107	131		
	3	Slopework (Retaining Wall)	Generator Mobile Crane Backhoe Bar Bender, Cutter Concrete pump Concrete Lorry Mixer	CNP 103 EPD-01425 EPD-02046 CNP 021 CNP 047 CNP 044	2 2 2 2 2 2	100 100 100 100 100 70				95 103 101 101 109 109	98 106 104 93 112 110	115		
	4	Reservoir Structure	Generator Concrete Lorry Mixer Bar Bender, Cutter Vibratory Poker	CNP 103 CNP 044 CNP 021 OCUPME-019	2 2 2 4	100 70 100 100					95 109 90 102	98 110 93 108	113	
	5	Roadwork (Laying Utilities)	Excavator Truck Water pump	EPD-00772 OCUPME-036 CNP 281	2 2 2	100 100 100					103 105 88	106 108 91	110	
	6	Roadwork (Paving)	Concrete Lorry Mixer Generator Asphalt Paver Roller	CNP 044 EPD-01692 EPD-01226 EPD-01806	2 2 2 2	70 100 100 100					109 93 104 95	110 96 107 98	112	
	7	Blasting	Rock Drill Air compressor	CNP 183 CNP 003	2 2	100 100					116 104	119 107	119	
	S2C2-uf	Site formation for Port Back-up and Storage Use sites, Refuse Transfer Station (per about 2 ha)	1	Site Clearance	Backhoe Generator Breaker, handheld Saw, circular, wood Bulldozer Dump Truck	EPD-02046 CNP 103 CNP 024 CNP 201 CNP 030 OCUPME-038	1 1 1 1 1 2	100 100 100 100 100 70	Movable Noise Barrier Noise Barrier Noise Barrier Movable Noise Barrier Movable Noise Barrier	-5 -10 -5 -5 -5	101 95 108 98 115 105	96 95 108 108 110 103	111	111
2	Earthwork (cut)		Excavator Generator Breaker, handheld Dump Truck Water pump	EPD-00772 CNP 103 CNP 024 OCUPME-038 CNP 281	1 1 1 1 1	100 100 100 70 100					103 95 108 105 88	101 95 108 103 88	110	
3	Earthwork (Fill)		Backhoe Generator Roller Dump Truck	EPD-02046 CNP 103 EPD-01806 OCUPME-038	1 1 1 2	100 100 100 70					101 95 95 103	101 95 95 96	106	
S2C2-vd	Site development for Port Back-up and Storage Use sites, Refuse Transfer Station (per about 2 ha)	4	Sub-Structure (per site)	Generator Air compressor Piling, Large Bored Pile Excavator Bar Bender, Cutter Mobile Crane Lorry Dump Truck Concrete Lorry Mixer Vibratory Poker Concrete pump Water pump	EPD-01692 CNP 002 CNP 166 EPD-00772 CNP 021 EPD-01425 OCUPME-019 OCUPME-038 CNP 044 CNP 047 OCUPME-019 CNP 281	2 2 2 2 2 1 2 2 2 2 4 2	100 100 100 100 100 50 100 100 100 100 100 100	Movable Noise Barrier Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Noise Barrier Noise Barrier	-5 -10 -5 -5 -5 -5 -5 -5 -5 -10 -10 -10	93 102 100 103 93 103 102 105 109 102 88	96 105 93 101 93 98 100 101 107 98 102	112	112	
5		Superstructure (per site)	Generator Bar Bender, Cutter Mobile Crane Concrete Lorry Mixer Vibratory Poker Concrete pump	EPD-01692 CNP 021 EPD-01425 CNP 044 OCUPME-019 CNP 047	2 1 1 2 4 2	100 100 100 100 100 100	Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Noise Barrier Noise Barrier	-10 -5 -5 -5 -10 -10	93 90 103 109 102 109	91 80 98 107 98 102	109			

Stage 3 Works

Item No.	Construction Items	Construction Methods	Equipment	Reference Code	No. of plant item	% usage	Type of Noise Control	Noise Reduction, dB(A)	Unit SWL, dB(A)	SWL, dB(A)	Total SWL, dB(A)	Max Activity SWL, dB(A)		
Contract S3C1														
S3C1-i	District Distributor Road D1, D4 and Ping Ha Road (Road D2) widening (per 200m)	1	Earthwork (Excavation and Backfill)	Backhoe Generator Roller Dump Truck	EPD-02046 CNP 103 EPD-01806 OCUPME-038	1 1 1 1	100 100 100 100	Movable Noise Barrier Noise barrier Noise barrier Movable Noise Barrier	-5 -5 -5 -5	101 95 95 105	96 95 95 100	103	106	
2		Roadwork (Laying Utilities)	Excavator Truck Water pump	EPD-00772 OCUPME-036 CNP 281	1 1 1	100 100 100	Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier	-5 -5 -5	103 100 88	98 100 88	102			
3		Roadwork (Paving)	Concrete Lorry Mixer Vibratory Poker Generator Asphalt Paver Roller	CNP 044 OCUPME-019 EPD-01692 EPD-01226 EPD-01806	1 1 1 1 1	70 100 100 100 100	Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier	-5 -5 -5 -5 -5	109 102 93 99 90	102 97 93 98 90	105			
4		Underpass	Lorry with Grab Air compressor Piling, Large Bored Pile Generator Concrete Lorry Mixer Excavator Vibratory Poker Compactor, Vibratory Bar Bender, Cutter Water pump	OCUPME-036 CNP 002 CNP 166 CNP 103 CNP 044 EPD-00772 OCUPME-019 CNP 050 CNP 021 CNP 281	1 2 2 1 1 2 2 1 1 2	50 100 100 100 50 100 100 70 100 100	Movable Noise Barrier Enclosure Movable Noise Barrier Enclosure Movable Noise Barrier Movable Noise Barrier Noise barrier Movable Noise Barrier Noise barrier Noise barrier	-5 -15 -5 -15 -5 -10 -5 -5 -10 -10	105 102 100 95 109 103 102 105 90 88	97 90 96 101 101 95 98 80 91	106			
S3C1-ir		Site formation for residential, commercial and G/C sites (per about 2 ha)	1	Site Clearance	Backhoe Generator Breaker, handheld Saw, circular, wood Bulldozer Dump Truck	EPD-02046 CNP 103 CNP 024 CNP 201 CNP 030 OCUPME-038	1 1 1 1 1 2	100 100 100 100 100 70	Movable Noise Barrier Noise barrier Noise barrier Movable Noise Barrier Movable Noise Barrier	-5 -10 -10 -5 -5	101 95 108 98 115 105	96 95 98 98 107 101	109	109
2			Earthwork (cut)	Excavator Generator Breaker, handheld Dump Truck Water pump	EPD-00772 CNP 103 CNP 024 OCUPME-038 CNP 281	8 3 1 4 4	80 100 100 70 100	Movable Noise Barrier Noise barrier Noise barrier Movable Noise Barrier Movable Noise Barrier	-5 -5 -10 -5 -5	103 100 108 105 104	106 100 98 104 94	109		
3			Earthwork (Fill)	Backhoe Generator Roller Dump Truck	EPD-02046 CNP 103 EPD-01806 OCUPME-038	8 3 4 4	100 100 100 70	Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier	-5 -5 -5 -5	101 95 105 105	105 96 104 104	109		
S3C1-ii		Site development for residential, commercial and G/C sites (per about 2 ha)	4	GIC Sub-Structure (per site)	Generator Air compressor Piling, Large Bored Pile Excavator Bar Bender, Cutter Mobile Crane Lorry Dump Truck Concrete Lorry Mixer Vibratory Poker Concrete pump Water pump	EPD-01692 CNP 002 CNP 166 EPD-00772 CNP 021 EPD-01425 OCUPME-019 OCUPME-038 CNP 044 OCUPME-019 CNP 047 CNP 281	2 2 2 2 2 1 2 2 2 2 2 2	100 100 100 100 100 100 50 100 100 100 100 100	Enclosure Movable Noise Barrier Movable Noise Barrier Noise barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Noise barrier Noise barrier Noise barrier	-15 -5 -5 -5 -10 -5 -5 -5 -5 -5 -5 -10	93 102 100 103 90 103 102 105 100 102 99 88	96 98 98 99 83 98 97 100 104 98 99 91	109	109
5			GIC Superstructure (per site)	Generator Bar Bender, Cutter Mobile Crane Concrete Lorry Mixer Vibratory Poker Concrete pump	EPD-01692 CNP 021 EPD-01425 CNP 044 OCUPME-019 CNP 047	2 1 1 2 4 2	100 100 100 100 100 100	Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Noise barrier Noise barrier	-5 -5 -5 -5 -10 -10	93 90 103 109 102 109	96 90 98 107 98 102	109		
Contract S3C2														
S3C2-i		District Distributor Road D3 and D5 (per 200m)	1	Earthwork (Excavation and Backfill)	Backhoe Generator Roller Dump Truck	EPD-02046 CNP 103 EPD-01806 OCUPME-038	1 1 1 1	100 100 100 100	Movable Noise Barrier Noise barrier Movable Noise Barrier Movable Noise Barrier	-5 -5 -5 -5	101 95 95 105	96 95 90 100	103	105
2			Roadwork (Laying Utilities)	Excavator Truck Water pump	EPD-00772 OCUPME-036 CNP 281	1 1 1	100 100 100	Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier	-5 -5 -5	103 105 105	98 100 98	102		
3	Roadwork (Paving)		Concrete Lorry Mixer Vibratory Poker Generator Asphalt Paver Roller	CNP 044 OCUPME-019 EPD-01692 EPD-01226 EPD-01806	1 1 1 1 1	50 100 100 100 100	Movable Noise Barrier Noise barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier	-5 -10 -5 -5 -5	101 102 93 104 95	101 89 93 99 95	104			
4	Elevated Road		Lorry with Grab Generator Concrete Lorry Mixer Excavator Vibratory Poker Compactor, Vibratory Bar Bender, Cutter Water pump	OCUPME-036 CNP 103 CNP 044 EPD-00772 OCUPME-019 CNP 050 CNP 021 CNP 281	1 1 1 2 2 1 1 2	50 100 50 70 50 100 100 70	Movable Noise Barrier Enclosure Movable Noise Barrier Movable Noise Barrier Noise barrier Movable Noise Barrier Noise barrier Noise barrier	-5 -15 -5 -5 -5 -5 -5 -10	105 95 109 103 105 105 105 88	97 80 101 96 92 105 90 81	105			



		4 Tank Sub-Structure (per site)	Bar Bender, Cutter Mobile Crane Lorry Dump Truck Concrete Lorry Mixer Vibratory Poker Concrete pump Water pump	CNP 021 EPD-01425 OCUPME-019 OCUPME-038 CNP 044 OCUPME-019 CNP 047 CNP 281	2 1 2 2 4 2 2 2	100 100 70 100 100 100 100 100	Noise barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Noise barrier Noise barrier Noise barrier	-10 -5 -5 -5 -5 -10 -10 -10	90 103 102 101 107 102 109 88	83 98 100 101 107 98 102 91			
		5 Laying pipelines (per 200m)	Excavator Truck Water pump Concrete Lorry Mixer Vibratory Poker Compactor, Vibratory Bar Bender, Cutter	EPD-00772 OCUPME-036 CNP 281 CNP 044 OCUPME-019 CNP 050 CNP 021	1 1 2 1 2 1 1	100 100 100 70 100 100 100	Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Noise barrier Movable Noise Barrier Noise barrier	-5 -5 -5 -5 -10 -5 -10	103 105 88 109 102 105 90	98 106 91 102 95 100 80	107		
S3C3-iv		1 Site Clearance	Backhoe Generator Breaker, handheld Saw, circular, wood Bulldozer Dump Truck	EPD-02046 CNP 103 CNP 024 CNP 201 Komatsu Model D21A-B OCUPME-038	1 1 1 1 1 2	100 100 50 50 100 70	Movable Noise Barrier Enclosure Noise barrier Noise barrier Movable Noise Barrier Movable Noise Barrier	-5 -15 -10 -10 -5 -5	101 95 108 108 102 105 101	96 80 95 95 97 103 104	105	107	
		2 Earthwork (cut)	Excavator Generator Breaker, handheld Dump Truck Water pump	EPD-00772 CNP 103 CNP 024 OCUPME-038 CNP 281	8 3 1 4 4	50 100 50 50 100	Movable Noise Barrier Enclosure Noise barrier Movable Noise Barrier Noise barrier	-5 -15 -10 -5 -10	103 95 108 105 88	104 95 95 103 84	107		
		3 Earthwork (Fill)	Backhoe Generator Roller Dump Truck	EPD-02046 CNP 103 EPD-01806 OCUPME-038	8 3 4 4	50 100 50 100	Movable Noise Barrier Enclosure Movable Noise Barrier Movable Noise Barrier	-5 -15 -5 -5	101 95 93 103	96 85 83 103	106		
S3C3-ivd		4 GIC Sub-Structure (per site)	Generator Air compressor Piling, Large Bored Pile Excavator Bar Bender, Cutter Mobile Crane Lorry Dump Truck Concrete Lorry Mixer Vibratory Poker Concrete pump Water pump	EPD-01692 CNP 002 CNP 166 EPD-00772 CNP 021 EPD-01425 OCUPME-019 OCUPME-038 CNP 044 OCUPME-019 CNP 047 CNP 281	2 2 2 2 2 2 2 2 2 2 2 2	100 100 100 70 100 100 70 50 100 50 100 100	Enclosure Enclosure Movable Noise Barrier Movable Noise Barrier Noise barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Noise barrier Noise barrier Noise barrier	-15 -15 -5 -5 -10 -5 -5 -5 -10 -10 -10	93 102 100 103 90 103 98 109 102 99 91	81 90 98 99 83 98 98 101 104 95 99	109	109	
		5 GIC Superstructure (per site)	Bar Bender, Cutter Mobile Crane Concrete Lorry Mixer Vibratory Poker Concrete pump	EPD-01692 CNP 021 EPD-01425 OCUPME-019 CNP 047	2 1 2 4 2	100 100 100 100 100	Enclosure Noise barrier Movable Noise Barrier Movable Noise Barrier Noise barrier	-15 -10 -5 -5 -10	93 90 103 109 102	81 80 98 107 98	109		

### Stage 4 Works

Item No.	Construction Items	Construction Methods	Equipment	Reference Code	No. of plant item	% usage	Type of Noise Control	Noise Reduction, dB(A)	Unit SWL, dB(A)	SWL, dB(A)	Total SWL, dB(A)	Max Activity SWL, dB(A)
S4C1-i	Removal of existing Tin Ying Road (per 200m)	1 Demolition work	Backhoe Generator Breaker, handheld Saw, circular, wood Bulldozer Dump Truck	EPD-02046 CNP 103 CNP 024 CNP 201 Komatsu Model D21A-B OCUPME-038	1 1 1 1 1 2	100 100 100 100 100 70	Movable Noise Barrier Movable Noise Barrier Noise Barrier Noise Barrier Movable Noise Barrier Movable Noise Barrier	-5 -10 -10 -10 -5 -5	101 95 108 108 97 101	96 95 98 98 97 101	106	106
S4C1-ii	Drainage Channel Re-vitalization (per 200m)	1 Earthfill (Excavation and Backfill)	Backhoe Generator Roller Dump Truck	EPD-02046 CNP 103 EPD-01806 OCUPME-038	1 1 1 1	100 100 100 100	Movable Noise Barrier Enclosure Movable Noise Barrier Movable Noise Barrier	-5 -15 -5 -5	101 95 95 100	96 95 90 100	103	105
		2 Drainage work	Lorry with Grab Generator Concrete Lorry Mixer Excavator Vibratory Poker Compactor, Vibratory Bar Bender, Cutter Water pump	OCUPME-036 CNP 103 CNP 044 EPD-01145 OCUPME-019 CNP 050 CNP 021 CNP 281	1 1 1 1 2 1 2	70 100 50 70 100 100 100	Movable Noise Barrier Enclosure Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Noise barrier Noise barrier Noise barrier	-5 -15 -5 -5 -10 -10 -10	105 95 109 99 102 105 90 88	98 80 101 102 92 98 80 91	105	
S4C1-iii	Stormwater Storage Tank near Tin Shui Wai Channel	1 Site Clearance	Backhoe Generator Breaker, handheld Saw, circular, wood Bulldozer Dump Truck	EPD-02046 CNP 103 CNP 024 CNP 201 CNP 030 OCUPME-038	1 1 1 1 1 2	100 100 100 100 100 70	Movable Noise Barrier Enclosure Noise Barrier Noise Barrier Movable Noise Barrier Movable Noise Barrier	-5 -10 -10 -10 -5 -5	101 95 108 108 110 105	96 95 98 98 110 101	111	111
		2 Earthwork (cut)	Excavator Generator Breaker, handheld Dump Truck Water pump	EPD-00772 CNP 103 CNP 024 OCUPME-038 CNP 281	8 3 1 4 4	100 100 100 100 100	Movable Noise Barrier Enclosure Noise Barrier Movable Noise Barrier Movable Noise Barrier	-5 -15 -10 -5 -5	103 95 108 105 88	107 100 98 104 94	110	
		3 Earthwork (Fill)	Backhoe Generator Roller Dump Truck	EPD-02046 CNP 103 EPD-01806 OCUPME-038	2 1 1 1	100 100 70 100	Movable Noise Barrier Enclosure Movable Noise Barrier Movable Noise Barrier	-5 -15 -5 -5	101 95 95 103	104 95 95 103	107	
		4 Tank Sub-Structure (per site)	Generator Air compressor Piling, Large Bored Pile Excavator Bar Bender, Cutter Mobile Crane Lorry Dump Truck Concrete Lorry Mixer Vibratory Poker Concrete pump Water pump	EPD-01692 CNP 002 CNP 166 EPD-00772 CNP 021 EPD-01425 OCUPME-019 OCUPME-038 CNP 044 OCUPME-019 CNP 047 CNP 281	2 2 2 2 2 1 2 2 2 2 2 2	100 100 100 100 100 100 70 50 100 100 100 100	Enclosure Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Noise barrier Noise barrier Noise barrier	-15 -15 -10 -5 -5 -5 -5 -5 -5 -10 -10 -10	93 102 100 103 101 103 98 103 101 102 107 102 91	111		
		5 Laying pipelines (per 200m)	Excavator Truck Water pump Concrete Lorry Mixer Vibratory Poker Compactor, Vibratory Bar Bender, Cutter	EPD-00772 CNP 103 CNP 281 CNP 044 OCUPME-019 CNP 050 CNP 021	1 1 2 1 2 1 1	100 100 100 70 100 100 100	Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Noise barrier Movable Noise Barrier Noise barrier	-5 -5 -5 -5 -10 -5 -10	103 105 88 109 102 105 90	98 100 91 102 95 100 80	107	
S4C1-iv	Local roads serving development sites (per 200m)	1 Earthwork (Excavation and Backfill)	Backhoe Generator Roller Dump Truck	EPD-02046 CNP 103 EPD-01806 OCUPME-038	1 1 1 1	100 100 100 100	Movable Noise Barrier Enclosure Movable Noise Barrier Movable Noise Barrier	-5 -15 -5 -5	101 95 95 105	101 95 95 105	107	110
		2 Roadwork (Laying Utilities)	Excavator Truck Water pump	EPD-00772 OCUPME-036 CNP 281	1 1 1	100 100 100	Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier	-5 -5 -5	103 105 88	103 107 98	107	
		3 Roadwork (Paving)	Concrete Lorry Mixer Vibratory Poker Generator Asphalt Paver Roller	CNP 044 OCUPME-019 EPD-01692 EPD-01226 EPD-01806	1 1 1 1 1	70 100 100 100 100	Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier Movable Noise Barrier	-10 -10 -10 -10 -5	109 102 93 104 95	107 102 93 104 95	110	
S4C1-v	Site formation and site development for a new District Cooling System	1 Site Clearance	Backhoe Generator Breaker, handheld Saw, circular, wood Bulldozer Dump Truck	EPD-02046 CNP 103 CNP 024 CNP 201 Komatsu Model D21A-B OCUPME-038	1 1 1 1 1 2	100 100 100 100 100 70	Movable Noise Barrier Enclosure Noise Barrier Noise Barrier Movable Noise Barrier Movable Noise Barrier	-5 -10 -10 -10 -5 -5	101 95 108 108 102 105	101 96 98 98 97 101	106	109
		2 Earthwork (cut)	Excavator Generator Breaker, handheld Dump Truck Water pump	EPD-00772 CNP 103 CNP 024 OCUPME-038 CNP 281	8 3 1 4 4	70 100 100 70 100	Movable Noise Barrier Enclosure Noise Barrier Movable Noise Barrier Noise barrier	-5 -10 -10 -5 -10	103 95 108 105 88	105 90 98 104 94	109	
		3 Earthwork (Fill)	Backhoe Generator Roller Dump Truck	EPD-02046 CNP 103 EPD-01806 OCUPME-038	8 3 4 4	70 100 100 100	Movable Noise Barrier Enclosure Movable Noise Barrier Movable Noise Barrier	-5 -15 -5 -5	101 95 95 103	103 100 94 104	108	

