

Appendix 4.5.1 Plant inventory (Unmitigated 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	CNP 081	1	100			112	112	114	114
			Generator	CNP 103	1	100			95	95		
			Roller	CNP 185	1	100			108	108		
			Dump Truck	OCUPME-038	1	100			105	105		
		2 Roadwork (Laying Utilities)	Excavator	CNP 081	1	100			112	112	113	
			Truck	OCUPME-033	1	100			105	105		
			Water pump	CNP 281	1	100			88	88		
			Concrete Lorry Mixer	CNP 044	1	70			109	107		
		3 Roadwork (Paving)	Vibratory Poker	OCUPME-019	1	100			102	102	114	
			Generator	CNP 101	1	100			108	108		
			Asphalt Paver	CNP 004	1	100			109	109		
			Roller	CNP 185	1	100			108	108		
AWC1-ii	Slip Roads (Connection between Primary Distributor Road P1 and KSWH) (per 200 m)	1 Earthwork (Excavation and Backfill)	Backhoe	CNP 081	1	100			112	112	114	117
			Generator	CNP 103	1	100			95	95		
			Roller	CNP 185	1	100			108	108		
			Dump Truck	OCUPME-038	1	100			105	105		
		2 Roadwork (Laying Utilities)	Excavator	CNP 081	1	100			112	112	113	
			Truck	OCUPME-033	1	100			105	105		
			Water pump	CNP 281	1	100			88	88		
			Concrete Lorry Mixer	CNP 044	1	70			109	107		
		3 Roadwork (Paving)	Vibratory Poker	OCUPME-019	1	100			102	102	114	
			Generator	CNP 101	1	100			108	108		
			Asphalt Paver	CNP 004	1	100			109	109		
			Roller	CNP 185	1	100			108	108		
4 Piling-Excavation	Mobile Crane	CNP 048	1	100			112	112	117			
	Piling, Large Bored Pile	CNP 166	1	100			100	100				
	Excavator	CNP 081	1	100			112	112				
	Dump Truck	OCUPME-038	1	70			105	103				
	Air compressor	CNP 002	1	100			102	102				
	Generator	CNP 101	1	100			108	108				
5 Piling-Concreting	Water pump	CNP 281	1	100			88	88	115			
	Air compressor	CNP 002	1	100			102	102				
	Breaker, handheld	CNP 023	1	100			108	108				
	Excavator	CNP 081	1	100			112	112				
	Dump Truck	OCUPME-038	1	70			105	103				
6 Pile Cap-Excavation	Generator	CNP 101	1	100			108	108	115			
	Water pump	CNP 281	1	100			88	88				
	Dump Truck	OCUPME-038	1	70			105	103				
7 Pile Cap-Concreting	Generator	CNP 101	1	100			108	108	116			
	Concrete Lorry Mixer	CNP 044	1	70			109	107				
	Mobile Crane	CNP 048	1	100			112	112				
8 Superstructure (Cast in-situ)	Vibratory Poker	OCUPME-019	1	100			102	102	116			
	Generator	CNP 101	1	100			108	108				
	Bar Bender, Cutter	CNP 021	1	100			90	90				
	Mobile Crane	CNP 048	1	100			112	112				
9 Superstructure (Segmental Launching)	Concrete Lorry Mixer	CNP 044	1	100			109	109	116			
	Vibratory Poker	OCUPME-019	1	100			102	102				
	Concrete pump	CNP 047	1	100			109	109				
10 Surfacing	Gantry Gribder, mobile	CNP 048	1	100			112	112	114			
	Mobile Crane	CNP 048	1	100			112	112				
	Lorry	OCUPME-033	1	100			105	105				
	Generator	CNP 101	1	100			108	108				
AWC1-iii	Site formation (residential Site 2-19, 5-24, 5-26) (per about 2 ha)	1 Site Clearance	Concrete Lorry Mixer	CNP 044	1	70			109	107	118	118
			Generator	CNP 101	1	100			108	108		
			Asphalt Paver	CNP 004	1	100			109	109		
			Roller	CNP 185	1	100			108	108		
			Excavator	CNP 081	1	100			112	112		
			Generator	CNP 103	1	100			95	95		
		2 Earthwork (cut)	Breaker, handheld	CNP 024	1	100			108	108	114	
			Saw, circular, wood	CNP 201	1	100			108	108		
			Bulldozer	CNP 030	1	100			115	115		
			Dump Truck	OCUPME-038	2	70			105	106		
		3 Earthwork (Fill)	Excavator	CNP 081	1	100			112	112	114	
			Generator	CNP 103	1	100			95	95		
Roller	CNP 185		1	100			108	108				
Dump Truck	OCUPME-038		1	70			105	103				
AWC1-iiid	Site development (residential Site 2-19, 5-24, 5-26) (per about 2 ha)	4 GIC Sub-Structure (per site)	Backhoe	CNP 081	1	100			112	112	121	121
			Generator	CNP 103	1	100			95	95		
			Breaker, handheld	CNP 024	1	100			108	108		
			Saw, circular, wood	CNP 201	1	100			108	108		
			Bulldozer	CNP 030	1	100			115	115		
			Dump Truck	OCUPME-038	2	70			105	106		
			Excavator	CNP 081	1	100			112	112		
			Generator	CNP 103	1	100			95	95		
		5 GIC Superstructure (per site)	Roller	CNP 185	1	100			108	108	118	
			Dump Truck	OCUPME-038	1	70			105	103		
			Backhoe	CNP 081	1	100			112	112		
			Generator	CNP 103	1	100			95	95		
AWC1-ivf	Site formation (residential Site 4-20) (per about 2 ha)	1 Site Clearance	Roller	CNP 185	1	100			108	108	114	114
			Bulldozer	CNP 030	1	100			115	115		
			Dump Truck	OCUPME-038	2	70			105	106		
			Excavator	CNP 081	1	100			112	112		
			Generator	CNP 103	1	100			95	95		
			Breaker, handheld	CNP 024	1	100			108	108		
		2 Earthwork (cut)	Dump Truck	OCUPME-038	1	70			105	103	114	
			Water pump	CNP 281	1	100			88	88		
			Backhoe	CNP 081	1	100			112	112		
			Generator	CNP 103	1	100			95	95		
		3 Earthwork (Fill)	Roller	CNP 185	1	100			108	108	114	
			Dump Truck	OCUPME-038	1	70			105	103		
Backhoe	CNP 081		1	100			112	112				
AWC1-ivd	Site development (residential Site 4-20) (per about 2 ha)	4 GIC Sub-Structure (per site)	Generator	CNP 101	2	100			108	111	121	121
			Air compressor	CNP 002	2	100			102	105		
			Piling, Large Bored Pile	CNP 166	2	100			100	103		
			Excavator	CNP 081	2	100			112	115		
			Bar Bender, Cutter	CNP 021	2	100			90	93		
			Mobile Crane	CNP 048	1	100			112	112		
			Lorry	OCUPME-033	2	100			105	108		
			Dump Truck	OCUPME-038	2	70			105	106		
		5 GIC Superstructure (per site)	Concrete Lorry Mixer	CNP 044	2	100			109	112	118	
			Vibratory Poker	OCUPME-019	4	100			102	108		
			Concrete pump	CNP 047	2	100			109	112		
			Water pump	CNP 281	2	100			88	91		

		5 GIC Superstructure (per site)	Generator Bar Bender, Cutter Mobile Crane Concrete Lorry Mixer Vibratory Poker Concrete pump	CNP 101 CNP 021 CNP 048 CNP 044 OCUPME-019 CNP 047	2 1 1 2 4 2	100 100 100 100 100 100			108 111 118	111 90 112 109 102 109	118					
AWC1-vf	Site formation for residential, G/C, commercial and industrial development areas (per about 2 ha)	1 Site Clearance	Backhoe Generator Breaker, handheld Saw, circular, wood Bulldozer Dump Truck	CNP 081 CNP 103 CNP 024 CNP 201 CNP 030 OCUPME-038	1 1 1 1 1 2	100 100 100 100 100 70			112 112 95 108 108 115	112 95 108 108 105 105	118	119				
		2 Earthwork (cut)	Excavator Generator Breaker, handheld Dump Truck Water pump	CNP 081 CNP 103 CNP 024 OCUPME-038 CNP 281	8 3 1 4 4	50 100 50 40 100			112 95 108 105 88	118 100 105 107 94	119					
		3 Earthwork (Fill)	Backhoe Generator Roller Dump Truck	CNP 081 CNP 103 CNP 185 OCUPME-038	8 3 4 4	50 100 70 50			112 95 108 105	118 100 112 108	119					
AWC1-vd		Site development for residential, G/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	CNP 101 CNP 002 CNP 166 CNP 081 CNP 021 CNP 048 OCUPME-033 OCUPME-038 CNP 044 OCUPME-019 CNP 047 CNP 281	2 2 2 2 2 1 2 2 2 4 2 2	100 100 100 50 100 100 50 50 50 50 50 100			108 102 100 112 90 112 105 105 109 102 109 88	111 105 103 112 93 110 105 105 109 105 109 91	118	118	118		
				5 GIC Superstructure (per site)	Generator Bar Bender, Cutter Mobile Crane Concrete Lorry Mixer Vibratory Poker Concrete pump	CNP 101 CNP 021 CNP 048 CNP 044 OCUPME-019 CNP 047	2 1 1 2 4 2	100 100 100 70 100 70			108 90 112 109 102 109	111 90 112 110 110 110	118			
					Generator Bar Bender, Cutter Mobile Crane Concrete Lorry Mixer Vibratory Poker Concrete pump	CNP 101 CNP 021 CNP 048 CNP 044 OCUPME-019 CNP 047	2 1 1 2 4 2	100 100 100 70 100 70			108 90 112 109 102 109	111 90 112 110 110 110	118			
AWC1-vi	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	CNP 081 CNP 103 CNP 024 CNP 201 CNP 030 OCUPME-038	1 1 1 1 1 2	100 100 100 100 100 70			112 95 108 108 115 105	112 95 108 108 115 106	118	119	120	
				2 Earthwork (cut)	Excavator Generator Breaker, handheld Dump Truck Water pump	CNP 081 CNP 103 CNP 024 OCUPME-038 CNP 281	4 1 1 2 2	100 100 100 70 100			112 95 108 105 88	118 95 108 106 91	119			
				3 Earthwork (Fill)	Backhoe Generator Roller Dump Truck	CNP 081 CNP 103 CNP 185 OCUPME-038	4 2 2 2	100 100 100 70			112 95 108 105	118 98 111 106	119			
				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	CNP 101 CNP 002 CNP 081 CNP 021 CNP 048 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 70 100 100 100 100			108 102 112 90 112 105 105 109 102 109 88	108 105 115 93 112 108 106 112 105 112 91	120			
					5 Pumping Station Superstructure	Generator Bar Bender, Cutter Mobile Crane Concrete Lorry Mixer Vibratory Poker Concrete pump	CNP 101 CNP 021 CNP 048 CNP 044 OCUPME-019 CNP 047	2 1 1 2 2 2	100 100 100 70 100 70			108 90 112 109 102 109	111 90 112 112 105 112	118		
						Excavator Truck Water pump Concrete Lorry Mixer Vibratory Poker Compactor, Vibratory CNP 050 Bar Bender, Cutter	CNP 081 OCUPME-033 CNP 281 CNP 044 OCUPME-019 CNP 050 CNP 021	1 1 2 1 2 1 1	100 100 100 70 100 100 100			112 105 88 109 102 105 90	112 105 91 107 105 105 90	115		

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)		
STC1-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	CNP 081	1	100			112	112	114	116		
			Generator	CNP 103	1	100			95	95				
			Roller	CNP 185	1	100			108	108				
			Dump Truck	OCUPME-038	1	100			105	105				
		2 Underpass	Lorry with Grab	OCUPME-036	1	100			105	105		116		
			Air compressor	CNP 002	2	100			102	105				
			Piling, Large Bored Pile	CNP 166	2	100			100	103				
			Generator	CNP 103	1	100			95	95				
			Concrete Lorry Mixer	CNP 044	1	70			109	107				
			Excavator	CNP 081	1	100			112	112				
		3 Roadwork (Laying Utilities)	Vibratory Poker	OCUPME-019	2	100			102	105			113	
			Compactor, Vibratory	CNP 050	1	100			105	105				
Bar Bender, Cutter	CNP 021		1	100			90	90						
Water pump	CNP 281		2	100			88	91						
4 Roadwork (Paving)	Excavator	CNP 081	1	100			112	112			114			
	Truck	OCUPME-033	1	100			105	105						
	Water pump	CNP 281	1	100			88	88						
	Concrete Lorry Mixer	CNP 044	1	70			109	107						
STC1-ii	Site formation and site development for Port Back-up and Storage Use site (per about 2 ha)	1 Site Clearance	Vibratory Poker	OCUPME-019	1	100			102	102				
			Generator	CNP 101	1	100			108	108				
			Asphalt Paver	CNP 004	1	100			108	108				
			Roller	CNP 185	1	100			108	108				
			Backhoe	CNP 081	1	100			112	112			118	118
			Generator	CNP 103	1	100			95	95				
		2 Earthwork (cut)	Breaker, handheld	CNP 024	1	100			108	108				
			Saw, circular, wood	CNP 201	1	100			108	108				
			Bulldozer	CNP 030	1	100			115	115				
			Dump Truck	OCUPME-038	2	70			105	106				
			Excavator	CNP 081	1	100			112	112			114	
			Generator	CNP 103	1	100			95	95				
3 Earthwork (Fill)	Breaker, handheld	CNP 024	1	100			108	108						
	Dump Truck	OCUPME-038	1	70			105	103						
	Water pump	CNP 281	1	100			88	88						
	Backhoe	CNP 081	1	100			112	112			114			
	Generator	CNP 103	1	100			95	95						
	Roller	CNP 185	1	100			108	108						

S1C1-ii	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	CNP 101 CNP 002 CNP 166 CNP 081 CNP 021 CNP 048 OCUPME-033 OCUPME-038 CNP 044 OCUPME-019 CNP 047 CNP 281	2 2 2 2 1 2 2 2 4 2 2	100 100 100 100 100 100 100 100 100 100 100			108 111 121 121	111 105 103 115 93 112 105 106 112 108 112 91		
		5	Superstructure (per site)	Generator Bar Bender, Cutter Mobile Crane Concrete Lorry Mixer Vibratory Poker Concrete pump	CNP 101 CNP 021 CNP 048 CNP 044 OCUPME-019 CNP 047	2 1 1 2 4 2	100 100 100 100 100 100			108 111 90 112 109 102 109	111 90 112 112 108 108 112	118	

Stage 2 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 S2C1															
S2C1-i	District Distributor Road D6, D7 and D8, and local roads (per 200m)	1	Earthwork (Excavation and Backfill)	Backhoe Generator Roller Dump Truck	CNP 081 CNP 103 CNP 185 OCUPME-038	1 1 1 1	100 100 100 100		112 95 108 105	112 95 108 105	114	116			
		2	Roadwork (Laying Utilities)	Excavator Truck Water pump	CNP 081 OCUPME-033 CNP 281	1 1 1	100 100 100		112 105 88	112 105 88		113			
		3	Roadwork (Paving)	Concrete Lorry Mixer Vibratory Poker Generator Asphalt Paver Roller	CNP 044 OCUPME-019 CNP 101 CNP 004 CNP 185	1 1 1 1 1	70 100 100 100 100		109 102 108 109 108	107 102 108 109 108		114			
		4	Underpass (per 200m)	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 CNP 081 OCUPME-019 CNP 050 CNP 021 CNP 281	1 2 2 1 1 1 2 1 2	100 100 100 100 70 100 100 100 100 100		105 102 100 95 109 112 102 105 90 88	105 105 103 95 107 112 105 105 90 91		116			
S2C1-ii		A new Sewage Pumping Station SPS3 and associated rising main from SPS3 to SPS2	1	Site Clearance	Backhoe Generator Breaker, handheld Saw, circular, wood Bulldozer Dump Truck	CNP 081 CNP 103 CNP 024 CNP 201 CNP 030 OCUPME-038	1 1 1 1 1 2	100 100 100 100 100 70		112 95 108 108 115 105	112 95 108 108 115 106	118	120		
			2	Earthwork (cut)	Excavator Generator Breaker, handheld Dump Truck Water pump	CNP 081 CNP 103 CNP 024 OCUPME-038 CNP 281	4 1 1 2 4	100 100 100 70 100		112 95 108 105 88	118 95 108 106 91		119		
			3	Earthwork (Fill)	Backhoe Generator Roller Dump Truck	CNP 081 CNP 103 CNP 185 OCUPME-038	4 2 2 2	100 100 100 70		112 95 108 105	118 98 111 106		119		
			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	CNP 101 CNP 002 CNP 081 CNP 021 CNP 048 OCUPME-033 OCUPME-038 CNP 044 OCUPME-019 CNP 047 CNP 281	1 2 2 2 1 2 2 2 2 2	100 100 100 100 100 100 70 100 100 100		108 102 112 90 112 105 105 109 102 88	108 105 115 93 112 108 106 112 102 91		120		
			5	Pumping Station Superstructure (per site)	Generator Bar Bender, Cutter Mobile Crane Concrete Lorry Mixer Vibratory Poker Concrete pump	CNP 101 CNP 021 CNP 048 CNP 044 OCUPME-019 CNP 047	2 1 1 2 2 2	100 100 100 100 100 100		108 90 112 109 102 109	111 90 112 112 105 112		118		
			6	Rising Mains (per 200m)	Excavator Truck Water pump Concrete Lorry Mixer Vibratory Poker Compactor, Vibratory Bar Bender, Cutter	CNP 081 OCUPME-033 CNP 281 CNP 044 OCUPME-019 CNP 050 CNP 021	1 1 2 1 2 1 1	100 100 100 70 100 100 100		112 105 88 109 102 105 90	112 105 91 107 105 105 90		115		
S2C1-iii			Site formation and development for Fresh Water Service Reservoir	1	Earthwork	Excavator Generator Breaker, handheld Roller Dump Truck	CNP 081 CNP 103 CNP 024 CNP 185 OCUPME-038	2 2 1 2 2	100 100 50 100 70		112 95 108 108 105	115 98 108 108 106		117	131
				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	100 100 70 30 30 100		128 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 CNP 048 CNP 081 CNP 021 CNP 047 CNP 044	2 2 2 2 2 2	100 100 100 100 100 70		95 112 112 90 109 109	98 115 115 93 112 110		120	
				4	Service 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		95 109 102 102	98 110 93 108		113	
				5	Roadwork (Laying Utilities)	Excavator Truck Water pump	CNP 081 OCUPME-033 CNP 281	2 2 2	100 100 100		112 105 88	115 108 91		116	
				6	Roadwork (Paving)	Concrete Lorry Mixer Generator Asphalt Paver Roller	CNP 044 CNP 101 CNP 004 CNP 185	2 2 2 2	70 100 100 100		109 108 109 108	110 111 112 111		117	
	7			Blasting	Rock Drill Air compressor	CNP 183 CNP 003	2 2	100 100		116 104	119 107		119		
S2C1-iv	Trunk main from Au Tau WTW to HSK Fresh Water Service Reservoir (per 200m)			1	Earthwork (Excavation and Backfill)	Backhoe Generator Roller Dump Truck	CNP 081 CNP 103 CNP 185 OCUPME-038	1 1 1 1	100 100 100 100		112 95 108 105	112 95 108 105	114	115	
				2	Laying Watermains	Excavator Truck Water pump Concrete Lorry Mixer Vibratory Poker Compactor, Vibratory Bar Bender, Cutter	CNP 081 OCUPME-033 CNP 281 CNP 044 OCUPME-019 CNP 050 CNP 021	1 1 2 1 2 1 1	100 100 100 70 100 100 100		112 105 88 109 102 105 90	112 105 91 107 105 105 90		115	
				3	Roadwork (Paving)	Concrete Lorry Mixer Vibratory Poker Generator Asphalt Paver Roller	CNP 044 OCUPME-019 CNP 101 CNP 004 CNP 185	1 1 1 1 1	70 100 100 100 100		109 102 108 109 108	107 102 108 109 108		114	

S2C1-iv	Site formation for residential & commercial developments, GIC and Open Space areas (per about 2 ha)	1	Site Clearance	Backhoe Generator Breaker, handheld Saw, circular, wood Bulldozer Dump Truck	CNP 081 CNP 103 CNP 024 CNP 201 CNP 030 OCUPME-038	1 1 1 1 1 2	100 100 100 100 100 70			112 95 108 108 115 105	112 95 108 108 115 106	118	121
		2	Earthwork (cut)	Excavator Generator Breaker, handheld Dump Truck Water pump	CNP 081 CNP 103 CNP 024 OCUPME-038 CNP 281	8 3 1 4 4	70 100 70 70 100			112 95 108 105 88	119 100 106 109 94	120	
		3	Earthwork (Fill)	Backhoe Generator Roller Dump Truck	CNP 081 CNP 103 CNP 185 OCUPME-038	8 3 4 4	70 100 100 70			112 95 108 105	119 100 114 109	121	
S2C1-vd	Site development for residential & commercial developments, GIC and Open Space 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	CNP 101 CNP 002 CNP 166 CNP 081 CNP 021 CNP 048 OCUPME-033 OCUPME-038 CNP 044 OCUPME-019 CNP 047 CNP 281	2 2 2 2 2 1 2 2 4 2 2	100 100 100 100 100 100 100 100 100 100 100			108 102 100 112 90 112 105 105 109 102 109 88	111 105 103 115 93 112 108 106 112 108 112 91	117	118
		5	GIC Superstructure (per site)	Generator Bar Bender, Cutter Mobile Crane Concrete Lorry Mixer Vibratory Poker Concrete pump	CNP 101 CNP 021 CNP 048 CNP 044 OCUPME-019 CNP 047	2 1 1 2 4 2	100 100 100 70 100 100			108 90 112 109 102 109	111 90 112 110 108 112	118	
S2C1-vf	Site formation for a new District Cooling System	1	Site Clearance	Backhoe Generator Breaker, handheld Saw, circular, wood Bulldozer Dump Truck	CNP 081 CNP 103 CNP 024 CNP 201 CNP 030 OCUPME-038	1 1 1 1 1 2	100 100 100 100 100 70			112 95 108 108 115 105	112 95 108 108 115 106	118	122
		2	Earthwork (cut)	Excavator Generator Breaker, handheld Dump Truck Water pump	CNP 081 CNP 103 CNP 024 OCUPME-038 CNP 281	8 3 1 4 4	100 100 100 70 100			112 95 108 105 88	121 100 108 109 94	122	
		3	Earthwork (Fill)	Backhoe Generator Roller Dump Truck	CNP 081 CNP 103 CNP 185 OCUPME-038	8 3 4 4	100 100 100 70			112 95 108 105	121 100 114 109	122	
S2C1-vd	Site development for a new District Cooling System	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	CNP 101 CNP 002 CNP 166 CNP 081 CNP 021 CNP 048 OCUPME-033 OCUPME-038 CNP 044 OCUPME-019 CNP 047 CNP 281	2 2 2 2 2 1 2 2 4 2 2	100 100 100 100 100 100 100 100 100 100 100			108 102 100 112 90 112 105 105 109 102 109 88	111 105 103 115 93 112 108 106 112 108 112 91	121	121
		5	Laying pipelines (per 200m)	Excavator Truck Water pump Concrete Lorry Mixer Vibratory Poker Compactor, Vibratory Bar Bender, Cutter	CNP 081 OCUPME-033 CNP 281 CNP 044 OCUPME-019 CNP 050 CNP 021	1 1 2 1 2 1 1	100 100 100 70 100 100 100			112 105 88 109 102 105 90	112 105 91 107 105 105 90	115	
Contract S2C2													
S2C2-i	District Distributor Road D1, a section of Road D3 and local roads (per 200m)	1	Earthwork (Excavation and Backfill)	Backhoe Generator Roller Dump Truck	CNP 081 CNP 103 CNP 185 OCUPME-038	1 1 1 1	100 100 100 100			112 95 108 105	112 95 108 105	114	116
		2	Roadwork (Laying Utilities)	Excavator Truck Water pump	CNP 081 OCUPME-033 CNP 281	1 1 1	100 100 100			112 105 88	113		
		3	Roadwork (Paving)	Concrete Lorry Mixer Vibratory Poker Generator Asphalt Paver Roller	CNP 044 OCUPME-019 CNP 101 CNP 004 CNP 185	1 1 1 1 1	70 100 100 100 100			109 102 108 109 108	107 102 108 109 108	114	
		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 CNP 081 OCUPME-019 CNP 050 CNP 021 CNP 281	1 2 2 1 1 1 2 1 1 2	100 100 100 100 70 100 100 100 100 100			105 102 100 95 109 112 102 105 90 88	105 105 103 95 107 112 105 105 90 91	116	
S2C2-ii	Site formation and site development for a new HSK STW	1	Site Clearance	Backhoe Generator Breaker, handheld Saw, circular, wood Bulldozer Dump Truck	CNP 081 CNP 103 CNP 024 CNP 201 CNP 030 OCUPME-038	1 1 1 1 1 2	100 100 100 100 100 70			112 95 108 108 115 105	112 95 108 108 115 106	118	122
		2	Earthwork (cut)	Excavator Generator Breaker, handheld Dump Truck Water pump	CNP 081 CNP 103 CNP 024 OCUPME-038 CNP 281	8 3 1 4 4	100 100 70 70 100			112 95 108 105 88	121 100 108 109 94	122	
		3	Earthwork (Fill)	Backhoe Generator Roller Dump Truck	CNP 081 CNP 103 CNP 185 OCUPME-038	8 3 4 4	100 100 100 70			112 95 108 105	121 100 114 109	122	
S2C2-iii	Site formation and site development for a new HSK STW	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	CNP 101 CNP 002 CNP 081 CNP 021 CNP 048 OCUPME-033 OCUPME-038 CNP 044 OCUPME-019 CNP 047 CNP 281	2 2 2 2 2 1 2 2 4 2 2	100 100 100 100 100 100 100 100 100 100 100			108 102 112 90 112 105 105 109 102 109 88	111 105 115 93 112 108 106 112 108 112 91	121	121
		5	STW Superstructure (per site)	Generator Bar Bender, Cutter Mobile Crane Concrete Lorry Mixer Vibratory Poker Concrete pump	CNP 101 CNP 021 CNP 048 CNP 044 OCUPME-019 CNP 047	2 1 1 2 4 2	100 100 100 70 100 100			108 90 112 109 102 109	111 90 112 112 108 112	118	
S2C2-iii		1	Site Clearance	Backhoe Generator Breaker, handheld Saw, circular, wood Bulldozer Dump Truck	CNP 081 CNP 103 CNP 024 CNP 201 CNP 030 OCUPME-038	1 1 1 1 1 2	100 100 100 100 100 70			112 95 108 108 115 105	112 95 108 108 115 106	118	120

A new Sewage Pumping Station SPS4 and associated rising mains	2	Earthwork (cut)	Excavator Generator Breaker, handheld Dump Truck Water pump	CNP 081 CNP 103 CNP 024 OCUPME-038 CNP 281	4 1 1 2 2	100 100 100 70 100			112 95 108 105 88	118 95 108 106 91	119		
	3	Earthwork (Fill)	Backhoe Generator Roller Dump Truck	CNP 081 CNP 103 CNP 185 OCUPME-038	4 2 2 2	100 100 100 70			112 95 108 105	118 95 111 106	119		
	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	CNP 101 CNP 002 CNP 081 CNP 021 CNP 048 OCUPME-033 OCUPME-038 CNP 044 OCUPME-019 CNP 047 CNP 281	2 2 2 2 1 2 2 2 2 2 2	100 100 100 100 100 100 70 100 100 100 100			108 102 112 90 112 105 105 109 102 109 88	108 105 115 93 112 108 106 112 105 112 91	120		
	5	Pumping Station Superstructure (per site)	Generator Bar Bender, Cutter Mobile Crane Concrete Lorry Mixer Vibratory Poker Concrete pump	CNP 101 CNP 021 CNP 048 CNP 044 OCUPME-019 CNP 047	2 1 1 2 2 2	100 100 100 100 100 100			108 90 112 109 102 109	111 90 112 112 105 112	118		
	6	Rising Mains (per 200m)	Excavator Truck Water pump Concrete Lorry Mixer Vibratory Poker Compactor, Vibratory Bar Bender, Cutter	CNP 081 OCUPME-033 CNP 281 CNP 044 OCUPME-019 CNP 050 CNP 021	1 1 2 1 1 1 1	100 100 100 70 100 100 100			112 105 88 109 102 105 90	112 105 91 107 105 105 90	115		
	S2C2-w	A new TSE reservoirs and associated pumping stations and rising mains	1	Earthwork	Excavator Generator Breaker, handheld Roller Dump Truck	CNP 081 CNP 103 CNP 024 CNP 185 OCUPME-038	2 2 1 2 2	100 100 100 50 70			112 95 108 108 105	115 98 108 108 106	117
2	Slopework (Soil Nail)		Rock Drill Generator Air compressor Grout Pump Grout Mixer Hoist, Pencil	CNP 181 CNP 103 CNP 002 OCUPME-015 OCUPME-014 CNP 123	2 2 2 2 2 2	100 100 70 30 30 100			128 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 CNP 048 CNP 081 CNP 021 CNP 047 CNP 044	2 2 2 2 2 2	100 100 100 100 100 70			112 112 112 90 109 109	115 98 115 93 112 110	120		
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			109 110 90 102	98 110 93 108	113		
5	Roadwork (Laying Utilities)		Excavator Truck Water pump Concrete Lorry Mixer	CNP 081 OCUPME-033 CNP 281 CNP 044	2 2 2 2	100 100 100 70			112 105 88 109	115 108 91 110	116	117	
6	Roadwork (Paving)		Generator Asphalt Paver Roller	CNP 101 CNP 004 CNP 185	2 2 2	100 100 100			108 109 108	111 112 111			
7	Blasting		Rock Drill Air compressor	CNP 183 CNP 003	2 2	100 100			116 104	119 107	119		
S2C2-vf	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	CNP 081 CNP 103 CNP 024 CNP 201 CNP 030 OCUPME-038	1 1 1 1 1 2	100 100 100 100 100 70			112 95 108 108 115 105	112 95 108 108 115 106	118	118
2		Earthwork (cut)	Excavator Generator Breaker, handheld Dump Truck Water pump	CNP 081 CNP 103 CNP 024 OCUPME-038 CNP 281	1 1 1 1 1	100 100 100 70 100			112 95 108 105 88	112 95 108 103 88	114		
3		Earthwork (Fill)	Backhoe Generator Roller Dump Truck	CNP 081 CNP 103 CNP 185 OCUPME-038	1 1 1 1	100 100 100 70			112 95 108 105	112 95 108 103	114		
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	CNP 101 CNP 002 CNP 166 CNP 081 CNP 021 CNP 048 OCUPME-033 OCUPME-038 CNP 044 OCUPME-019 CNP 047 CNP 281	2 2 2 2 2 1 2 2 2 4 2 2	100 100 100 100 100 100 100 70 100 100 100 100			108 102 100 112 90 112 105 105 109 102 109 88	111 105 103 115 93 112 108 106 112 108 112 91	121	121
5		Superstructure (per site)	Generator Bar Bender, Cutter Mobile Crane Concrete Lorry Mixer Vibratory Poker Concrete pump	CNP 101 CNP 021 CNP 048 CNP 044 OCUPME-019 CNP 047	2 1 1 2 4 2	100 100 100 100 100 100			108 90 112 109 102 109	111 90 112 112 108 112	118		

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	CNP 081 CNP 103 CNP 185 OCUPME-038	1 1 1 1	100 100 100 100			112 95 108 105	112 95 108 105	114	114	
2		Roadwork (Laying Utilities)	Excavator Truck Water pump	CNP 081 OCUPME-033 CNP 281	1 1 1	100 100 100			112 105 88	112 105 88	113			
3		Roadwork (Paving)	Concrete Lorry Mixer Vibratory Poker Generator Asphalt Paver Roller	CNP 044 OCUPME-019 CNP 101 CNP 004 CNP 185	1 1 1 1 1	70 100 100 100 100			109 102 108 109 108	107 102 108 109 108	114			
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 CNP 081 OCUPME-019 CNP 050 CNP 021 CNP 281	1 2 2 1 1 1 2 1 1 2	50 100 70 100 50 70 100 70 100 100			105 102 100 109 112 102 105 105 90 88	102 105 101 95 106 110 105 103 90 91	114			
S3C1-ii		District Distributor Road D1, D4 and Ping Ha Road (Road D2) widening (per 200m)	1	Site Clearance	Backhoe Generator Breaker, handheld Saw, circular, wood Bulldozer Dump Truck	CNP 081 CNP 103 CNP 024 CNP 201 CNP 030 OCUPME-038	1 1 1 1 1 2	100 100 100 100 100 50			112 95 108 108 115 105	112 95 108 108 112 106	117	122

	Site formation for residential, commercial and GIC sites (per about 2 ha)	2	Earthwork (cut)	Excavator Generator Breaker, handheld Dump Truck Water pump	CNP 081 CNP 103 CNP 024 OCUPME-038 CNP 281	8 3 1 4 4	80 100 100 70 100					112 95 108 105 88	120 100 108 109 94	121		
		3	Earthwork (Fill)	Backhoe Generator Roller Dump Truck	CNP 081 CNP 103 CNP 185 OCUPME-038	8 3 4 4	100 100 100 70					112 95 108 105	121 100 114 109	122		
S3C1-ii	Site development for residential, commercial and GIC 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	CNP 101 CNP 002 CNP 166 CNP 081 CNP 021 CNP 048 OCUPME-033 OCUPME-038 CNP 044 OCUPME-019 CNP 047 CNP 281	2 2 2 2 2 1 2 2 4 2 2 2	100 100 100 70 100 100 50 50 100 100 50 100					108 102 100 112 90 112 105 105 109 102 109 88	111 105 103 113 93 112 105 105 109 108 109 91	119	119	
		5	GIC Superstructure (per site)	Generator Bar Bender, Cutter Mobile Crane Concrete Lorry Mixer Vibratory Poker Concrete pump	CNP 101 CNP 021 CNP 048 CNP 044 OCUPME-019 CNP 047	2 1 1 2 4 2	100 100 100 100 100 100					108 90 112 109 102 109	111 90 112 112 108 112	118		
Contract S3C2																
S3C2-i	District Distributor Road D3 and D5 (per 200m)	1	Earthwork (Excavation and Backfill)	Backhoe Generator Roller Dump Truck	CNP 081 CNP 103 CNP 185 OCUPME-038	1 1 1 1	100 100 100 100					112 95 108 105	112 95 108 105	114	114	
		2	Roadwork (Laying Utilities)	Excavator Truck Water pump	CNP 081 OCUPME-033 CNP 281	1 1 1	100 100 100					112 105 88	105 107 88	113		
		3	Roadwork (Paving)	Concrete Lorry Mixer Vibratory Poker Generator Asphalt Paver Roller	CNP 044 OCUPME-019 CNP 101 CNP 004 CNP 185	1 1 1 1 1	60 100 100 100 100					109 102 108 109 108	107 102 108 109 108	114		
		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 CNP 081 OCUPME-019 CNP 050 CNP 021 CNP 281	1 1 1 1 2 1 1 2	50 100 50 100 100 50 100 100					105 95 109 112 102 105 90 88	102 95 106 112 105 102 90 91	114		
S3C2-ii	Slip roads connecting KSWH and Road D3 (per 200 m)	1	Piling-Excavation	Mobile Crane Piling, Large Bored Pile Excavator Dump Truck Air compressor Generator Water pump Breaker	CNP 048 CNP 166 CNP 081 OCUPME-038 CNP 002 CNP 101 CNP 281 CNP 025	1 2 1 1 1 1 1 1	100 100 100 70 100 100 100 100					112 100 112 105 102 108 88 111	112 103 112 103 102 108 88 111	118	118	
		2	Piling-Concreting	Mobile Crane Piling, Large Bored Pile Concrete Lorry Mixer Generator Water pump	CNP 048 CNP 166 CNP 044 CNP 101 CNP 281	1 1 1 1 1	100 100 100 100 100						112 100 109 108 88	112 100 109 108 88	115	
		3	Pile Cap-Excavation	Air compressor Breaker, handheld Excavator Dump Truck Generator Water pump	CNP 002 CNP 023 CNP 081 OCUPME-038 CNP 101 CNP 281	1 1 1 1 1 1	100 100 100 70 100 100						102 108 112 105 108 88	102 108 112 103 108 88	115	
		4	Pile Cap-Concreting	Generator Concrete Lorry Mixer Mobile Crane Vibratory Poker	CNP 101 CNP 044 CNP 048 OCUPME-019	1 1 1 2	100 70 100 100						108 109 112 102	108 107 112 105	116	
		5	Superstructure (Cast in-situ)	Generator Bar Bender, Cutter Mobile Crane Concrete Lorry Mixer Vibratory Poker Concrete pump	CNP 101 CNP 021 CNP 048 CNP 044 OCUPME-019 CNP 047	1 1 1 1 2 1	100 100 100 100 100 100						108 90 112 109 102 109	108 90 112 109 105 109	116	
		6	Superstructure (Segmental Launching)	Gantry Gribder, mobile Mobile Crane Lorry Generator	CNP 048 CNP 048 OCUPME-033 CNP 101	1 1 1 1	100 100 100 100						112 112 105 108	112 112 105 108	116	
		7	Surfacing	Concrete Lorry Mixer Generator Asphalt Paver Roller	CNP 044 CNP 101 CNP 004 CNP 185	1 1 1 1	70 100 100 100						109 108 109 108	107 108 109 108	114	
S3C2-iii	A new TSE reservoirs and associated pumping stations and rising mains	1	Earthwork	Excavator Generator Breaker, handheld Roller Dump Truck	CNP 081 CNP 103 CNP 024 CNP 185 OCUPME-038	2 2 1 2 2	100 100 100 50 70					112 95 108 108 105	115 98 108 108 106	117	131	
		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	100 100 70 30 30 100					128 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 CNP 048 CNP 081 CNP 021 CNP 047 CNP 044	2 2 2 2 2 2	100 100 100 100 100 70						95 112 112 90 109 109	98 115 115 93 112 110	113	
		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	CNP 081 OCUPME-033 CNP 281	2 2 2	100 100 100						112 105 88	115 108 91	116	
		6	Roadwork (Paving)	Concrete Lorry Mixer Generator Asphalt Paver Roller	CNP 044 CNP 101 CNP 004 CNP 185	2 2 2 2	70 100 100 100						109 108 109 108	110 111 112 111	117	
		7	Blasting	Rock Drill Air compressor	CNP 183 CNP 003	2 2	100 100						116 104	119 107	119	
S3C2-iv	Site formation for Logistics and Enterprise & Technology Park sites (per about 2 ha)	1	Site Clearance	Backhoe Generator Breaker, handheld Saw, circular, wood Bulldozer Dump Truck	CNP 081 CNP 103 CNP 024 CNP 201 CNP 030 OCUPME-038	1 1 1 1 1 2	70 100 70 70 70 40					112 95 108 108 115 105	110 95 106 106 113 104	117	117	
		2	Earthwork (cut)	Excavator Generator Breaker, handheld Dump Truck Water pump	CNP 081 CNP 103 CNP 024 OCUPME-038 CNP 281	1 1 1 1 1	100 100 100 70 100						112 95 108 105 88	112 95 108 103 88	114	
		3	Earthwork (Fill)	Backhoe Generator Roller Dump Truck	CNP 081 CNP 103 CNP 185 OCUPME-038	1 1 1 1	100 100 100 70						112 95 108 105	112 95 108 103	114	

S3C2-ivd	Site development for Logistics and Enterprise & Technology Park 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	CNP 101 CNP 002 CNP 166 CNP 081 CNP 021 CNP 048 OCUPME-033 OCUPME-038 CNP 044 OCUPME-019 CNP 047 CNP 281	2 2 2 2 1 2 2 2 4 2 2	100 100 70 70 100 50 50 50 50 50 50 100			108 111 119 119	119
		5	GIC Superstructure (per site)	Generator Bar Bender, Cutter Mobile Crane Concrete Lorry Mixer Vibratory Poker Concrete pump	CNP 101 CNP 021 CNP 048 CNP 044 OCUPME-019 CNP 047	2 1 1 2 4 2	100 100 50 50 50 50			108 111 90 109 109 109	116
Contract S3C3											
S3C3-i	Local Roads serving district open space (per 200m)	1	Earthwork (Excavation and Backfill)	Backhoe Generator Roller Dump Truck	CNP 081 CNP 103 CNP 185 OCUPME-038	1 1 1 1	100 100 100 100			112 112 114 114	114
		2	Roadwork (Laying Utilities)	Excavator Truck Water pump	CNP 081 OCUPME-033 CNP 281	1 1 1	100 100 100			112 113 113	113
		3	Roadwork (Paving)	Concrete Lorry Mixer Vibratory Poker Generator Asphalt Paver Roller	CNP 044 OCUPME-019 CNP 101 CNP 004 CNP 185	1 1 1 1 1	70 100 100 100 100			109 107 102 108 109 108	114
S3C3-ii	Re-vitalization of existing Tin Sam Channel and Hung Shui Kiu Channel (per 200m)	1	Earthwork (Excavation and Backfill)	Backhoe Generator Roller Dump Truck	CNP 081 CNP 103 CNP 185 OCUPME-038	1 1 1 1	100 100 100 100			112 112 114 114	114
		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 CNP 081 OCUPME-019 CNP 050 CNP 021 CNP 281	1 1 1 1 2 1 1 2	50 100 50 70 50 50 70 100			102 102 106 110 102 102 88 91	113
S3C3-iii	Polder schemes with water storage tanks (for mitigation of flooding risk) and Open Space Areas	1	Site Clearance	Backhoe Generator Breaker, handheld Saw, circular, wood Bulldozer Dump Truck	CNP 081 CNP 103 CNP 024 CNP 201 CNP 030 OCUPME-038	1 1 1 1 1 2	100 100 100 100 100 70			112 112 118 118 115 106	122
		2	Earthwork (cut)	Excavator Generator Breaker, handheld Dump Truck Water pump	CNP 081 CNP 103 CNP 024 OCUPME-038 CNP 281	8 3 1 4 4	100 100 100 70 100			112 121 100 108 88 94	122
		3	Earthwork (Fill)	Backhoe Generator Roller Dump Truck	CNP 081 CNP 103 CNP 185 OCUPME-038	8 3 4 4	100 100 100 70			112 121 100 108 109 91	122
		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	CNP 101 CNP 002 CNP 166 CNP 081 CNP 021 CNP 048 OCUPME-033 OCUPME-038 CNP 044 OCUPME-019 CNP 047 CNP 281	2 2 2 2 2 1 2 2 2 4 2 2	100 100 100 100 100 100 100 70 100 50 100 100			108 111 105 103 112 90 93 112 112 108 109 112 88 91	121
		5	Laying pipelines (per 200m)	Excavator Truck Water pump Concrete Lorry Mixer Vibratory Poker Compactor, Vibratory Bar Bender, Cutter	CNP 081 OCUPME-033 CNP 281 CNP 044 OCUPME-019 CNP 050 CNP 021	1 1 2 1 2 1 1	100 100 100 70 100 100 100			112 112 105 88 109 105 90	115
S3C3-iv	Site formation and site development for GIC sites (per about 2 ha)	1	Site Clearance	Backhoe Generator Breaker, handheld Saw, circular, wood Bulldozer Dump Truck	CNP 081 CNP 103 CNP 024 CNP 201 CNP 030 OCUPME-038	1 1 1 1 1 2	100 100 50 100 100 70			112 112 118 105 115 106	118
		2	Earthwork (cut)	Excavator Generator Breaker, handheld Dump Truck Water pump	CNP 081 CNP 103 CNP 024 OCUPME-038 CNP 281	8 3 4 4 4	50 100 50 100 100			112 118 100 108 88 94	119
		3	Earthwork (Fill)	Backhoe Generator Roller Dump Truck	CNP 081 CNP 103 CNP 185 OCUPME-038	8 3 4 4	50 100 50 70			112 118 100 111 108	119
S3C3-ivd	Site formation and site development for GIC 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	CNP 101 CNP 002 CNP 166 CNP 081 CNP 021 CNP 048 OCUPME-033 OCUPME-038 CNP 044 OCUPME-019 CNP 047 CNP 281	2 2 2 2 2 1 2 2 2 4 2 2	100 100 100 100 100 100 100 70 100 50 100 100			108 111 105 103 112 90 93 112 112 108 109 109 88 91	119
		5	GIC Superstructure (per site)	Generator Bar Bender, Cutter Mobile Crane Concrete Lorry Mixer Vibratory Poker Concrete pump	CNP 101 CNP 021 CNP 048 CNP 044 OCUPME-019 CNP 047	2 1 1 2 4 2	100 100 100 100 100 100			108 111 90 112 109 112 108 109 112	118

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	CNP 081	1	100			112	112	118
Generator				CNP 103	1	100	95	95	108	108		
S4C1-ii	1	Earthwork (Excavation and Backfill)	Breaker, handheld	CNP 024	1	100	108	105	108	108	114	115
			Saw, circular, wood	CNP 201	1	100	108	105	108	108	114	115
			Bulldozer	CNP 030	1	100	115	115	106	106	114	115
			Dump Truck	OCUPME-038	2	70	105	106	106	106	114	115
			Backhoe	CNP 081	1	100	112	112	114	114	118	119
			Generator	CNP 103	1	100	95	95	108	108	114	115
			Roller	CNP 185	1	100	108	105	108	114	115	
			Dump Truck	OCUPME-038	1	100	105	105	108	114	115	

	Drainage Channel Re-vitalization (per 200m)	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 CNP 081 OCUPME-019 CNP 050 CNP 021 CNP 281	1 1 1 1 2 1 1 2	100 100 70 100 100 100 100 100			105 105 105 105 105 90 90 88	105 95 107 112 102 105 105 100 88 91	115	
S4C1-ii	Stormwater Storage Tank near Tin Shui Wai Channel	1 Site Clearance	Backhoe Generator Breaker, handheld Saw, circular, wood Bulldozer Dump Truck	CNP 081 CNP 103 CNP 024 CNP 201 CNP 030 OCUPME-038	1 1 1 1 1 2	100 100 100 100 100 70			112 112 95 108 108 115 105	112 95 108 108 115 106	118	122
2 Earthwork (cut)		Excavator Generator Breaker, handheld Dump Truck Water pump	CNP 081 CNP 103 CNP 024 OCUPME-038 CNP 281	8 3 1 4 4	100 100 100 70 100			112 121 95 108 105 88 94	105 100 108 109	122		
3 Earthwork (Fill)		Backhoe Generator Roller Dump Truck	CNP 081 CNP 103 CNP 185 OCUPME-038	2 1 1 1	100 100 100 70			112 95 108 105	115 95 108 103	116		
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	CNP 101 CNP 002 CNP 166 CNP 081 CNP 021 CNP 048 OCUPME-033 OCUPME-038 CNP 044 OCUPME-019 CNP 047 CNP 281	2 2 2 2 2 1 2 2 4 2 2 2	100 100 100 100 100 100 70 100 100 100 100 100			108 102 100 112 90 112 105 105 109 102 109 88 91	111 105 103 115 93 112 108 106 112 108 112 91	121		
5 Laying pipelines (per 200m)		Excavator Truck Water pump Concrete Lorry Mixer Vibratory Poker Compactor, Vibratory Bar Bender, Cutter	CNP 081 OCUPME-033 CNP 281 CNP 044 OCUPME-019 CNP 050 CNP 021	1 1 2 1 2 1 1	100 100 100 70 100 100 100			112 105 88 109 102 105 90	112 105 91 107 105 105 90	115		
S4C1-iv	Local roads serving development sites (per 200m)	1 Earthwork (Excavation and Backfill)	Backhoe Generator Roller Dump Truck	CNP 081 CNP 103 CNP 185 OCUPME-038	1 1 1 1	100 100 100 100			112 95 108 105	112 95 108 105	114	114
2 Roadwork (Laying Utilities)		Excavator Truck Water pump	CNP 081 OCUPME-033 CNP 281	1 1 1	100 100 100			112 105 88	105 105 88	113		
3 Roadwork (Paving)		Concrete Lorry Mixer Vibratory Poker Generator Asphalt Paver Roller	CNP 044 OCUPME-019 CNP 101 CNP 004 CNP 185	1 1 1 1 1	70 100 100 100 100			109 102 108 109 108	107 107 108 108 108	114		
S4C1-vf	Site formation and site development for a new District Cooling System	1 Site Clearance	Backhoe Generator Breaker, handheld Saw, circular, wood Bulldozer Dump Truck	CNP 081 CNP 103 CNP 024 CNP 201 CNP 030 OCUPME-038	1 1 1 1 1 2	100 100 100 100 100 70			112 112 95 108 108 115 105	112 95 108 108 115 106	118	122
2 Earthwork (cut)		Excavator Generator Breaker, handheld Dump Truck Water pump	CNP 081 CNP 103 CNP 024 OCUPME-038 CNP 281	8 3 1 4 4	100 100 100 70 100			112 121 95 108 105 88 94	105 100 108 109	122		
3 Earthwork (Fill)		Backhoe Generator Roller Dump Truck	CNP 081 CNP 103 CNP 185 OCUPME-038	8 3 4 4	100 100 100 70			112 95 108 105	121 100 114 109	122		
S4C1-vd	Site formation and site development for a new District Cooling System	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	CNP 101 CNP 002 CNP 166 CNP 081 CNP 021 CNP 048 OCUPME-033 OCUPME-038 CNP 044 OCUPME-019 CNP 047 CNP 281	2 2 2 2 2 1 2 2 2 4 2 2	100 100 100 100 100 100 70 100 100 100 100 100			108 102 100 112 90 112 105 105 109 102 109 88 91	111 105 103 115 93 112 108 106 112 108 112 91	121	121
5 Laying pipelines (per 200m)		Excavator Truck Water pump Concrete Lorry Mixer Vibratory Poker Compactor, Vibratory Bar Bender, Cutter	CNP 081 OCUPME-033 CNP 281 CNP 044 OCUPME-019 CNP 050 CNP 021	1 1 2 1 2 1 1	100 100 100 70 100 100 100			112 105 88 109 102 105 90	112 105 91 107 105 105 90	115		
S4C1-vf	Site formation and site development for residential, GIC, commercial and Open Space Areas (per about 2 ha)	1 Site Clearance	Backhoe Generator Breaker, handheld Saw, circular, wood Bulldozer Dump Truck	CNP 081 CNP 103 CNP 024 CNP 201 CNP 030 OCUPME-038	1 1 1 1 1 2	100 100 100 100 100 70			112 112 95 108 108 115 105	112 95 108 108 115 106	118	122
2 Earthwork (cut)		Excavator Generator Breaker, handheld Dump Truck Water pump	CNP 081 CNP 103 CNP 024 OCUPME-038 CNP 281	8 3 1 4 4	100 100 100 70 100			112 121 95 108 105 88 94	105 100 108 109	122		
3 Earthwork (Fill)		Backhoe Generator Roller Dump Truck	CNP 081 CNP 103 CNP 185 OCUPME-038	8 3 4 4	100 100 100 70			112 95 108 105	121 100 114 109	122		
S4C1-vd	Site formation and site development for residential, GIC, commercial and Open Space 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	CNP 101 CNP 002 CNP 166 CNP 081 CNP 021 CNP 048 OCUPME-033 OCUPME-038 CNP 044 OCUPME-019 CNP 047 CNP 281	2 2 2 2 2 1 2 2 2 4 2 2	100 100 100 100 100 100 70 100 100 100 100 100			108 102 100 112 90 112 105 105 109 102 109 88 91	111 105 103 112 93 112 108 106 112 108 112 91	121	121
5 GIC Superstructure (per site)		Generator Bar Bender, Cutter Mobile Crane Concrete Lorry Mixer Vibratory Poker Concrete pump	CNP 101 CNP 021 CNP 048 CNP 044 OCUPME-019 CNP 047	2 1 1 2 4 2	100 100 100 100 100 100			108 90 112 109 102 109	111 90 112 112 108 112	118		