

ANNEX D

Construction Noise Calculations : Noise Plant Inventories

Tai Wai to Ma On Shan Extension - Construction Plant Inventory**Unmitigated****A. At-grade, Alignment Construction**

Activity No.	Activity	PME	TM ref.	Unit	SWL	Sub-SWL
1	Site Clearance	Excavator/ Loader	CNP 081	1	112	112
		Lorry	CNP 141	1	112	112
		Total: 115				
2	Excavation for Construction of Drainage	Excavator/ Loader	CNP 081	1	112	112
		Lorry	CNP 141	1	112	112
		Compactor, vibratory	CNP 050	1	105	105
Total: 115						
3	Excavation for Minor Retaining Wall	Excavator/ Loader	CNP 081	1	112	112
		Lorry	CNP 141	1	112	112
		Concrete Lorry Mixer	CNP 044	1	109	109
		Poker Vibrator, Hand-held	CNP 170	2	113	116
Total: 119						
4	Formation Preparation	Grader	CNP 104	1	113	113
		Roller, vibratory	CNP 186	1	108	108
Total: 114						

B. Standard Viaduct Construction

Activity No.	Activity	PME	TM ref.	Unit	SWL	Sub-SWL
1	Site Clearance	Excavator/ Loader	CNP 081	1	112	112
		Lorry	CNP 141	1	112	112
		Total: 115				
2	Piling	Piling, reverse circulation drill	CNP 166	4	100	106
		Concrete Lorry Mixer	CNP 044	2	109	112
		Poker Vibrator, Hand-held	CNP 170	2	113	116
		Generator, silenced (75 dB(A) at 7m)	CNP 102	4	100	106
Total: 118						
3	Pilecap Construction	Hand-held Breaker (20kg ≤ mass ≤ 35kg)	CNP 025	4	111	117
		Air Compressor (air flow ≤ 10m ³ /min)	CNP 001	4	100	106
		Lorry	CNP 141	1	112	112
		Poker Vibrator, Hand-held	CNP 170	4	113	119
		Concrete Lorry Mixer	CNP 044	2	109	112
		Mobile Crane	CNP 048	1	112	112
Total: 123						
4	Superstructure Construction	Poker Vibrator, Hand-held	CNP 170	3	113	118
		Concrete Lorry Mixer	CNP 044	2	109	112
		Mobile Crane	CNP 048	3	112	117
Total: 121						
5	Span Construction (may be undertaken at night time)	Mobile Crane	CNP 048	1	112	112
		Electric Winch	CNP 262	2	95	98
		Total: 112				

C. Special Long Span Viaducts/ Cable Stayed Structure ⁽¹⁾

Activity No.	Activities	PME	TM ref.	Unit	SWL	Sub-SWL
1	Site Clearance	Excavator/ Loader	CNP 081	1	112	112
		Lorry	CNP 141	2	112	115
		Total: 117				
2	Piling	Piling, reverse circulation drill	CNP 166	4	100	106
		Concrete Lorry Mixer	CNP 044	2	109	112
		Poker Vibrator, Hand-held	CNP 170	2	113	116
		Generator, silenced (75 dB(A) at 7m)	CNP 102	4	100	106
Total: 118						
3	Pilecap Construction	Excavator/ Loader	CNP 081	1	112	112
		Lorry	CNP 141	1	112	112
		Poker Vibrator, Hand-held	CNP 170	4	113	119
		Concrete Lorry Mixer	CNP 044	3	109	114
Total: 121						
4	Superstructure Construction	Poker Vibrator, Hand-held	CNP 170	3	113	118
		Concrete Lorry Mixer	CNP 044	2	109	112
		Mobile Crane	CNP 048	3	112	117
Total: 121						

Tai Wai to Ma On Shan Extension - Construction Plant Inventory**Unmitigated**

5	Span Construction (may be undertaken at night time)	Mobile Crane	CNP 048	1	112	112
		Electric Winch	CNP 262	2	95	98
					Total: 112	

D. Station Construction

Activity No.	Activities	PME	TM ref.	Unit	SWL	Sub-SWL
1	Site Clearance	Excavator/ Loader	CNP 081	1	112	112
		Lorry	CNP 141	1	112	112
					Total: 115	
2	Piling for Station	Piling, reverse circulation drill	CNP 166	6	100	108
		Poker Vibrator, Hand-held	CNP 170	4	113	119
		Concrete Lorry Mixer	CNP 044	2	109	112
		Mobile Crane	CNP 048	2	112	115
		Generator, silenced (75 dB(A) at 7m)	CNP 102	4	100	106
			Total: 121			
3	Pilecap Construction	Hand-held Breaker (20kg ≤ mass ≤ 35kg)	CNP 025	4	111	117
		Air Compressor (air flow ≤ 10m ³ /min)	CNP 001	4	100	106
		Lorry	CNP 141	1	112	112
		Poker Vibrator, Hand-held	CNP 170	4	113	119
		Concrete Lorry Mixer	CNP 044	2	109	112
			Total: 122			
4	Superstructure Construction	Poker Vibrator, Hand-held	CNP 170	4	113	119
		Concrete Lorry Mixer	CNP 044	2	109	112
		Tower Crane	CNP 049	2	95	98
		Air Compressor (air flow ≤ 10m ³ /min)	CNP 001	4	100	106
			Total: 120			

E. Road Improvement Works/ Construction of Public Transport Interchange

Activity No.	Activities	PME	TM ref.	Unit	SWL	Sub-SWL
1	Excavation	Excavator	CNP 081	1	112	112
		Dump Truck	CNP 067	1	117	117
		Hand-held Breaker (mass > 35kg)	CNP 026	1	114	114
		Air Compressor (air flow ≤ 10m ³ /min)	CNP 001	1	100	100
					Total: 120	
2	Placement of Road Base	Dump Truck	CNP 067	1	117	117
		Roller, vibratory	CNP 186	1	108	108
		Loader	CNP 081	1	112	112
			Total: 119			
3	Kerbing	Concrete Lorry Mixer	CNP 044	1	109	109
		Poker Vibrator, Hand-held	CNP 170	1	113	113
			Total: 114			
4	Levelling of New Road	Grader	CNP 104	1	113	113
			Total: 113			
5	Road Paving	Asphalt Paver	CNP 004	1	109	109
		Dump Truck	CNP 067	1	117	117
		Road Roller	CNP 185	1	108	108
			Total: 118			

F. Footbridge Construction

Activity No.	Activities	PME	TM ref.	Unit	SWL	Sub-SWL
1	Excavation for Foundation	Excavator	CNP 081	1	112	112
		Dump Truck	CNP 067	1	117	117
		Hand-held Breaker (mass > 35kg)	CNP 026	1	114	114
		Air Compressor (air flow ≤ 10m ³ /min)	CNP 001	1	100	100
					Total: 120	
2	Bored Piling	Piling, reverse circulation drill	CNP 166	1	100	100
			Total: 100			
3	Concreting for Pilecap and Bridge Structure	Concrete Lorry Mixer	CNP 044	1	109	109
		Poker Vibrator, Hand-held	CNP 170	1	113	113
		Concrete Pump	CNP 047	1	109	109
			Total: 116			

Tai Wai to Ma On Shan Extension - Construction Plant Inventory**Unmitigated**

4	Formwork and Reinforcement	Mobile Crane	CNP 048	1	112	112
		Air Compressor (air flow $\leq 10\text{m}^3/\text{min}$)	CNP 001	1	100	100
		Bar Bender	CNP 021	1	90	90
					Total:	112

G. Drainage Works/ Box Culvert Construction

Activity No.	Activities	PME	TM ref.	Unit	SWL	Sub-SWL
1	Excavation	Excavator	CNP 081	1	112	112
		Dump Truck	CNP 067	1	117	117
					Total:	118

2	Preparation of Formation	Breaker (mass > 35kg)	CNP 026	1	114	114
		Air Compressor (air flow $\leq 10\text{m}^3/\text{min}$)	CNP 001	1	100	100
		Concrete Lorry Mixer	CNP 044	1	109	109
			Total:	115		

3	Laying of Pipes	Mobile Crane	CNP 048	1	112	112
			Total:	112		

4	Formwork and Reinforcement	Mobile Crane	CNP 048	1	112	112
		Air Compressor (air flow $\leq 10\text{m}^3/\text{min}$)	CNP 001	1	100	100
		Bar Bender	CNP 021	1	90	90
			Total:	112		

5	Construction of Manhole	Concrete Lorry Mixer	CNP 044	1	109	109
		Poker Vibrator, Hand-held	CNP 170	1	113	113
			Total:	114		

6	Backfilling	Excavator	CNP 081	1	112	112
		Roller, vibratory	CNP 186	1	108	108
			Total:	113		

H. Subway Construction

Activity No.	Activities	PME	TM ref.	Unit	SWL	Sub-SWL
1	Excavation	Excavator	CNP 081	1	112	112
		Dump Truck	CNP 067	1	117	117
					Total:	118

2	Preparation of Formation	Breaker (mass > 35kg)	CNP 026	1	114	114
		Air Compressor (air flow $\leq 10\text{m}^3/\text{min}$)	CNP 001	1	100	100
		Concrete Lorry Mixer	CNP 044	1	109	109
			Total:	115		

3	Formwork and Reinforcement	Mobile Crane	CNP 048	1	112	112
		Air Compressor (air flow $\leq 10\text{m}^3/\text{min}$)	CNP 001	1	100	100
		Bar Bender	CNP 021	1	90	90
			Total:	112		

4	Backfilling	Excavator	CNP 081	1	112	112
		Roller, vibratory	CNP 186	1	108	108
			Total:	113		

I. Works Area for Railway System Contractors

Activity No.	Activities	PME	TM ref.	Unit	SWL	Sub-SWL
1	Materials Handling	Lorry	CNP 141	1	112	112
		Mobile Crane	CNP 048	1	112	112
			Total:	115		

Remark: ⁽¹⁾ Long span structures located between SHM & CHG, TAW & STT, SKS & CIO, MOS & LEO, CHG & HEO

Tai Wai to Ma On Shan Extension - Construction Plant Inventory**Quiet Plant and Substitution of Noisy Construction Equipment****A. At-grade, Alignment Construction**

Activity No.	Activity	PME	BS ref. ⁽²⁾	Unit	SWL	Sub-SWL
1	Site Clearance	Excavator/ Loader	C3/79	1	101	101
		Lorry	C7/121	1	98	98
						Total: 103
2	Excavation for Construction of Drainage	Excavator/ Loader	C3/79	1	101	101
		Lorry	C7/121	1	98	98
		Compactor, vibratory	CNP 050	1	105	105
					Total: 107	
3	Excavation for Minor Retaining Wall	Excavator/ Loader	C3/79	1	101	101
		Lorry	C7/121	1	98	98
		Concrete Lorry Mixer	C6/35	1	100	100
		Poker Vibrator, Hand-held	C6/32	2	100	103
					Total: 107	
4	Formation Preparation	Grader	C3/76	1	111	111
		Roller, vibratory	C3/116	1	106	106
					Total: 112	

B. Standard Viaduct Construction

Activity No.	Activity	PME	BS ref. ⁽²⁾	Unit	SWL	Sub-SWL
1	Site Clearance	Excavator/ Loader	C3/79	1	101	101
		Lorry	C7/121	1	98	98
						Total: 103
2	Piling	Piling, reverse circulation drill	CNP 166	4	100	106
		Concrete Lorry Mixer	C6/35	2	100	103
		Poker Vibrator, Hand-held	C6/32	2	100	103
		Generator, silenced (75 dB(A) at 7m)	CNP 102	4	100	106
					Total: 111	
3	Pilecap Construction	Mini-concrete Cruncher ⁽³⁾		4	93	99
		Lorry	C7/121	1	98	98
		Poker Vibrator, Hand-held	C6/32	4	100	106
		Concrete Lorry Mixer	C6/35	2	100	103
		Mobile Crane	C7/109	1	103	103
					Total: 110	
4	Superstructure Construction	Poker Vibrator, Hand-held	C6/32	3	100	105
		Concrete Lorry Mixer	C6/35	2	100	103
		Mobile Crane	C7/109	3	103	108
					Total: 110	
5	Span Construction (may be undertaken at night time)	Mobile Crane	C7/109	1	103	103
		Electric Winch	CNP 262	2	95	98
					Total: 104	

C. Special Long Span Viaduct Construction⁽¹⁾

Activity No.	Activities	PME	BS ref. ⁽²⁾	Unit	SWL	Sub-SWL
1	Site Clearance	Excavator/ Loader	C3/79	1	101	101
		Lorry	C7/121	2	98	101
						Total: 104
2	Piling	Piling, reverse circulation drill	CNP 166	4	100	106
		Concrete Lorry Mixer	C6/35	2	100	103
		Poker Vibrator, Hand-held	C6/32	2	100	103
		Generator, silenced (75 dB(A) at 7m)	CNP 102	4	100	106
					Total: 111	
3	Pilecap Construction	Excavator/ Loader	C3/79	1	101	101
		Lorry	C7/121	1	98	98
		Poker Vibrator, Hand-held	C6/32	4	100	106
		Concrete Lorry Mixer	C6/35	3	100	105
					Total: 109	
4	Superstructure Construction	Poker Vibrator, Hand-held	C6/32	3	100	105
		Concrete Lorry Mixer	C6/35	2	100	103
		Mobile Crane	C7/109	3	103	108
					Total: 110	

Tai Wai to Ma On Shan Extension - Construction Plant Inventory**Quiet Plant and Substitution of Noisy Construction Equipment**

5	Span Construction (may be undertaken at night time)	Mobile Crane	C7/109	1	103	103
		Electric Winch	CNP 262	2	95	98
					Total: 104	
D. Station Construction						
Activity No.	Activities	PME	BS ref. ⁽²⁾	Unit	SWL	Sub-SWL
1	Site Clearance	Excavator/ Loader	C3/79	1	101	101
		Lorry	C7/121	2	98	101
					Total: 104	
2	Piling for Station	Piling, reverse circulation drill	CNP 166	6	100	108
		Poker Vibrator, Hand-held	C6/32	4	100	106
		Concrete Lorry Mixer	C6/35	2	100	103
		Mobile Crane	C7/109	2	103	106
		Generator, silenced (75 dB(A) at 7m)	CNP 102	4	100	106
			Total: 113			
3	Pilecap Construction	Mini-concrete Cruncher ⁽³⁾		4	93	99
		Lorry	C7/121	1	98	98
		Poker Vibrator, Hand-held	C6/32	4	100	106
		Concrete Lorry Mixer	C6/35	2	100	103
			Total: 109			
4	Superstructure Construction	Poker Vibrator, Hand-held	C6/32	4	100	106
		Concrete Lorry Mixer	C6/35	2	100	103
		Tower Crane	CNP 049	2	95	98
		Air Compressor (air flow $\leq 10\text{m}^3/\text{min}$)	C7/25	4	98	104
			Total: 110			
E. Road Improvement Works/ Construction of Public Transport Interchange						
Activity No.	Activities	PME	BS ref. ⁽²⁾	Unit	SWL	Sub-SWL
1	Excavation	Excavator	C3/79	1	101	101
		Lorry	C7/121	1	98	98
		Mini-concrete Cruncher ⁽³⁾		1	93	93
			Total: 103			
2	Placement of Road Base	Lorry	C7/121	1	98	98
		Roller, vibratory	C3/115	1	102	102
		Loader	C3/97	1	105	105
			Total: 107			
3	Kerbing	Concrete Lorry Mixer	C6/35	1	100	100
		Poker Vibrator, Hand-held	C6/32	1	100	100
			Total: 103			
4	Levelling of New Road	Grader	C3/76	1	111	111
			Total: 111			
5	Road Paving	Asphalt Paver	CNP 004	1	109	109
		Lorry	C7/121	1	98	98
		Road Roller	C3/114	1	108	108
			Total: 112			
F. Footbridge Construction						
Activity No.	Activities	PME	BS ref. ⁽²⁾	Unit	SWL	Sub-SWL
1	Excavation for Foundation	Excavator	C3/79	1	101	101
		Lorry	C7/121	1	98	98
		Mini-concrete Cruncher ⁽³⁾		1	93	93
			Total: 103			
2	Bored Piling	Piling, reverse circulation drill	CNP 166	1	100	100
			Total: 100			
3	Concreting for Pilecap and Bridge Structure	Concrete Lorry Mixer	C6/35	1	100	100
		Poker Vibrator, Hand-held	C6/32	1	100	100
		Concrete Pump	C6/36	1	106	106
			Total: 108			

Tai Wai to Ma On Shan Extension - Construction Plant Inventory**Quiet Plant and Substitution of Noisy Construction Equipment**

4	Formwork and Reinforcement	Mobile Crane	C7/109	1	103	103
		Air Compressor (air flow $\leq 10\text{m}^3/\text{min}$)	C7/25	1	98	98
		Bar Bender	CNP 021	1	90	90
		Total:				104

G. Drainage Works/ Box Culvert Construction

Activity No.	Activities	PME	BS ref. ⁽²⁾	Unit	SWL	Sub-SWL
1	Excavation	Excavator	C3/79	1	101	101
		Lorry	C7/121	1	98	98
		Total:				103
2	Preparation of Formation	Mini-concrete Cruncher ⁽³⁾		1	93	93
		Concrete Lorry Mixer	C6/35	1	100	100
		Total:				101
3	Laying of Pipes	Mobile Crane	C7/109	1	103	103
				Total:	103	
4	Formwork and Reinforcement	Mobile Crane	C7/109	1	103	103
		Air Compressor (air flow $\leq 10\text{m}^3/\text{min}$)	C7/25	1	98	98
		Bar Bender	CNP 021	1	90	90
		Total:				104
5	Construction of Manhole	Concrete Lorry Mixer	C6/35	1	100	100
		Poker Vibrator, Hand-held	C6/32	1	100	100
		Total:				103
6	Backfilling	Excavator	C3/79	1	101	101
		Roller, vibratory	C3/115	1	102	102
		Total:				105

H. Subway Construction

Activity No.	Activities	PME	BS ref. ⁽²⁾	Unit	SWL	Sub-SWL
1	Excavation	Excavator	C3/79	1	101	101
		Lorry	C7/121	1	98	98
		Total:				103
2	Preparation of Formation	Mini-concrete Cruncher ⁽³⁾		1	93	93
		Concrete Lorry Mixer	C6/35	1	100	100
		Total:				101
3	Formwork and Reinforcement	Mobile Crane	C7/109	1	103	103
		Air Compressor (air flow $\leq 10\text{m}^3/\text{min}$)	C7/25	1	98	98
		Bar Bender	CNP 021	1	90	90
		Total:				104
4	Backfilling	Excavator	C3/79	1	101	101
		Roller, vibratory	C3/115	1	102	102
		Total:				105

I. Works Area for Railway System Contractors

Activity No.	Activities	PME	BS ref. ⁽²⁾	Unit	SWL	Sub-SWL
1	Materials Handling	Lorry	C7/121	1	98	98
		Mobile Crane	C7/109	1	103	103
		Total:				104

Remark: ⁽¹⁾ Long span structures located between SHM & CHG, TAW & STT, SKS & CIO, MOS & LEO, CHG & HEO

⁽²⁾ Noise source data extracted from BS 5228:Part 1:1997 (except CNP no.)

⁽³⁾ Reference has been made according to EPD's publication,

"A Practical Guide for the Reduction of Noise From Construction Works".

Tai Wai to Ma On Shan Extension - Construction Plant Inventory**Quiet Plant and the Use of Barriers****A. At-grade, Alignment Construction**

Activity No.	Activity	PME	BS ref. ⁽²⁾	Unit	SWL	Reduction ⁽³⁾	Sub-SWL
1	Site Clearance	Excavator/ Loader	C3/79	1	101	5	96
		Lorry	C7/121	1	98	0	98
		Total:					
2	Excavation for Construction of Drainage	Excavator/ Loader	C3/79	1	101	5	96
		Lorry	C7/121	1	98	0	98
		Compactor, vibratory	CNP 050	1	105	10	95
Total:						101	
3	Excavation for Minor Retaining Wall	Excavator/ Loader	C3/79	1	101	5	96
		Lorry	C7/121	1	98	0	98
		Concrete Lorry Mixer	C6/35	1	100	5	95
		Poker Vibrator, Hand-held	C6/32	2	100	10	93
Total:						102	
4	Formation Preparation	Grader	C3/76	1	111	0	111
		Roller, vibratory	C3/116	1	106	5	101
		Total:					

B. Standard Viaduct Construction

Activity No.	Activity	PME	BS ref. ⁽²⁾	Unit	SWL	Reduction ⁽³⁾	Sub-SWL
1	Site Clearance	Excavator/ Loader	C3/79	1	101	5	96
		Lorry	C7/121	1	98	0	98
		Total:					
2	Piling	Piling, reverse circulation drill	CNP 166	4	100	0	106
		Concrete Lorry Mixer	C6/35	2	100	5	98
		Poker Vibrator, Hand-held	C6/32	2	100	10	93
		Generator, silenced (75 dB(A) at 7m)	CNP 102	4	100	10	96
Total:						107	
3	Pilecap Construction	Mini-concrete Cruncher ⁽⁴⁾		4	93	5	94
		Lorry	C7/121	1	98	0	98
		Poker Vibrator, Hand-held	C6/32	4	100	10	96
		Concrete Lorry Mixer	C6/35	2	100	5	98
		Mobile Crane	C7/109	1	103	5	98
Total:						104	
4	Superstructure Construction	Poker Vibrator, Hand-held	C6/32	3	100	10	95
		Concrete Lorry Mixer	C6/35	2	100	5	98
		Mobile Crane	C7/109	3	103	5	103
Total:						105	
5	Span Construction (may be undertaken at night time)	Mobile Crane	C7/109	1	103	5	98
		Electric Winch	CNP 262	2	95	10	88
		Total:					

C. Special Long Span Viaduct Construction⁽¹⁾

Activity No.	Activities	PME	BS ref. ⁽²⁾	Unit	SWL	Reduction ⁽³⁾	Sub-SWL
1	Site Clearance	Excavator/ Loader	C3/79	1	101	5	96
		Lorry	C7/121	2	98	0	101
		Total:					
2	Piling	Piling, reverse circulation drill	CNP 166	4	100	0	106
		Concrete Lorry Mixer	C6/35	2	100	5	98
		Poker Vibrator, Hand-held	C6/32	2	100	10	93
		Generator, silenced (75 dB(A) at 7m)	CNP 102	4	100	10	96
Total:						107	
3	Pilecap Construction	Excavator/ Loader	C3/79	1	101	5	96
		Lorry	C7/121	1	98	0	98
		Poker Vibrator, Hand-held	C6/32	4	100	10	96
		Concrete Lorry Mixer	C6/35	3	100	5	100
Total:						104	
4	Superstructure Construction	Poker Vibrator, Hand-held	C6/32	3	100	10	95
		Concrete Lorry Mixer	C6/35	2	100	5	98
		Mobile Crane	C7/109	3	103	5	103
Total:						105	

Tai Wai to Ma On Shan Extension - Construction Plant Inventory**Quiet Plant and the Use of Barriers**

Span Construction (may be undertaken at night time)							
5		Mobile Crane	C7/109	1	103	5	98
		Electric Winch	CNP 262	2	95	10	88
						Total:	98
D. Station Construction							
Activity No.	Activities	PME	BS ref. ⁽²⁾	Unit	SWL	Reduction ⁽³⁾	Sub-SWL
1	Site Clearance	Excavator/ Loader	C3/79	1	101	5	96
		Lorry	C7/121	2	98	0	101
						Total:	102
2	Piling for Station	Piling, reverse circulation drill	CNP 166	6	100	0	108
		Poker Vibrator, Hand-held	C6/32	4	100	10	96
		Concrete Lorry Mixer	C6/35	2	100	5	98
		Mobile Crane	C7/109	2	103	5	101
		Generator, silenced (75 dB(A) at 7m)	CNP 102	4	100	10	96
						Total:	109
3	Pilecap Construction	Mini-concrete Cruncher ⁽⁴⁾		4	93	5	94
		Lorry	C7/121	1	98	0	98
		Poker Vibrator, Hand-held	C6/32	4	100	10	96
		Concrete Lorry Mixer	C6/35	2	100	5	98
						Total:	103
4	Superstructure Construction	Poker Vibrator, Hand-held	C6/32	4	100	10	96
		Concrete Lorry Mixer	C6/35	2	100	5	98
		Tower Crane	CNP 049	2	95	0	98
		Air Compressor (air flow $\leq 10\text{m}^3/\text{min}$)	C7/25	4	98	10	94
						Total:	103
E. Road Improvement Works/ Construction of Public Transport Interchange							
Activity No.	Activities	PME	BS ref. ⁽²⁾	Unit	SWL	Reduction ⁽³⁾	Sub-SWL
1	Excavation	Excavator	C3/79	1	101	5	96
		Lorry	C7/121	1	98	0	98
		Mini-concrete Cruncher ⁽⁴⁾		1	93	5	88
						Total:	100
2	Placement of Road Base	Lorry	C7/121	1	98	0	98
		Roller, vibratory	C3/115	1	102	5	97
		Loader	C3/97	1	105	5	100
						Total:	103
3	Kerbing	Concrete Lorry Mixer	C6/35	1	100	5	95
		Poker Vibrator, Hand-held	C6/32	1	100	10	90
						Total:	96
4	Levelling of New Road	Grader	C3/76	1	111	0	111
						Total:	111
5	Road Paving	Asphalt Paver	CNP 004	1	109	5	104
		Lorry	C7/121	1	98	0	98
		Road Roller	C3/114	1	108	5	103
						Total:	107
F. Footbridge Construction							
Activity No.	Activities	PME	BS ref. ⁽²⁾	Unit	SWL	Reduction ⁽³⁾	Sub-SWL
1	Excavation for Foundation	Excavator	C3/79	1	101	5	96
		Lorry	C7/121	1	98	0	98
		Mini-concrete Cruncher ⁽⁴⁾		1	93	5	88
						Total:	100
2	Bored Piling	Piling, reverse circulation drill	CNP 166	1	100	0	100
						Total:	100
3	Concreting for Pilecap and Bridge Structure	Concrete Lorry Mixer	C6/35	1	100	5	95
		Poker Vibrator, Hand-held	C6/32	1	100	5	95
		Concrete Pump	C6/36	1	106	10	96
						Total:	100

Tai Wai to Ma On Shan Extension - Construction Plant Inventory**Quiet Plant and the Use of Barriers**

4	Formwork and Reinforcement	Mobile Crane	C7/109	1	103	5	98
		Air Compressor (air flow $\leq 10\text{m}^3/\text{min}$)	C7/25	1	98	10	88
		Bar Bender	CNP 021	1	90	10	80
		Total:					98

G. Drainage Works/ Box Culvert Construction

Activity No.	Activities	PME	BS ref. ⁽²⁾	Unit	SWL	Reduction ⁽³⁾	Sub-SWL
1	Excavation	Excavator	C3/79	1	101	5	96
		Lorry	C7/121	1	98	0	98
		Total:					100
2	Preparation of Formation	Mini-concrete Cruncher ⁽⁴⁾		1	93	5	88
		Concrete Lorry Mixer	C6/35	1	100	5	95
		Total:					96
3	Laying of Pipes	Mobile Crane	C7/109	1	103	5	98
		Total:					98
4	Formwork and Reinforcement	Mobile Crane	C7/109	1	103	5	98
		Air Compressor (air flow $\leq 10\text{m}^3/\text{min}$)	C7/25	1	98	10	88
		Bar Bender	CNP 021	1	90	10	80
		Total:					98
5	Construction of Manhole	Concrete Lorry Mixer	C6/35	1	100	5	95
		Poker Vibrator, Hand-held	C6/32	1	100	10	90
		Total:					96
6	Backfilling	Excavator	C3/79	1	101	5	96
		Roller, vibratory	C3/115	1	102	5	97
		Total:					100

H. Subway Construction

Activity No.	Activities	PME	BS ref. ⁽²⁾	Unit	SWL	Reduction ⁽³⁾	Sub-SWL
1	Excavation	Excavator	C3/79	1	101	5	96
		Lorry	C7/121	1	98	0	98
		Total:					100
2	Preparation of Formation	Mini-concrete Cruncher ⁽⁴⁾		1	93	5	88
		Concrete Lorry Mixer	C6/35	1	100	5	95
		Total:					96
3	Formwork and Reinforcement	Mobile Crane	C7/109	1	103	5	98
		Air Compressor (air flow $\leq 10\text{m}^3/\text{min}$)	C7/25	1	98	10	88
		Bar Bender	CNP 021	1	90	10	80
		Total:					98
4	Backfilling	Excavator	C3/97	1	105	5	100
		Roller, vibratory	C3/115	1	102	5	97
		Total:					102

I. Works Area for Railway System Contractors

Activity No.	Activities	PME	BS ref. ⁽²⁾	Unit	SWL	Sub-SWL	
1	Materials Handling	Lorry	C7/121	1	98	0	98
		Mobile Crane	C7/109	1	103	5	98
		Total:					101

Remark: ⁽¹⁾ Long span structures located between SHM & CHG, TAW & STT, SKS & CIO, MOS & LEO, CHG & HEO

⁽²⁾ Noise source data extracted from BS 5228: Part 1:1997 (except CNP no.)

⁽³⁾ Reduction of noise with the use of barrier

⁽⁴⁾ Reference has been made according to EPD's publication,

"A Practical Guide for the Reduction of Noise From Construction Works"

Tai Wai to Ma On Shan Extension - Construction Plant Inventory**Quiet Plant and the Use of Barriers, with Reduction in No. of PME****A. At-grade. Alignment Construction**

Activity No.	Activity	PME	BS ref. ⁽²⁾	Unit	SWL	Reduction ⁽³⁾	Sub-SWL
1	Site Clearance	Excavator/ Loader	C3/79	1	101	5	96
		Lorry	C7/121	1	98	0	98
		Total:					
2	Excavation for Construction of Drainage	Excavator/ Loader	C3/79	1	101	5	96
		Lorry	C7/121	1	98	0	98
		Compactor, vibratory	CNP 050	1	105	10	95
Total:						101	
3	Excavation for Minor Retaining Wall	Excavator/ Loader	C3/79	1	101	5	96
		Lorry	C7/121	1	98	0	98
		Concrete Lorry Mixer	C6/35	1	100	5	95
		Poker Vibrator, Hand-held	C6/32	1	100	10	90
Total:						102	
4	Formation Preparation	Grader	C3/76	1	111	0	111
		Roller, vibratory	C3/116	1	106	5	101
Total:						111	

B. Standard Viaduct Construction

Activity No.	Activity	PME	BS ref. ⁽²⁾	Unit	SWL	Reduction ⁽³⁾	Sub-SWL
1	Site Clearance	Excavator/ Loader	C3/79	1	101	5	96
		Lorry	C7/121	1	98	0	98
		Total:					
2	Piling	Piling, reverse circulation drill	CNP 166	1	100	0	100
		Concrete Lorry Mixer	C6/35	1	100	5	95
		Poker Vibrator, Hand-held	C6/32	1	100	10	90
		Generator, silenced (75 dB(A) at 7m)	CNP 102	1	100	10	90
Total:						102	
3	Pilecap Construction	Mini-concrete Cruncher ⁽⁴⁾		1	93	5	88
		Lorry	C7/121	1	98	0	98
		Poker Vibrator, Hand-held	C6/32	1	100	10	90
		Concrete Lorry Mixer	C6/35	1	100	5	95
		Mobile Crane	C7/109	1	103	5	98
Total:						102	
4	Superstructure Construction	Poker Vibrator, Hand-held	C6/32	1	100	10	90
		Concrete Lorry Mixer	C6/35	1	100	5	95
		Mobile Crane	C7/109	1	103	5	98
Total:						100	
5	Span Construction (may be undertaken at night time)	Mobile Crane	C7/109	1	103	5	98
		Electric Winch	CNP 262	1	95	10	85
		Total:					

C. Special Long Span Viaduct Construction⁽¹⁾

Activity No.	Activities	PME	BS ref. ⁽²⁾	Unit	SWL	Reduction ⁽³⁾	Sub-SWL
1	Site Clearance	Excavator/ Loader	C3/79	1	101	5	96
		Lorry	C7/121	1	98	0	98
		Total:					
2	Piling	Piling, reverse circulation drill	CNP 166	1	100	0	100
		Concrete Lorry Mixer	C6/35	1	100	5	95
		Poker Vibrator, Hand-held	C6/32	1	100	10	90
		Generator, silenced (75 dB(A) at 7m)	CNP 102	1	100	10	90
Total:						102	
3	Pilecap Construction	Excavator/ Loader	C3/79	1	101	5	96
		Lorry	C7/121	1	98	0	98
		Poker Vibrator, Hand-held	C6/32	1	100	10	90
		Concrete Lorry Mixer	C6/35	1	100	5	95
Total:						102	
4	Superstructure Construction	Poker Vibrator, Hand-held	C6/32	1	100	10	90
		Concrete Lorry Mixer	C6/35	1	100	5	95
		Mobile Crane	C7/109	1	103	5	98
Total:						100	

Tai Wai to Ma On Shan Extension - Construction Plant Inventory**Quiet Plant and the Use of Barriers, with Reduction in No. of PME**

5	Span Construction (may be undertaken at night time)	Mobile Crane	C7/109	1	103	5	98
		Electric Winch	CNP 262	1	95	10	85
						Total:	98
D. Station Construction							
Activity No.	Activities	PME	BS ref. ⁽²⁾	Unit	SWL	Reduction ⁽³⁾	Sub-SWL
1	Site Clearance	Excavator/ Loader	C3/79	1	101	5	96
		Lorry	C7/121	1	98	0	98
						Total:	100
2	Piling for Station	Piling, reverse circulation drill	CNP 166	1	100	0	100
		Poker Vibrator, Hand-held	C6/32	1	100	10	90
		Concrete Lorry Mixer	C6/35	1	100	5	95
		Mobile Crane	C7/109	1	103	5	98
		Generator, silenced (75 dB(A) at 7m)	CNP 102	1	100	10	90
						Total:	103
3	Pilecap Construction	Mini-concrete Cruncher ⁽⁴⁾		1	93	5	88
		Lorry	C7/121	1	98	0	98
		Poker Vibrator, Hand-held	C6/32	1	100	10	90
		Concrete Lorry Mixer	C6/35	1	100	5	95
						Total:	100
4	Superstructure Construction	Poker Vibrator, Hand-held	C6/32	1	100	10	90
		Concrete Lorry Mixer	C6/35	1	100	5	95
		Tower Crane	CNP 049	1	95	0	95
		Air Compressor (air flow $\leq 10\text{m}^3/\text{min}$)	C7/25	1	98	10	88
						Total:	99
E. Road Improvement Works/ Construction of Public Transport Interchange							
Activity No.	Activities	PME	BS ref. ⁽²⁾	Unit	SWL	Reduction ⁽³⁾	Sub-SWL
1	Excavation	Excavator	C3/79	1	101	5	96
		Lorry	C7/121	1	98	0	98
		Mini-concrete Cruncher ⁽⁴⁾		1	93	5	88
						Total:	100
2	Placement of Road Base	Lorry	C7/121	1	98	0	98
		Roller, vibratory	C3/115	1	102	5	97
		Loader	C3/97	1	105	5	100
						Total:	103
3	Kerbing	Concrete Lorry Mixer	C6/35	1	100	5	95
		Poker Vibrator, Hand-held	C6/32	1	100	10	90
						Total:	96
4	Levelling of New Road	Grader	C3/76	1	111	0	111
						Total:	111
5	Road Paving	Asphalt Paver	CNP 004	1	109	5	104
		Lorry	C7/121	1	98	0	98
		Road Roller	C3/114	1	108	5	103
						Total:	107
F. Footbridge Construction							
Activity No.	Activities	PME	BS ref. ⁽²⁾	Unit	SWL	Reduction ⁽³⁾	Sub-SWL
1	Excavation for Foundation	Excavator	C3/79	1	101	5	96
		Lorry	C7/121	1	98	0	98
		Mini-concrete Cruncher ⁽⁴⁾		1	93	5	88
						Total:	100
2	Bored Piling	Piling, reverse circulation drill	CNP 166	1	100	0	100
						Total:	100
3	Concreting for Pilecap and Bridge Structure	Concrete Lorry Mixer	C6/35	1	100	5	95
		Poker Vibrator, Hand-held	C6/32	1	100	5	95
		Concrete Pump	C6/36	1	106	10	96
						Total:	100

Tai Wai to Ma On Shan Extension - Construction Plant Inventory**Quiet Plant and the Use of Barriers, with Reduction in No. of PME**

4	Formwork and Reinforcement	Mobile Crane	C7/109	1	103	5	98
		Air Compressor (air flow $\leq 10\text{m}^3/\text{min}$)	C7/25	1	98	10	88
		Bar Bender	CNP 021	1	90	10	80
		Total:					

G. Drainage Works/ Box Culvert Construction

Activity No.	Activities	PME	BS ref. ⁽²⁾	Unit	SWL	Reduction ⁽³⁾	Sub-SWL
1	Excavation	Excavator	C3/79	1	101	5	96
		Lorry	C7/121	1	98	0	98
		Total:					

2	Preparation of Formation	Mini-concrete Cruncher ⁽⁴⁾		1	93	5	88
		Concrete Lorry Mixer	C6/35	1	100	5	95
		Total:					

3	Laying of Pipes	Mobile Crane	C7/109	1	103	5	98
		Total:					

4	Formwork and Reinforcement	Mobile Crane	C7/109	1	103	5	98
		Air Compressor (air flow $\leq 10\text{m}^3/\text{min}$)	C7/25	1	98	10	88
		Bar Bender	CNP 021	1	90	10	80
		Total:					

5	Construction of Manhole	Concrete Lorry Mixer	C6/35	1	100	5	95
		Poker Vibrator, Hand-held	C6/32	1	100	10	90
		Total:					

6	Backfilling	Excavator	C3/79	1	101	5	96
		Roller, vibratory	C3/115	1	102	5	97
		Total:					

H. Subway Construction

Activity No.	Activities	PME	BS ref. ⁽²⁾	Unit	SWL	Reduction ⁽³⁾	Sub-SWL
1	Excavation	Excavator	C3/79	1	101	5	96
		Lorry	C7/121	1	98	0	98
		Total:					

2	Preparation of Formation	Mini-concrete Cruncher ⁽⁴⁾		1	93	5	88
		Concrete Lorry Mixer	C6/35	1	100	5	95
		Total:					

3	Formwork and Reinforcement	Mobile Crane	C7/109	1	103	5	98
		Air Compressor (air flow $\leq 10\text{m}^3/\text{min}$)	C7/25	1	98	10	88
		Bar Bender	CNP 021	1	90	10	80
		Total:					

4	Backfilling	Excavator	C3/79	1	101	5	96
		Roller, vibratory	C3/115	1	102	5	97
		Total:					

I. Works Area for Railway System Contractors

Activity No.	Activities	PME	BS ref. ⁽²⁾	Unit	SWL	Sub-SWL	
1	Materials Handling	Lorry	C7/121	1	98	0	98
		Mobile Crane	C7/109	1	103	5	98
		Total:					

Remark: ⁽¹⁾ Long span structures located between SHM & CHG, TAW & STT, SKS & CIO, MOS & LEO, CHG & HEO

⁽²⁾ Noise source data extracted from BS 5228:Part 1:1997 (except CNP no.)

⁽³⁾ Reduction of noise with the use of barrier

⁽⁴⁾ Reference has been made according to EPD's publication, "A Practical Guide for the Reduction of Noise From Construction Works".