

Appendix 4.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

Scenario: Mitigated ▼

Contract 1: contribution of Main Tunnel, Branch Tunnel, Lam Tin Interchange & CKL Tunnel

1. General

(beginning of month - end of month)
May 16 - Jul 16

1.1 Site Clearance

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Excavator	BS D8/13	2	110	65%	-5	106
Lorry	BS D8/25	2	96	65%	-5	92
Dump Truck	BS D9/27	2	105	65%	-5	101
Total SWL						107

2. Lam Tin Side

2.1 Lam Tin Interchange

2.1.1 Conveyor belt

Feb 16 - Apr 16

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Excavator	BS D8/13	1	110	65%	-5	103
Welding Set	CNP107	1	99	100%	0	99
Mobile Crane	BS D7/114	1	101	30%	-5	91
Lorry	BS D8/25	1	96	65%	-5	89
Compressor	BS D7/16	1	96	100%	-10	86
Bar Bender	CNP 021	1	90	100%	-10	80
Concrete mixer truck	BS D6/23	1	100	100%	-5	95
Vibratory poker	BS D6/32	1	100	100%	-5	95
Total SWL						106

2.1.1b Operation of Conveyor belt

Feb 16 - Apr 19

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Conveyor belts	CNP 041	1	90	100%	0	90
Total SWL						90

2.1.2 Barging point construction

Feb 16 - Apr 16

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Excavator	BS D8/13	1	110	65%	-5	103
Welding Set	CNP107	1	99	100%	0	99
Mobile Crane	BS D7/114	1	101	30%	-5	91
Lorry	BS D8/25	1	96	65%	-5	89
Compressor	BS D7/16	1	96	100%	-10	86
Bar Bender	CNP 021	1	90	100%	-10	80
Concrete mixer truck	BS D6/23	1	100	100%	-5	95
Vibratory poker	BS D6/32	1	100	100%	-5	95
Total SWL						106

2.1.2b Operation of Barging Point

Feb 16 - Apr 19

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Conveyor belts	CNP 041	1	90	100%	0	90
Barge	CNP 061	1	104	100%	0	104
Total SWL						104

2.1.3 Topsoil Excavation

May 16 - Oct 16

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Excavator	BS D8/13	2	110	65%	-5	106
Lorry	BS D8/25	2	96	65%	-5	92
Dump Truck	BS D9/27	2	105	65%	-5	101
Total SWL						107

Appendix 4.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

Scenario: Mitigated ▼

Contract 1: contribution of Main Tunnel, Branch Tunnel, Lam Tin Interchange & CKL Tunnel

2.1.4 Surface Blasting at LTI & CKL Tunnel Portal

Group A

Oct 16 - Mar 17

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Lorry	BS D8/25	1	96	65%	-5	89
Mobile Crane	BS D7/114	1	101	30%	-5	91
Hydraulic breaker	BS D8/12	2	106	80%	-5	103
Dump Truck	BS D9/27	4	105	65%	-5	104
Generator, Silenced	CNP 102	2	100	100%	-10	93
Welding Set	CNP107	2	99	100%	0	102
Drilling Rig	BS D11/1	3	117	100%	-10	112
Air Compressor	CNP 003	3	104	100%	-10	99
Water Pump	CNP 281	2	88	100%	0	91
Mobile Crusher	BS D9/15	2	125	100%	-5	123
Water Truck	BS C6/37	1	109	100%	0	109
Cherry Picker	BS C4/54	1	104	100%	0	104
Total SWL						124

Group B

Oct 16 - Mar 17

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Excavator	BS D8/13	6	110	65%	-5	111
Lorry	BS D8/25	1	96	65%	-5	89
Mobile Crane	BS D7/114	1	101	30%	-5	91
Dump Truck	BS D9/27	4	105	65%	-5	104
Generator, Silenced	CNP 102	2	100	100%	-10	93
Water Pump	CNP 281	2	88	100%	0	91
Mobile Crusher	BS D9/15	2	125	100%	-5	123
Water Truck	BS C6/37	1	109	100%	0	109
Cherry Picker	BS C4/54	1	104	100%	0	104
Total SWL						124
Maximum SWL Group A-B						124

2.1.5 Site Formation at LTI

Jan 18 - Sep 18

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Excavator	BS D8/13	1	110	65%	-5	103
Dump Truck	BS D9/27	1	105	65%	-5	98
Lorry	BS D8/25	1	96	65%	-5	89
Air Compressor	CNP 003	1	104	100%	-10	94
Generator, Silenced	CNP 102	2	100	100%	-10	93
Drilling Rig	BS D11/1	1	117	100%	-10	107
Grout Mixer and Pump	BS D6/13	1	108	100%	-10	98
Reverse-circulation drill	CNP 166	1	100	100%	0	100
Concrete mixer truck	BS D6/23	1	100	100%	-5	95
Total SWL						110

2.1.6 Foundation Piers of Bridge Construction

Sep 17 - Jun 19

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Concrete Lorry Mixer	BS D6/33	3	96	50%	-5	93
Dump Truck	BS D9/27	3	105	30%	-5	100
Backhoe	BS D3/35	3	106	70%	-5	104
Generator, Silenced	CNP 102	3	100	100%	-10	95
Crane	BS D7/114	3	101	50%	-5	98
Poker, vibratory, hand-held	BS D6/40	9	98	50%	-5	100
Saw, circular, wood	CNP 201	3	108	50%	-5	105
Bar bender and cutter (electric)	CNP 021	3	90	50%	-10	82
Pneumatic Breaker	BS D8/1	3	114	50%	0	116
Total SWL						117

Appendix 4.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

Scenario: Mitigated ▼

Contract 1: contribution of Main Tunnel, Branch Tunnel, Lam Tin Interchange & CKL Tunnel

2.1.7 Bridge Deck Construction

Jan 18 - Dec 19

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Crane	BS D7/114	4	101	30%	-5	97
Lorry	BS D8/25	4	96	30%	-5	92
Generator, Silenced	CNP 102	4	100	100%	-10	96
Cutter, circular, steel (electric)	CNP 056	3	112	50%	0	114
Drill, percussive, hand-held (electric)	CNP 064	4	103	50%	0	106
Bar bender and cutter (electric)	CNP 021	4	90	50%	-10	83
Concrete lorry mixer	BS D6/33	4	96	50%	-5	94
Concrete Pump	BS D6/36	4	106	50%	-10	99
Poker, vibratory, hand-held	BS D6/40	4	98	50%	-5	96
Total SWL						115

2.1.8 Roadworks, Signage & Noise Barriers Installation

Jun 18 - Jun 20

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Dump Truck	BS D9/27	2	105	50%	-5	100
Asphalt Paver	BS D8/24	2	101	100%	-5	99
Roller, vibratory	BS D8/30	2	101	100%	-5	99
Generator, Silenced	CNP 102	2	100	100%	-10	93
Paint line marker	CNP 161	2	90	80%	0	92
Lorry	BS D8/25	2	96	100%	-5	94
Crane	BS D7/114	2	101	100%	-5	99
Total SWL						106

2.1.9 Translucent Noise Cover

2.1.9.1 Footing

Sep 18 - Jun 19

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Concrete lorry mixer	BS D6/33	1	96	50%	-5	88
Dump Truck	BS D9/27	1	105	30%	-5	95
Backhoe	BS D3/35	1	106	70%	-5	99
Generator, Silenced	CNP 102	1	100	100%	-10	90
Crane	BS D7/114	1	101	50%	-5	93
Poker, vibratory, hand-held	BS D6/40	3	98	50%	-5	95
Saw, circular, wood	CNP 201	1	108	50%	-5	100
Bar bender and cutter (electric)	CNP 021	1	90	50%	-10	77
Pneumatic Breaker	BS D8/1	1	114	50%	0	111
Total SWL						112

2.1.9.2 Noise Cover

Dec18 - Aug 19

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Lorry	BS D8/25	2	96	100%	-5	94
Crane	BS D7/114	2	101	100%	-5	99
Total SWL						100

2.1.10 Landscape Works for Slope

Jun 20 - Nov 20

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Excavator	BS D8/13	1	110	65%	-5	103
Loader	BS D3/59	1	105	50%	0	102
Lorry	BS D8/25	1	96	65%	-5	89
Total SWL						106

Appendix 4.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

Scenario: Mitigated ▼

Contract 1: contribution of Main Tunnel, Branch Tunnel, Lam Tin Interchange & CKL Tunnel

2.1.11 Construction of Landscape deck

2.1.11.1 Footing and retaining structure at central divider

Jun 19 - Mar 20

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Concrete lorry mixer	BS D6/33	2	96	70%	-5	92
Dump Truck	BS D9/27	2	105	45%	-5	100
Backhoe	BS D3/35	2	106	80%	-5	103
Generator, Silenced	CNP 102	2	100	80%	-10	92
Crane	BS D7/114	2	101	80%	-5	98
Poker, vibratory, hand-held	BS D6/40	6	98	80%	-5	100
Saw, circular, wood	CNP 201	2	108	80%	-5	105
Bar bender and cutter (electric)	CNP 021	2	90	45%	-10	80
Ventilation Fans	CNP 241	2	108	50%	0	108
Pneumatic Breaker	BS D8/1	2	114	60%	0	115
Total SWL						116

2.1.11.2 Civil works for landscape deck

Sep 19 - May 20

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Concrete lorry mixer	BS D6/33	2	96	70%	-5	92
Dump Truck	BS D9/27	2	105	45%	-5	100
Backhoe	BS D3/35	2	106	80%	-5	103
Generator, Silenced	CNP 102	2	100	80%	-10	92
Crane	BS D7/114	2	101	80%	-5	98
Poker, vibratory, hand-held	BS D6/40	6	98	80%	-5	100
Saw, circular, wood	CNP 201	2	108	80%	-5	105
Bar bender and cutter (electric)	CNP 021	2	90	45%	-10	80
Pneumatic Breaker	BS D8/1	2	114	60%	0	115
Lorry	BS D8/25	2	96	80%	-5	93
Drill, percussive, hand-held (electric)	CNP 064	2	103	45%	0	103
Concrete Pump	BS D6/36	2	106	100%	-10	99
Total SWL						116

2.1.11.3 Landscape works

May 20 - Aug 20

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Excavator	BS D8/13	1	110	65%	-5	103
Loader	BS D3/59	1	105	50%	0	102
Lorry	BS D8/25	1	96	65%	-5	89
Total SWL						106

2.1.12 Construction of Admin Bldg, Vent Bldg & Tunnel Facilities

Sep 17 - Mar 19

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Excavator	BS D8/13	2	110	65%	-5	106
Lorry	BS D8/25	2	96	65%	-5	92
Dump Truck	BS D9/27	2	105	65%	-5	101
Mobile Crane	BS D7/114	5	101	30%	-5	98
Compressor	BS D7/16	2	96	100%	-10	89
Bar Bender	CNP 021	2	90	100%	-10	83
Concrete mixer truck	BS D6/23	2	100	100%	-5	98
Vibratory poker	BS D6/32	3	100	100%	-5	100
Piling, large diameter bored, grab and chisel	CNP 164	3	115	30%	-10	105
Piling, large diameter bored, oscillator	CNP 165	3	115	30%	-10	105
Piling, large diameter bored, reverse circulation drill	CNP 166	3	100	30%	0	100
Total SWL						112

Appendix 4.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

Scenario: Mitigated ▼

Contract 1: contribution of Main Tunnel, Branch Tunnel, Lam Tin Interchange & CKL Tunnel

2.1.13 Blasting for Slip Roads S2, S3, EHC 4

Sep 17 - Jul 18

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Lorry	BS D8/25	2	96	65%	-5	92
Dump Truck	BS D9/27	2	105	65%	-5	101
Mobile Crane	BS D7/114	1	101	30%	-5	91
Conveyor Belts	CNP 041	1	90	100%	0	90
Ventilation Fans	CNP 241	3	108	100%	0	113
Total SWL						113

2.1.14 Cover & Cut Slip Road and At-grade Road Construction

Jul 18 - Apr 19

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Grader	BS D9/11	1	110	30%	0	105
Bulldozer	BS D9/2	1	104	30%	0	99
Lorry	BS D8/25	1	96	20%	-5	84
Hydraulic Breaker	BS D8/12	1	106	80%	-5	100
Compactor	CNP 050	1	105	30%	-5	95
Roller	BS D8/27	1	104	30%	-5	94
Concrete mixer	CNP 045	1	96	50%	-5	88
Vibratory poker	BS D6/32	1	100	30%	-5	90
Bar Bender	CNP 021	1	90	100%	-10	80
Excavator	BS D8/13	1	110	65%	-5	103
Dump Truck	BS D9/27	1	105	65%	-5	98
Mobile Crane	BS D7/114	1	101	50%	-5	93
Total SWL						109

2.1.14b Cover & Cut Slip Road and At-grade Road Construction (for work sites 113c&d)

Jul 18 - Apr 19

Group A

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Lorry	BS D8/25	1	96	20%	-5	84
Hydraulic Breaker	BS D8/12	1	106	80%	-5	100
Excavator	BS D8/13	1	110	65%	-5	103
Total SWL						105

Group B

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Compactor	CNP 050	1	105	30%	-5	95
Roller	BS D8/27	1	104	30%	-5	94
Concrete mixer	CNP 045	1	96	50%	-5	88
Vibratory poker	BS D6/32	1	100	30%	-5	90
Bar Bender	CNP 021	1	90	100%	-10	80
Mobile Crane	BS D7/114	1	101	50%	-5	93
Total SWL						100
Maximum SWL Group A-B						105

2.1.15 Roadworks & Signage

Oct 18 - Jan 20

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Grader	BS D9/11	1	110	30%	0	105
Bulldozer	BS D9/2	1	104	30%	0	99
Lorry	BS D8/25	1	96	50%	-5	88
Compactor	CNP 050	1	105	30%	-5	95
Roller	BS D8/27	1	104	30%	-5	94
Concrete mixer	CNP 045	1	96	50%	-5	88
Vibratory poker	BS D6/32	1	100	30%	-5	90
Mobile Crane	BS D7/114	1	101	50%	-5	93
Total SWL						107

Appendix 4.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

Scenario: Mitigated ▼

Contract 1: contribution of Main Tunnel, Branch Tunnel, Lam Tin Interchange & CKL Tunnel

3.1.16 Drainage, E&M works

Oct 18 - Jan 20

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Excavator	BS D8/13	1	110	65%	-5	103
Lorry	BS D8/25	1	96	20%	-5	84
Mobile Crane	BS D7/114	1	101	30%	-5	91
Total SWL						103

3.Main Tunnel (TKO Side)

3.1.1 Site Formation & Slope Stabilization Works

May 16 - Dec 16

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Excavator	BS D8/13	3	110	65%	-5	108
Truck	BS D9/39	3	103	100%	0	108
Lorry	BS D8/25	2	96	65%	-5	92
Air Compressor	CNP 003	2	104	100%	-10	97
Generator, Silenced	CNP 102	2	100	100%	-10	93
Drilling Rig	BS D11/1	3	117	100%	-10	112
Grout Mixer and Pump	BS D6/13	2	108	100%	-10	101
Total SWL						115

3.1.2 Barging point construction

Feb 16 - Apr 16

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Excavator	BS D8/13	2	110	65%	-5	106
Welding Set	CNP107	2	99	100%	0	102
Mobile Crane	BS D7/114	2	101	30%	-5	94
Lorry	BS D8/25	2	96	65%	-5	92
Compressor	BS D7/16	2	96	100%	-10	89
Bar Bender	CNP 021	2	90	100%	-10	83
Concrete mixer truck	BS D6/23	2	100	100%	-5	98
Vibratory poker	BS D6/32	2	100	100%	-5	98
Barge	CNP 061	1	104	100%	0	104
Total SWL						110

3.1.3 Surface Blasting for TKO Portal

Dec 16 - Jul 17

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Excavator	BS D8/13	4	110	65%	-5	109
Lorry	BS D8/25	4	96	65%	-5	95
Mobile Crane	BS D7/114	1	101	30%	-5	91
Hydraulic Breaker	BS D8/12	1	106	80%	-5	100
Dump Truck	BS D9/27	5	105	65%	-5	105
Generator, Silenced	CNP 102	2	100	100%	-10	93
Welding Set	CNP107	2	99	100%	0	102
Drilling Rig	BS D11/1	3	117	100%	-10	112
Air Compressor	CNP 003	2	104	100%	-10	97
Water Pump	CNP 281	1	88	100%	0	88
Mobile Crusher	BS D9/15	1	125	100%	-5	120
Water Truck	BS C6/37	1	109	100%	0	109
Cherry Picker	BS C4/54	2	104	100%	0	107
Total SWL						122

3.1.4 Diversion of JBCPC Footpath

May 16 - Nov 16

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Excavator	BS D8/13	2	110	65%	-5	106
Truck	BS D9/39	2	103	100%	0	106
Compactor	CNP 050	1	105	100%	-5	100
Roller	BS D8/27	1	104	100%	-5	99
Bar Bender	CNP 021	2	90	100%	-10	83
Concrete mixer truck	BS D6/23	2	100	100%	-5	98
Vibratory poker	BS D6/32	3	100	100%	-5	100
Mobile Crane	BS D7/114	1	101	30%	-5	91
Grader	BS D9/11	2	110	50%	0	110
Total SWL						113

Appendix 4.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

Scenario: Mitigated ▼

Contract 1: contribution of Main Tunnel, Branch Tunnel, Lam Tin Interchange & CKL Tunnel

3.1.5 Demolition of Existing JBCPC Footpath

Nov 16 - Feb 17

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Bulldozer	BS D9/2	2	104	100%	0	107
Lorry	BS D8/25	2	96	65%	-5	92
Mobile Crane	BS D7/114	2	101	30%	-5	94
Hydraulic breaker	BS D8/12	1	106	80%	-5	100
Dump Truck	BS D9/27	2	105	65%	-5	101
Total SWL						109

3.1.6 Ventilation Bldg Construction

May 19 - May 20

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Excavator	BS D8/13	2	110	65%	-5	106
Lorry	BS D8/25	2	96	65%	-5	92
Dump Truck	BS D9/27	2	105	65%	-5	101
Mobile Crane	BS D7/114	5	101	30%	-5	98
Compressor	BS D7/16	2	96	100%	-10	89
Bar Bender	CNP 021	2	90	100%	-10	83
Concrete mixer truck	BS D6/23	2	100	100%	-5	98
Vibratory poker	BS D6/32	3	100	100%	-5	100
Piling, large diameter bored, grab and chisel	CNP 164	3	115	30%	-10	105
Piling, large diameter bored, oscillator	CNP 165	3	115	30%	-10	105
Piling, large diameter bored, reverse circulation drill	CNP 166	3	100	30%	0	100
Total SWL						112

3.1.7 Landscape Works

May 20 - Nov 20

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Excavator	BS D8/13	1	110	65%	-5	103
Loader	BS D3/59	1	105	50%	0	102
Lorry	BS D8/25	1	96	65%	-5	89
Total SWL						106

Appendix 4.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

Scenario: Mitigated ▼

Contract 2: TKO Interchange and Depressed Road P2

(beginning of month - end of month)
May 16 - Aug 16

1. Reclamation for Depressed Road

1.1 Placing Geotextile

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Tug Boat	CNP 221	1	110	100%	0	110
Barge	CNP 061	1	104	100%	0	104
Total SWL						111

1.2 Placing Stone Blanket

Aug 16 - Sep 16

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Tug Boat	CNP 221	1	110	100%	0	110
Barge	CNP 061	2	104	100%	0	107
Total SWL						112

1.3 Installation of Stone Column

Sep 16 - May 17

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Vibrolance	BS D4/104b	1	117	50%	-5	109
Barge	CNP 061	2	104	100%	0	107
Excavator	BS D8/13	1	110	100%	-5	105
Total SWL						112

1.4 Installation of Cellular Caisson

May 17 - Jul 17

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Tug Boat	CNP 221	1	110	100%	0	110
Barge	CNP 061	2	104	100%	0	107
Total SWL						112

1.5 Placing Geotextile Separator

Jul 17 - Sep 17

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Tug Boat	CNP 221	1	110	100%	0	110
Barge	CNP 061	1	104	100%	0	104
Total SWL						111

1.6 Placing Sand Drainage Blanket

Sep 17 - Oct 17

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Tug Boat	CNP 221	1	110	100%	0	110
Barge	CNP 061	2	104	100%	0	107
Total SWL						112

1.7 Installing Vertical Band Drains

Oct 17 - Feb 18

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Hydraulic Vibratory Lance	BS D4/107c	1	115	50%	-5	106.9897
Total SWL						107

1.8 Construction of Seawall

Feb 18 - May 18

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Tug Boat	CNP 221	1	110	30%	0	105
Derrick Barge	CNP 061	1	104	30%	0	99
Total SWL						106

Appendix 4.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

Scenario: Mitigated ▼

Contract 2: TKO Interchange and Depressed Road P2

1.9.1 Reclamation Fill behind Seawall

May 18 - Aug 18

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Barge	CNP 061	3	104	100%	0	109
Total SWL						109

1.9.2 Reclamation Fill behind Seawall

May 18 - Aug 18

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Lorry	BS D8/25	2	96	100%	-5	94
Bulldozer	BS D9/2	2	104	100%	0	107
Mechanical Compactors	CNP 050	2	105	50%	-5	100
Total SWL						108

1.10 Placing Surcharge

Sep 18 - Mar 19

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Grader	BS D9/11	1	110	50%	0	107
Excavator	BS D8/13	1	110	65%	-5	103
Dump Truck	BS D9/27	2	105	50%	-5	100
Total SWL						109

1.11 Removal of Surcharge

Mar 20 - Jun 20

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Grader	BS D9/11	1	110	50%	0	107
Excavator	BS D8/13	1	110	65%	-5	103
Dump Truck	BS D9/27	2	105	65%	-5	101
Total SWL						109

1.12 Landscape Deck Construction

Group A

Aug 18 - Aug 20

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Excavator	BS D8/13	2	110	65%	-5	106
Dump Truck	BS D9/27	1	105	65%	-5	98
Compressor	BS D7/16	3	96	100%	-10	91
Total SWL						107

Group B

Aug 18 - Aug 20

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Dump Truck	BS D9/27	1	105	30%	-5	95
Compressor	BS D7/16	3	96	50%	-10	88
Bar Bender	CNP 021	2	90	50%	-10	80
Concrete Pump	BS D6/36	3	106	50%	-10	98
Concrete mixer truck	BS D6/23	3	100	50%	-5	97
Vibratory poker	BS D6/32	6	100	50%	-5	100
Total SWL						104

Group C

Aug 18 - Aug 20

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Grader	BS D9/11	1	110	50%	0	107
Bulldozer	BS D9/2	1	104	100%	0	104
Roller	BS D8/27	2	104	100%	-5	102
Total SWL						110
Maximum SWL Group A-C						110

Appendix 4.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

Scenario: Mitigated ▼

Contract 2: TKO Interchange and Depressed Road P2

1.13 Footpath, cycle track and landscape works

May 20 - Oct 20

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Dump Truck	BS D9/27	1	105	50%	-5	97
Asphalt Paver	BS D8/24	1	101	50%	-5	93
Roller, vibratory	BS D8/30	1	101	50%	-5	93
Generator, Silenced	CNP 102	1	100	100%	-10	90
Paint line marker	CNP 161	1	90	50%	0	87
Total SWL						100

2. Bridge Structure for TKO Interchange

2.1 Slip Road S300 + S400

2.1.1 Sea Piling Works, Pile Cap & Piers

May 16 - Aug 18

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Air Compressor	CNP 002	1	102	50%	-10	89
Concrete lorry mixer	BS D6/33	1	96	50%	-5	88
Crane	BS D7/114	1	101	50%	-5	93
Derrick barge	CNP 061	1	104	50%	0	101
Piling, vibration hammer	CNP 172	1	115	50%	-5	107
Poker, vibratory, hand-held	BS D6/40	2	98	50%	-5	93
Generator, Silenced	CNP 102	1	100	50%	-10	87
Water pump	CNP 281	1	88	50%	0	85
Dump Truck	BS D9/27	1	105	50%	-5	97
Backhoe	BS D3/35	1	106	50%	-5	98
Saw, circular, wood	CNP 201	1	108	50%	-5	100
Bar bender and cutter (electric)	CNP 021	1	90	50%	-10	77
Chisel	CNP 164	1	115	50%	-10	102
Piling, large diameter bored, oscillator	CNP 165	1	115	50%	-10	102
Piling, large diameter bored, reverse circulation drill	CNP 166	1	100	50%	0	97
Pneumatic Breaker	BS D8/1	1	114	50%	0	111
Total SWL						114

2.1.2 Bridge Deck Construction for S400

Jul 16 - Sep 18

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Generator, Silenced	CNP 102	1	100	90%	-10	90
Breaker, hand-held, mass <= 10kg	CNP 023	1	108	90%	-5	103
Derrick barge	CNP 061	1	104	90%	0	104
Tug boat	CNP 221	1	110	90%	0	110
Winch (electric)	CNP 262	1	95	90%	0	95
Bar bender and cutter (electric)	CNP 021	1	90	45%	-10	77
Concrete lorry mixer	BS D6/33	1	96	45%	-5	88
Concrete Pump	BS D6/36	1	106	45%	-10	93
Poker, vibratory, hand-held	BS D6/40	1	98	65%	-5	91
Total SWL						111

2.1.3 Roadworks, Drainage, Utilities for S400

Sep 18 - Jan 19

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Dump Truck	BS D9/27	1	105	50%	-5	97
Asphalt Paver	BS D8/24	1	101	100%	-5	96
Roller, vibratory	BS D8/30	1	101	100%	-5	96
Generator, Silenced	CNP 102	1	100	100%	-10	90
Paint line marker	CNP 161	1	90	80%	0	89
Total SWL						102

Appendix 4.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

Scenario: Mitigated ▼

Contract 2: TKO Interchange and Depressed Road P2

2.1.4 Bridge Deck Construction for S300

Dec 16 - Dec 18

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Generator, Silenced	CNP 102	1	100	90%	-10	90
Breaker, hand-held, mass <= 10kg	CNP 023	1	108	90%	-5	103
Derrick barge	CNP 061	1	104	90%	0	104
Tug boat	CNP 221	1	110	90%	0	110
Winch (electric)	CNP 262	1	95	90%	0	95
Bar bender and cutter (electric)	CNP 021	1	90	45%	-10	77
Concrete lorry mixer	BS D6/33	1	96	45%	-5	88
Concrete Pump	BS D6/36	1	106	45%	-10	93
Poker, vibratory, hand-held	BS D6/40	2	98	65%	-5	94
Total SWL						111

2.1.5 Roadworks, Drainage, Utilities for S300

Jul 20 - Oct 20

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Dump Truck	BS D9/27	1	105	50%	-5	97
Asphalt Paver	BS D8/24	1	101	100%	-5	96
Roller, vibratory	BS D8/30	1	101	100%	-5	96
Generator, Silenced	CNP 102	1	100	100%	-10	90
Paint line marker	CNP 161	1	90	80%	0	89
Total SWL						102

2.2 Slip Road S100 + S200 (Start from CBL side)

2.2.1 Sea Piling Works, Pile Cap & Piers

May 16 - Jan 18

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Air Compressor	CNP 002	1	102	50%	-10	89
Concrete lorry mixer	BS D6/33	1	96	50%	-5	88
Crane	BS D7/114	1	101	50%	-5	93
Derrick barge	CNP 061	1	104	50%	0	101
Piling, vibration hammer	CNP 172	1	115	50%	-5	107
Poker, vibratory, hand-held	BS D6/40	2	98	50%	-5	93
Generator, Silenced	CNP 102	1	100	50%	-10	87
Water pump	CNP 281	1	88	50%	0	85
Dump Truck	BS D9/27	1	105	50%	-5	97
Backhoe	BS D3/35	1	106	50%	-5	98
Saw, circular, wood	CNP 201	1	108	50%	-5	100
Bar bender and cutter (electric)	CNP 021	1	90	50%	-10	77
Chisel	CNP 164	1	115	50%	-10	102
Piling, large diameter bored, oscillator	CNP 165	1	115	50%	-10	102
Piling, large diameter bored, reverse circulation drill	CNP 166	1	100	50%	0	97
Pneumatic Breaker	BS D8/1	1	114	50%	0	111
Total SWL						114

2.2.2 Bridge Deck Construction for S100

Jul 16 - Apr 18

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Generator, Silenced	CNP 102	1	100	90%	-10	90
Breaker, hand-held, mass <= 10kg	CNP 023	1	108	90%	-5	103
Derrick barge	CNP 061	1	104	90%	0	104
Tug boat	CNP 221	1	110	90%	0	110
Winch (electric)	CNP 262	1	95	90%	0	95
Bar bender and cutter (electric)	CNP 021	1	90	45%	-10	77
Concrete lorry mixer	BS D6/33	1	96	45%	-5	88
Concrete Pump	BS D6/36	1	106	45%	-10	93
Poker, vibratory, hand-held	BS D6/40	1	98	65%	-5	91
Total SWL						111

Appendix 4.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

Scenario: Mitigated ▼

Contract 2: TKO Interchange and Depressed Road P2

2.2.3 Roadworks, Drainage, Utilities for S100

Jul 20 - Oct 20

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Dump Truck	BS D9/27	1	105	50%	-5	97
Asphalt Paver	BS D8/24	1	101	100%	-5	96
Roller, vibratory	BS D8/30	1	101	100%	-5	96
Generator, Silenced	CNP 102	1	100	100%	-10	90
Paint line marker	CNP 161	1	90	80%	0	89
Total SWL						102

2.2.4 Bridge Deck Construction for S200

Dec 16 - Mar 18

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Generator, Silenced	CNP 102	1	100	90%	-10	90
Breaker, hand-held, mass <= 10kg	CNP 023	1	108	90%	-5	103
Derrick barge	CNP 061	1	104	90%	0	104
Tug boat	CNP 221	1	110	90%	0	110
Winch (electric)	CNP 262	1	95	90%	0	95
Bar bender and cutter (electric)	CNP 021	1	90	45%	-10	77
Concrete lorry mixer	BS D6/33	1	96	45%	-5	88
Concrete Pump	BS D6/36	1	106	45%	-10	93
Poker, vibratory, hand-held	BS D6/40	1	98	65%	-5	91
Total SWL						111

2.3 Slip Road S100 + S200 (Start from P2)

2.3.1 Sea Piling Works, Pile Cap & Piers

Apr 18 - Jun 19

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Air Compressor	CNP 002	1	102	100%	-10	92
Concrete lorry mixer	BS D6/33	1	96	80%	-5	90
Crane	BS D7/114	1	101	100%	-5	96
Derrick barge	CNP 061	1	104	100%	0	104
Piling, vibration hammer	CNP 172	1	115	100%	-5	110
Poker, vibratory, hand-held	BS D6/40	2	98	100%	-5	96
Generator, Silenced	CNP 102	1	100	100%	-10	90
Water pump	CNP 281	1	88	100%	0	88
Dump Truck	BS D9/27	1	105	50%	-5	97
Backhoe	BS D3/35	1	106	100%	-5	101
Saw, circular, wood	CNP 201	1	108	100%	-5	103
Total SWL						112

2.3.2 Bridge Deck Construction for S100

Jun 18 - Aug 19

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Generator, Silenced	CNP 102	1	100	90%	-10	90
Breaker, hand-held, mass <= 10kg	CNP 023	1	108	90%	-5	103
Derrick barge	CNP 061	1	104	90%	0	104
Tug boat	CNP 221	1	110	90%	0	110
Winch (electric)	CNP 262	1	95	90%	0	95
Bar bender and cutter (electric)	CNP 021	1	90	45%	-10	77
Concrete lorry mixer	BS D6/33	1	96	45%	-5	88
Concrete Pump	BS D6/36	1	106	45%	-10	93
Poker, vibratory, hand-held	BS D6/40	1	98	65%	-5	91
Total SWL						111

Appendix 4.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

Scenario: Mitigated ▼

Contract 2: TKO Interchange and Depressed Road P2

2.3.3 Roadworks, Drainage, Utilities for S100

Aug 19 - Feb 20

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On-time %	Barrier Correction	Sub-total SWL
Dump Truck	BS D9/27	1	105	50%	-5	97
Asphalt Paver	BS D8/24	1	101	100%	-5	96
Roller, vibratory	BS D8/30	1	101	100%	-5	96
Generator, Silenced	CNP 102	1	100	100%	-10	90
Paint line marker	CNP 161	1	90	80%	0	89
Total SWL						102

2.3.4 Bridge Deck Construction for S200

Nov 18 - Oct 19

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On-time %	Barrier Correction	Sub-total SWL
Generator, Silenced	CNP 102	1	100	90%	-10	90
Breaker, hand-held, mass <= 10kg	CNP 023	1	108	90%	-5	103
Derrick barge	CNP 061	1	104	90%	0	104
Tug boat	CNP 221	1	110	90%	0	110
Winch (electric)	CNP 262	1	95	90%	0	95
Bar bender and cutter (electric)	CNP 021	1	90	45%	-10	77
Concrete lorry mixer	BS D6/33	1	96	45%	-5	88
Concrete Pump	BS D6/36	1	106	45%	-10	93
Poker, vibratory, hand-held	BS D6/40	1	98	65%	-5	91
Total SWL						111

2.3.5 Roadworks, Drainage, Utilities for S200

Jul 20 - Oct 20

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On-time %	Barrier Correction	Sub-total SWL
Dump Truck	BS D9/27	1	105	50%	-5	97
Asphalt Paver	BS D8/24	1	101	100%	-5	96
Roller, vibratory	BS D8/30	1	101	100%	-5	96
Generator, Silenced	CNP 102	1	100	100%	-10	90
Paint line marker	CNP 161	1	90	80%	0	89
Total SWL						102

2.4 Mainline

2.4.1 Sea Piling Works, Pile Cap & Piers

May 16 - Oct 19

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On-time %	Barrier Correction	Sub-total SWL
Air Compressor	CNP 002	2	102	50%	-10	92
Concrete lorry mixer	BS D6/33	2	96	50%	-5	91
Crane	BS D7/114	2	101	50%	-5	96
Derrick barge	CNP 061	2	104	50%	0	104
Piling, vibration hammer	CNP 172	2	115	50%	-5	110
Poker, vibratory, hand-held	BS D6/40	5	98	50%	-5	97
Generator, Silenced	CNP 102	2	100	50%	-10	90
Water pump	CNP 281	2	88	50%	0	88
Dump Truck	BS D9/27	2	105	50%	-5	100
Backhoe	BS D3/35	2	106	50%	-5	101
Saw, circular, wood	CNP 201	2	108	50%	-5	103
Bar bender and cutter (electric)	CNP 021	1	90	50%	-10	77
Pneumatic Breaker	BS D8/1	1	114	50%	0	111
Total SWL						115

Appendix 4.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

Scenario: Mitigated ▼

Contract 2: TKO Interchange and Depressed Road P2

2.4.2 Bridge Deck Construction for Mainline

Dec 16 - Jan 20

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Generator, Silenced	CNP 102	2	100	90%	-10	93
Breaker, hand-held, mass <= 10kg	CNP 023	2	108	90%	-5	106
Derrick barge	CNP 061	2	104	90%	0	107
Tug boat	CNP 221	2	110	90%	0	113
Winch (electric)	CNP 262	2	95	90%	0	98
Bar bender and cutter (electric)	CNP 021	2	90	45%	-10	80
Concrete lorry mixer	BS D6/33	2	96	45%	-5	91
Concrete Pump	BS D6/36	2	106	45%	-10	96
Poker, vibratory, hand-held	BS D6/40	2	98	65%	-5	94
Total SWL						114

2.4.3 Bridge Deck Construction at TKO Portal after Construction of Ventilation Building

May 20 - Nov 20

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Generator, Silenced	CNP 102	2	100	90%	-10	93
Breaker, hand-held, mass <= 10kg	CNP 023	2	108	90%	-5	106
Derrick barge	CNP 061	2	104	90%	0	107
Tug boat	CNP 221	2	110	90%	0	113
Winch (electric)	CNP 262	2	95	90%	0	98
Bar bender and cutter (electric)	CNP 021	2	90	45%	-10	80
Concrete lorry mixer	BS D6/33	2	96	45%	-5	91
Concrete Pump	BS D6/36	2	106	45%	-10	96
Poker, vibratory, hand-held	BS D6/40	2	98	65%	-5	94
Total SWL						114

2.4.4 Roadworks, Drainage, Utilities for Mainline

Jan 20 - Oct 20

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Dump Truck	BS D9/27	1	105	50%	-5	97
Asphalt Paver	BS D8/24	1	101	100%	-5	96
Roller, vibratory	BS D8/30	1	101	100%	-5	96
Generator, Silenced	CNP 102	1	100	100%	-10	90
Paint line marker	CNP 161	1	90	80%	0	89
Total SWL						102

3. North Bridge

3.1 Piling works for North Bridge

Mar 16 - May 16

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Piling, vibration hammer	CNP 172	1	115	30%	-5	105
Dump Truck	BS D9/27	1	105	30%	-5	95
Backhoe	BS D3/35	1	106	30%	-5	96
Air Compressor	CNP 002	1	102	100%	-10	92
Concrete lorry mixer	BS D6/33	1	96	30%	-5	86
Crane	BS D7/114	1	101	30%	-5	91
Generator, Silenced	CNP 102	1	100	100%	-10	90
Chisel	CNP 164	1	115	100%	-10	105
Piling, large diameter bored, oscillator	CNP 165	1	115	100%	-10	105
Piling, large diameter bored, reverse circulation drill	CNP 166	1	100	100%	0	100
Total SWL						111

Appendix 4.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

Scenario:

Mitigated ▼

Contract 2: TKO Interchange and Depressed Road P2

3.2 Pile Cap and Column Construction

Jun 16 - Sep 16

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Concrete lorry mixer	BS D6/33	1	96	30%	-5	86
Dump Truck	BS D9/27	1	105	30%	-5	95
Backhoe	BS D3/35	1	106	50%	-5	98
Generator, Silenced	CNP 102	1	100	100%	-10	90
Crane	BS D7/114	1	101	30%	-5	91
Poker, vibratory, hand-held	BS D6/40	3	98	30%	-5	93
Saw, circular, wood	CNP 201	1	108	30%	-5	98
Bar bender and cutter (electric)	CNP 021	1	90	30%	-10	75
Breaker, hand-held, mass <= 10kg	CNP 023	1	108	30%	-5	98
Concrete mixer	CNP 045	1	96	30%	-5	86
Concrete Pump	BS D6/36	1	106	30%	-10	91
Lorry	BS D8/25	1	96	30%	-5	86
Total SWL						104

3.3 Bridge Deck & Lift shaft construction

Sep 16 - Feb 17

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Concrete lorry mixer	BS D6/33	1	96	80%	-5	90
Crane	BS D7/114	1	101	100%	-5	96
Poker, vibratory, hand-held	BS D6/40	1	98	100%	-5	93
Generator, Silenced	CNP 102	1	100	100%	-10	90
Bar bender and cutter (electric)	CNP 021	1	90	100%	-10	80
Breaker, hand-held, mass <= 10kg	CNP 023	1	108	100%	-5	103
Concrete mixer	CNP 045	1	96	100%	-5	91
Concrete Pump	BS D6/36	1	106	100%	-10	96
Lorry	BS D8/25	1	96	100%	-5	91
Total SWL						105

3.4 Drainage, Utilities & E&M works

Feb 17 - Jun 17

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Excavator	BS D8/13	1	110	65%	-5	103
Loader	BS D3/59	1	105	50%	0	102
Lorry	BS D8/25	1	96	65%	-5	89
Mobile Crane	BS D7/114	1	101	30%	-5	91
Total SWL						106

Appendix 4.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

Scenario: Mitigated ▼

Contract 3: P2/D4 Junction Works and P2/D4 Footbridges

(beginning of month - end of month)

1. South Bridge

1.1 Piling Works for South Bridge

Sep 17 - Mar 18

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Crane	BS D7/114	1	101	30%	-5	91
Piling, vibration hammer	CNP 172	1	115	30%	-5	105
Dump Truck	BS D9/27	1	105	30%	-5	95
Backhoe	BS D3/35	1	106	30%	-5	96
Air Compressor	CNP 002	1	102	100%	-10	92
Concrete lorry mixer	BS D6/33	1	96	30%	-5	86
Generator, Silenced	CNP 102	1	100	100%	-10	90
Chisel	CNP 164	1	115	100%	-10	105
Piling, large diameter bored, oscillator	CNP 165	1	115	100%	-10	105
Piling, large diameter bored, reverse circulation drill	CNP 166	1	100	100%	0	100
Total SWL						111

1.2 Pile Cap and Column Construction

Mar 18 - Sep 18

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Concrete lorry mixer	BS D6/33	1	96	30%	-5	86
Dump Truck	BS D9/27	1	105	30%	-5	95
Backhoe	BS D3/35	1	106	50%	-5	98
Generator, Silenced	CNP 102	1	100	100%	-10	90
Crane	BS D7/114	1	101	30%	-5	91
Poker, vibratory, hand-held	BS D6/40	3	98	30%	-5	93
Saw, circular, wood	CNP 201	1	108	30%	-5	98
Bar bender and cutter (electric)	CNP 021	1	90	30%	-10	75
Breaker, hand-held, mass <= 10kg	CNP 023	1	108	30%	-5	98
Concrete mixer	CNP 045	1	96	30%	-5	86
Concrete Pump	BS D6/36	1	106	30%	-10	91
Lorry	BS D8/25	1	96	30%	-5	86
Total SWL						104

1.3 Bridge Deck & Lift shaft construction

Sep 18 - Mar 19

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Concrete lorry mixer	BS D6/33	1	96	80%	-5	90
Crane	BS D7/114	1	101	100%	-5	96
Poker, vibratory, hand-held	BS D6/40	1	98	100%	-5	93
Generator, Silenced	CNP 102	1	100	100%	-10	90
Bar bender and cutter (electric)	CNP 021	1	90	100%	-10	80
Breaker, hand-held, mass <= 10kg	CNP 023	1	108	100%	-5	103
Concrete mixer	CNP 045	1	96	100%	-5	91
Concrete Pump	BS D6/36	1	106	100%	-10	96
Lorry	BS D8/25	1	96	100%	-5	91
Total SWL						105

1.4 Drainage & Utilities

Mar 19 - Jun 19

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Excavator	BS D8/13	1	110	65%	-5	103
Loader	BS D3/59	1	105	50%	0	102
Lorry	BS D8/25	1	96	65%	-5	89
Mobile Crane	BS D7/114	1	101	30%	-5	91
Total SWL						106

1.5 Finishing & Landscaping & E&M works

Jun 19 - Dec 19

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Excavator	BS D8/13	1	110	65%	-5	103
Loader	BS D3/59	1	105	50%	0	102
Lorry	BS D8/25	1	96	65%	-5	89
Total SWL						106

Appendix 4.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

Scenario: Mitigated

Contract 3: P2/D4 Junction Works and P2/D4 Footbridges

2. Slip Road Between L681 & Road P2

2.1 Roadworks, Signage, Drainage, E&M

Sep 17 - Mar 19

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Excavator	BS D8/13	1	110	50%	-5	102
Loader	BS D3/59	1	105	50%	0	102
Mobile Crane	BS D7/114	1	101	50%	-5	93
Grader	BS D9/11	1	110	30%	0	105
Bulldozer	BS D9/2	1	104	30%	0	99
Lorry	BS D8/25	2	96	50%	-5	91
Compactor	CNP 050	1	105	30%	-5	95
Roller	BS D8/27	1	104	30%	-5	94
Concrete mixer	CNP 045	1	96	50%	-5	88
Vibratory poker	BS D6/32	1	100	30%	-5	90
Total SWL						109

3. Depressed Road P2 and Associated Slip Roads

3.1 Roadworks, Signage, Drainage, E&M

Sep 17 - Mar 19

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Excavator	BS D8/13	1	110	50%	-5	102
Loader	BS D3/59	1	105	50%	0	102
Mobile Crane	BS D7/114	1	101	50%	-5	93
Grader	BS D9/11	1	110	30%	0	105
Bulldozer	BS D9/2	1	104	30%	0	99
Lorry	BS D8/25	2	96	50%	-5	91
Compactor	CNP 050	1	105	30%	-5	95
Roller	BS D8/27	1	104	30%	-5	94
Concrete mixer	CNP 045	1	96	50%	-5	88
Vibratory poker	BS D6/32	1	100	30%	-5	90
Total SWL						109

3.2 Noise Barrier at Road P2

Dec 17 - Mar 18

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Lorry	BS D8/25	2	96	100%	-5	94
Crane	BS D7/114	2	101	100%	-5	99
Total SWL						100

4. P2/D4 Junction Works

4.1 Install Traffic Lighting System

Dec 19 - Jun 20

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Excavator	BS D8/13	1	110	65%	-5	103
Loader	BS D3/59	1	105	50%	0	102
Lorry	BS D8/25	1	96	65%	-5	89
Total SWL						106

4.2 Junction Modification Works

Jun 20 -Nov 20

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Grader	BS D9/11	1	110	30%	0	105
Bulldozer	BS D9/2	2	104	30%	0	102
Lorry	BS D8/25	1	96	20%	-5	84
Compactor	CNP 050	1	105	30%	-5	95
Roller	BS D8/27	2	104	30%	-5	97
Concrete mixer	CNP 045	1	96	50%	-5	88
Vibratory poker	BS D6/32	2	100	30%	-5	93
Hydraulic breaker	BS D8/12	2	106	80%	-5	103
Total SWL						109

Appendix 4.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

Scenario:

Mitigated ▼

T2 Entrustment Works at Cha Kwo Ling Village

(beginning of month - end of month)

1 Cut & Cover Works (Erection of Construction Shaft & Cut and Cover Tunnel at CKLPCA)

Jul 16 - Jul 17

1.1 Erection of Construction Shaft & Cut and Cover Tunnel at CKLPCA

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Excavator	BS D8/13	5	110	70%	-5	110
Hydraulic breaker	BS D8/12	1	106	70%	-5	99
Saw, concrete	CNP 203	1	115	40%	-10	101
Lorry with crane/grab	CNP 145	1	105	100%	-5	100
Crane, mobile	BS D7/101	1	94	70%	-5	87
Total SWL						112

1.2 Mechanical Breaking at CKLR & CKLV including Pile Roofing Works

July 17 - Jan 19

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Backhoe with hydraulic breaker	BS D8/13	1	110	70%	-5	103
Dump Truck	BS D9/27	5	105	30%	-5	102
Concrete pump truck	BS D6/36	1	106	30%	0	101
Concrete Mixer Truck	BS D6/23	1	100	30%	-5	90
Total SWL						107

1.3 Remaining Mechanical Breaking for CKL Tunnel

Jan 19 - Jan 20

PME	TM Ref./ other Ref	No. of Items	SWL/ Item dB(A)	On- time %	Barrier Correction	Sub-total SWL
Backhoe with hydraulic breaker	BS D8/13	1	110	70%	-5	103
Dump Truck	BS D9/27	5	105	30%	-5	102
Concrete pump truck	BS D6/36	1	106	30%	0	101
Concrete Mixer Truck	BS D6/23	1	100	30%	-5	90
Total SWL						107

