

Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)

Works Area A: Mai Po Ventilation Building (MPV)

1 Possession of site

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref. <sup>(1)</sup>	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Excavator	CNP 081	1	112	75%			111			
Breaker, mini-robot mounted	CNP 031	1	115	30%			110			
Mobile Crane	CNP 048	1	112	30%				107		
Dump Truck	CNP 067	4	117	30%				118		
Concrete Lorry Mixer	CNP 044	2	109	30%					107	
Poker, vibratory, hand-held (electric)	OCNP 024	2	94	50%					94	
Air compressor, air flow >30m³/min	CNP 003	2	104	50%					104	
Handheld breaker	CNP 024	2	108	30%					106	
Generator, silenced	CNP 102	1	100	75%					99	
Roller compactor	CNP 185	1	108	50%						105
<b>Total</b>							<b>113</b>	<b>118</b>	<b>111</b>	<b>105</b>
<b>Max</b>							<b>118</b>			

2 Diaphragm Wall

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref. <sup>(1)</sup>	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Hydraulic extractor	CNP 163	2	90	75%			92				
Tracked cranes with grab	BS C7, 105	10	108	30%			113				
Bentonite Plant	CNP 162	2	105	75%			107				
Pump, submersible	CNP 283	4	85	100%			91	91	91	91	
Air compressor, air flow >30m³/min	CNP 003	2	104	75%				106			
Dump Truck	CNP 067	6	117	30%					120		
Concrete Lorry Mixer	CNP 044	6	109	30%						112	
Drilling Rigs	OCNP 014	2	110	75%							112
Desilting Plant	CNP 283	1	85	75%							84
<b>Total</b>							<b>114</b>	<b>106</b>	<b>120</b>	<b>112</b>	<b>112</b>
<b>Max</b>							<b>120</b>				

3 Bulk Excavation/Fill - Soft

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref. <sup>(1)</sup>	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	4	108	30%				109	
Excavator	CNP 081	6	112	75%	Underground Plant	5		114	
Ventilation fans	CNP 241	2	108	100%			111	111	111
Mobile generator	CNP 103	2	95	75%			97		
Dump Truck	CNP 067	12	117	30%					123
Air compressor, air flow >30m³/min	CNP 003	2	104	50%			104		
Mobile crane	CNP 048	4	112	30%			113		
<b>Total</b>							<b>115</b>	<b>116</b>	<b>123</b>
<b>Max</b>							<b>123</b>		

4 Concrete Works

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref. <sup>(1)</sup>	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	2	108	30%				106	
Concrete Lorry Mixer	CNP 044	6	109	30%			112		
Poker, vibratory, hand-held (electric)	OCNP 024	8	94	50%	Underground Plant	5			95
Air compressor, air flow >30m³/min	CNP 003	2	104	50%			104		
Concrete pump	OCNP 007	2	109	75%			111		
Ventilation fans	CNP 241	2	108	100%			111	111	111
Alimak hoist	BS C7, 97	2	101	20%	Underground Plant	5			92
Mobile generator	CNP 103	1	95	75%			94		94
<b>Total</b>							<b>116</b>	<b>112</b>	<b>111</b>
<b>Max</b>							<b>116</b>		

5 TBM Erection

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref. <sup>(1)</sup>	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	1	108	20%				101	
Mobile Crane	CNP 048	2	112	50%			112		
Air compressor, air flow >30m³/min	CNP 003	2	104	30%			102	102	102
Ventilation fans	CNP 241	2	108	100%			111	111	111
Alimak hoist	BS C7, 97	2	101	20%	Underground Plant	10	87	87	87
Welding plant	EIA ref. 1	2	78	75%	Underground Plant	10			70
Articulated truck & flat bed	BS C11, 49	1	102	20%			95		
Mobile generator	CNP 103	1	95	75%	Underground Plant	10			84
<b>Total</b>							<b>115</b>	<b>112</b>	<b>112</b>
<b>Max</b>							<b>115</b>		

**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area A: Mai Po Ventilation Building (MPV)**

**6 TBM Driving**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref. <sup>(1)</sup>	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Ventilation fan	CNP 241	4	108	100%	Silencer	15	99	99
Tower crane	CNP 049	4	95	30%				96
Bentonite Plant	CNP 162	2	105	100%				108
Pump, submersible	CNP 283	6	85	100%			93	93
Excavator	CNP 081	4	112	50%				115
Fork lift truck	BS C7, 93	2	104	10%				97
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	100%			107	107
Alimak hoist	BS C7, 97	2	101	20%	Underground Plant	10	87	87
Narrow gauge trains	EIA ref. 2	4	105	10%	Underground Plant	10		91
Dump Truck	CNP 067	10	117	30%				122
Desilting Plant	CNP 283	1	85	100%			85	85
<b>Total</b>							<b>123</b>	<b>111</b>
<b>Max</b>							<b>123</b>	

**7 Ventilation building construction**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref. <sup>(1)</sup>	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tower crane	CNP 049	1	95	50%			92			
Mobile crane	CNP 048	1	112	20%				105		
Concrete pump	OCNP 007	2	109	75%					111	
Poker, vibratory, hand-held (electric)	OCNP 024	4	94	50%						97
Generator, silenced	CNP 102	2	100	50%					100	100
Concrete Lorry Mixer	CNP 044	2	109	30%					107	
<b>Total</b>							<b>92</b>	<b>105</b>	<b>112</b>	<b>102</b>
<b>Max</b>							<b>112</b>			

**8 Access road construction**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref. <sup>(1)</sup>	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Mini Backhoe	OCNP 015	1	94	75%					93		
Breaker, mini-robot mounted	CNP 031	1	115	30%						110	
Dump Truck	CNP 067	1	117	30%					112		
Concrete Lorry Mixer	CNP 044	1	109	30%				104			
Poker, vibratory, hand-held (electric)	OCNP 024	1	94	50%							91
Air compressor, air flow <=10m <sup>3</sup> /min	CNP 001	1	100	75%			99				
Handheld breaker	CNP 024	1	108	30%			103				
Generator, silenced	CNP 102	1	100	75%							99
<b>Total</b>							<b>104</b>	<b>104</b>	<b>112</b>	<b>110</b>	<b>110</b>
<b>Max</b>							<b>112</b>				

**9 Operation of access road**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref. <sup>(1)</sup>	No. of Items	SWL/Item dB(A)
Dump Truck	CNP 067	24	117

**Remark:**

- (1) EIA Ref. 1 - SWL of Welding Plant refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).  
 EIA Ref. 2 - SWL of narrow gauge trains refer to approved EIA Report of Drainage Improvement in Northern Hong Kong Island - Hong Kong West Drainage Tunnel (AEIAR-099/2006)  
 BS - British Standard BSS228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites  
 OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWLe.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf))

**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area B: Ngau Tam Mei Ventilation Building (NTV)**

**10 Possession of site**

Powered Mechanical Equipment (PME)	TM Ref./ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Excavator	CNP 081	1	112	75%			111		
Breaker, mini-robot mounted	CNP 031	1	115	30%			110		
Mobile Crane	CNP 048	1	112	30%				107	
Dump Truck	CNP 067	4	117	30%				118	
Concrete lorry mixer	CNP 044	2	109	30%					107
Poker, vibratory, hand-held (electric)	OCNP 024	2	94	50%					94
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	50%					104
Handheld breaker	CNP 024	2	108	30%					106
Generator, silenced	CNP 102	1	100	75%					99
<b>Total</b>							<b>113</b>	<b>118</b>	<b>111</b>
<b>Max</b>							<b>118</b>		

**11 Site Formation Works**

Powered Mechanical Equipment (PME)	TM Ref./ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Excavator	CNP 081	2	112	50%			112	
Roller, vibratory	CNP 186	1	108	30%				103
Dump Truck	CNP 067	2	117	30%			115	
Generator, silenced	CNP 102	1	100	75%				99
<b>Total</b>							<b>117</b>	<b>103</b>
<b>Max</b>							<b>117</b>	

**12 Sheet Pile Walls**

Powered Mechanical Equipment (PME)	TM Ref./ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Piling, Vibrating Hammer	OCNP 023	1	115	50%			112			
Tracked Crane	BS C7, 105	1	108	50%					105	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	50%					101	
Generator	CNP 102	1	100	50%					97	
Dump Truck	CNP 067	2	117	30%						115
Concrete lorry mixer	CNP 044	2	109	30%					107	
<b>Total</b>							<b>112</b>	<b>108</b>	<b>105</b>	<b>115</b>
<b>Max</b>							<b>115</b>			

**13 Bulk Excavation/Fill - Soft**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref. <sup>(1)</sup>	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	2	108	30%			106		
Excavator	CNP 081	3	112	75%	Underground Plant	5			111
Ventilation fans	CNP 241	2	108	100%			111	111	111
Mobile generator	CNP 103	1	95	75%			94		
Dump Truck	CNP 067	6	117	30%				120	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	50%			104		
<b>Total</b>							<b>113</b>	<b>120</b>	<b>114</b>
<b>Max</b>							<b>120</b>		

**14 Bulk excavation - Rock**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref. <sup>(1)</sup>	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	2	108	30%			106		
Drilling Rigs	OCNP 014	2	110	50%					110
Hydraulic Breaker	CNP 028	3	122	50%	Underground Plant	5			119
Ventilation fans	CNP 241	2	108	100%	Underground Plant	5	106	106	106
Mobile generator	CNP 103	1	95	75%			94		
Dump Truck	CNP 067	3	117	30%				117	
Shotcrete pump	OCNP 007	2	109	10%	Underground Plant	5			97
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	75%			106		
<b>Total</b>							<b>111</b>	<b>117</b>	<b>120</b>
<b>Max</b>							<b>120</b>		

Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)

Works Area B: Ngau Tam Mei Ventilation Building (NTV)

15 Concrete Works

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref. <sup>(1)</sup>	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7. 105	2	108	20%				104	
Concrete Delivery Trucks	CNP 044	2	109	30%			107		
Poker, vibratory, hand-held (electric)	OCNP 024	4	94	50%	Underground Plant	5			92
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	50%			104		
Concrete pump	OCNP 007	2	109	75%				111	
Ventilation fans	CNP 241	2	108	100%				111	
Alimak hoist	BS C7. 97	1	101	20%	Underground Plant	5			89
Mobile generator	CNP 103	1	95	75%				94	94
<b>Total</b>							<b>115</b>	<b>104</b>	<b>97</b>
<b>Max</b>							<b>115</b>		

16 Drill & Blast Tunnelling

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref. <sup>(1)</sup>	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Ventilation fans	CNP 241	2	108	100%			111	111
Drilling Jumbo	CNP 182	2	123	50%				123
Hydraulic Breaker	CNP 028	2	122	50%	Underground Plant	10		112
Pump, submersible	CNP 283	2	85	100%	Underground Plant	10		78
Grout pump	OCNP 017	1	105	20%	Underground Plant	10		88
Dump trucks	CNP 067	4	117	50%	Underground Plant	10		110
Dump trucks	CNP 067	6	117	30%			120	
Generator	CNP 102	2	100	100%	Underground Plant	10		93
Fork lift truck	BS C7. 93	1	104	10%				94
Loader	CNP 081	1	112	50%	Underground Plant	10		99
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	75%			106	106
Alimak hoist	BS C7. 97	1	101	20%	Underground Plant	10		84
Shotcrete pump	OCNP 007	2	109	20%	Underground Plant	10		95
Welding plant	EIA ref. 1	2	78	20%	Underground Plant	10		64
Pump, submersible	CNP 283	4	85	100%				91
<b>Total</b>							<b>120</b>	<b>124</b>
<b>Max</b>							<b>124</b>	

17 TBM Removal

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref. <sup>(1)</sup>	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Tracked Crane	BS C7. 105	1	108	50%				105
Mobile Crane	CNP 048	2	112	50%				112
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	30%				99
Low loader vehicle	OCNP 010	1	105	30%				100
Alimak hoist	BS C7. 97	1	101	20%	Underground Plant	10		84
<b>Total</b>							<b>113</b>	<b>84</b>
<b>Max</b>							<b>113</b>	

18 Ventilation building construction

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref. <sup>(1)</sup>	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tower crane	CNP 049	1	95	50%				92		
Mobile crane	CNP 048	1	112	30%					107	
Concrete pump	OCNP 007	2	109	75%						111
Poker, vibratory, hand-held (electric)	OCNP 024	4	94	50%						97
Generator, silenced	CNP 102	2	100	50%						100
Concrete Delivery Trucks	CNP 044	2	109	30%						107
<b>Total</b>							<b>92</b>	<b>107</b>	<b>112</b>	<b>102</b>
<b>Max</b>							<b>112</b>			

Remark:

- (1) EIA Ref. 1 - SWL of Welding Plant refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).  
 EIA Ref. 2 - SWL of narrow gauge trains refer to approved EIA Report of Drainage Improvement in Northern Hong Kong Island - Hong Kong West Drainage Tunnel (AEIAR-099/2006)  
 BS - British Standard BS5228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites  
 OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWLe.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf))

Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)

Works Area C: Tai Kong Po Emergency Access Point (TPP)

19 Access road construction

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Mini Backhoe	OCNP 015	1	94	75%						93	
Breaker, mini-robot mounted	CNP 031	1	115	30%							110
Mobile Crane	CNP 048	1	112	30%					107		
Dump Trucks	CNP 067	1	117	30%						112	
Concrete lorry mixer	CNP 044	1	109	30%			104				
Poker, vibratory, hand-held (electric)	OCNP 024	1	94	50%			91				
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	30%				99			
Handheld breaker	CNP 024	1	108	30%				103			
Generator, super silenced, 70dB(A) at 1m	CNP 103	1	95	75%				94			
<b>Total</b>							<b>104</b>	<b>104</b>	<b>107</b>	<b>112</b>	<b>110</b>
<b>Max</b>							<b>112</b>				

20 Prepare works area for site office

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Excavator	CNP 081	1	112	75%						111	
Breaker, mini-robot mounted	CNP 031	1	115	30%							110
Mobile Crane	CNP 048	1	112	30%					107		
Trucks	CNP 067	2	117	30%						115	
Concrete lorry mixer	CNP 044	2	109	30%				107			
Poker, vibratory, hand-held (electric)	OCNP 024	2	94	50%				94			
Air compressor, air flow <=10m <sup>3</sup> /min	CNP 001	2	100	75%			102				
Handheld breaker	CNP 024	2	108	30%				106			
Generator, silenced	CNP 102	1	100	75%					99		
<b>Total</b>							<b>107</b>	<b>108</b>	<b>112</b>	<b>115</b>	<b>110</b>
<b>Max</b>							<b>115</b>				

21 Possession of site

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Excavator	CNP 081	1	112	75%						111	
Breaker, mini-robot mounted	CNP 031	1	115	30%							110
Mobile Crane	CNP 048	1	112	30%					107		
Trucks	CNP 067	2	117	30%						115	
Concrete lorry mixer	CNP 044	2	109	30%				107			
Poker, vibratory, hand-held (electric)	OCNP 024	2	94	50%				94			
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	50%			104				
Handheld breaker	CNP 024	2	108	30%				106			
Generator, silenced	CNP 102	1	100	75%					99		
<b>Total</b>							<b>108</b>	<b>108</b>	<b>112</b>	<b>115</b>	<b>110</b>
<b>Max</b>							<b>115</b>				

22 Sheet Pile Wall

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Piling, Vibrating Hammer	OCNP 023	1	115	50%			112		
Tracked cranes	BS C7, 105	2	108	50%				108	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	50%			101		
Generator, silenced	CNP 102	1	100	50%				97	
Dump Truck	CNP 067	2	117	30%					115
Concrete lorry mixer	CNP 044	2	109	30%				107	
<b>Total</b>							<b>113</b>	<b>108</b>	<b>115</b>
<b>Max</b>							<b>115</b>		

Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)

Works Area C: Tai Kong Po Emergency Access Point (TPP)

23 Bulk Excavation/Fill - Soft

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7_105	2	108	30%			106		
Excavator	CNP 081	3	112	75%	Underground Plant	5			111
Ventilation fans	CNP 241	2	108	100%			111	111	111
Mobile generator	CNP 103	1	95	75%			94		
Road Trucks	CNP 067	3	117	30%				117	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	50%			104		
<b>Total</b>							<b>113</b>	<b>118</b>	<b>114</b>
<b>Max</b>							<b>118</b>		

24 Bulk excavation - Rock

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7_105	2	108	30%			106		
Drilling Rigs	OCNP 014	2	110	50%					110
Hydraulic Breaker	CNP 028	3	122	50%	Underground Plant	5			119
Ventilation fans	CNP 241	2	108	100%			111	111	111
Mobile generator	CNP 103	1	95	75%			94		
Road Trucks	CNP 067	3	117	30%				117	
Shotcrete pump	OCNP 007	2	109	10%	Underground Plant	5			97
Submersible pump	CNP 283	2	85	100%			88		
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	75%			106		
<b>Total</b>							<b>113</b>	<b>117</b>	<b>120</b>
<b>Max</b>							<b>120</b>		

25 Concrete Works

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7_105	2	108	20%				104	
Concrete Delivery Trucks	CNP 044	2	109	30%			107		
Poker, vibratory, hand-held (electric)	OCNP 024	4	94	50%	Underground Plant	5			92
Air Compressors	CNP 002	2	102	50%			102		
Concrete pump	OCNP 007	2	109	75%			111		
Ventilation fans	CNP 241	2	108	100%			111	111	111
Alimak hoist	BS C7_97	1	101	20%	Underground Plant	5			89
Mobile generator	CNP 103	1	95	75%			94		94
<b>Total</b>							<b>115</b>	<b>112</b>	<b>111</b>
<b>Max</b>							<b>115</b>		

Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)

Works Area C: Tai Kong Po Emergency Access Point (TPP)

26 Drill & Blast Tunnelling

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Ventilation fans	CNP 241	2	108	100%			111	111	111
Drilling Jumbo	CNP 182	2	123	50%	Underground Plant	10			113
Hydraulic Breaker	CNP 028	2	122	50%	Underground Plant	10			112
Grout pump	OCNP 017	1	105	20%	Underground Plant	10			88
Dump trucks	CNP 067	4	117	50%	Underground Plant	10			110
Dump trucks	CNP 067	6	117	30%				120	
Generator	CNP 102	2	100	100%	Underground Plant	10			93
Fork lift truck	BS C7, 93	1	104	75%			103		
Loader	CNP 081	1	112	50%	Underground Plant	10			99
Air compressor, air flow >30mm <sup>3</sup> /min	CNP 003	2	104	75%			106	106	106
Alimak hoist	BS C7, 97	1	101	20%			94	94	94
Shotcrete pump	OCNP 007	2	109	20%	Underground Plant	10			95
Welding plant	EIA ref. 1	2	78	20%	Underground Plant	10			64
Pump, submersible	CNP 283	4	85	100%			91	91	91
<b>Total</b>							<b>113</b>	<b>120</b>	<b>118</b>
<b>Max</b>							<b>120</b>		

27 TBM Removal

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Tracked Crane	BS C7, 105	1	108	50%				105
Mobile Crane	CNP 048	2	112	50%			112	
Air compressor, air flow >30mm <sup>3</sup> /min	CNP 003	1	104	30%			99	99
Low loader vehicle	OCNP 010	1	105	30%			100	
Alimak hoist	BS C7, 97	1	101	20%			94	94
<b>Total</b>							<b>113</b>	<b>106</b>
<b>Max</b>							<b>113</b>	

28 TBM Removal

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Tracked Crane	BS C7, 105	1	108	75%				107
Mobile Crane	CNP 048	2	112	75%			114	
Air compressor, air flow >30mm <sup>3</sup> /min	CNP 003	1	104	75%			103	103
Low loader vehicle	OCNP 010	1	105	75%			104	
Alimak hoist	BS C7, 97	1	101	75%			100	100
<b>Total</b>							<b>115</b>	<b>109</b>
<b>Max</b>							<b>115</b>	

29 Emergency Access Point Structure Construction

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tower crane	CNP 049	1	95	50%			92			
Mobile crane	CNP 048	1	112	30%				107		
Concrete pump	OCNP 007	2	109	75%					111	
Poker, vibratory, hand-held (electric)	OCNP 024	4	94	50%						97
Generator, silenced	CNP 102	2	100	50%					100	100
Concrete Delivery Trucks	CNP 044	2	109	30%					107	
<b>Total</b>							<b>92</b>	<b>107</b>	<b>112</b>	<b>102</b>
<b>Max</b>							<b>112</b>			

30 Operation of access road

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref. (1)	No. of Items	SWL/Item dB(A)
Dump Truck	CNP 067	12	117

Remark:

(1) EIA Ref. 1 - SWL of Welding Plant refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).

EIA Ref. 2 - SWL of narrow gauge trains refer to approved EIA Report of Drainage Improvement in Northern Hong Kong Island - Hong Kong West Drainage Tunnel (AEIAR-099/2006)

BS - British Standard BS5228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites

OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWL.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWL.pdf))

Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)

Works Area D: Shek Kong Stabling Sidings - TBM Driving to the North (SSS)

31 Possession of site

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Excavator	CNP 081	1	112	75%			111		
Breaker, mini-robot mounted	CNP 031	1	115	30%			110		
Mobile Crane	CNP 048	1	112	30%				107	
Dump Trucks	CNP 067	4	117	30%				118	
Concrete lorry mixer	CNP 044	2	109	30%					107
Poker to Poker, vibratory, hand-held (electric)	OCNP 024	2	94	50%					94
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	50%					104
Handheld breaker	CNP 024	2	108	30%					106
Generator, silenced	CNP 102	1	100	75%					99
<b>Total</b>							<b>113</b>	<b>118</b>	<b>111</b>
<b>Max</b>							<b>118</b>		

32 Diaphragm wall

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes with grab	BS C7, 105	6	108	30%			111		
Bentonite Plant	CNP 162	1	105	75%			104		
Pump, submersible	CNP 283	3	85	100%			90	90	90
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	50%			104		
Road Trucks	CNP 067	6	117	30%					120
Concrete lorry mixer	CNP 044	4	109	30%				110	
Desilting Plant	CNP 283	1	85	100%			85		
<b>Total</b>							<b>112</b>	<b>110</b>	<b>120</b>
<b>Max</b>							<b>120</b>		

33 Bulk excavation/fill - soft

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	2	108	30%			106			
Excavator	CNP 081	3	112	75%	Underground Plant	5	111			
Ventilation fans	CNP 241	2	108	100%			111	111	111	111
Mobile generator	CNP 103	2	95	75%				97		
Dump Trucks	CNP 067	8	117	30%					121	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	50%				104		104
Mobile Crane	CNP 048	4	112	30%				113		
<b>Total</b>							<b>114</b>	<b>115</b>	<b>121</b>	<b>112</b>
<b>Max</b>							<b>121</b>			

34 Bulk excavation - rock

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	2	108	30%			106				
Drilling Rigs	OCNP 014	2	110	50%				110			
Hydraulic Breaker	CNP 028	3	122	50%	Underground Plant	5		119			
Ventilation fans	CNP 241	2	108	100%	Underground Plant	5	106	106	106	106	106
Mobile generator	CNP 103	1	95	75%					94		
Road Trucks	CNP 067	8	117	30%					121		
Shotcrete pump	OCNP 007	2	109	10%	Underground Plant	5					97
Grout pump	OCNP 017	2	105	10%	Underground Plant	5					93
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	75%						106	
Mobile Crane	CNP 048	4	112	30%						113	
Excavator	CNP 081	4	112	75%			117				
<b>Total</b>							<b>117</b>	<b>120</b>	<b>121</b>	<b>114</b>	<b>107</b>
<b>Max</b>							<b>121</b>				



**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area D: Shek Kong Stabling Sidings - TBM Driving to the North (SSS)**

**35 Concrete works**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	2	108	20%				104	
Concrete Delivery Trucks	CNP 044	4	109	30%			110		
Poker, vibratory, hand-held (electric)	OCNP 024	4	94	50%	Underground Plant	5			92
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	50%			104		
Concrete pump	OCNP 007	2	109	75%				111	
Ventilation fans	CNP 241	2	108	100%			111	111	111
Allimak hoist	BS C7, 97	2	101	20%	Underground Plant	5			92
Mobile generator	CNP 103	1	95	75%			94		94
<b>Total</b>							<b>116</b>	<b>112</b>	<b>111</b>
<b>Max</b>							<b>116</b>		

**36 TBM erection**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked Crane	BS C7, 105	1	108	20%				101	
Mobile Crane	CNP 048	2	112	50%			112		
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	30%			102		
Ventilation fans	CNP 241	2	108	100%			111		
Allimak hoist	BS C7, 97	2	101	20%	Underground Plant	10			87
Welding plant	EIA ref. 1	2	78	75%	Underground Plant	10			70
Articulated truck & flat bed	BS C11, 49	1	102	20%			95		
Mobile generator	CNP 103	1	95	75%	Underground Plant	10			84
<b>Total</b>							<b>115</b>	<b>101</b>	<b>89</b>
<b>Max</b>							<b>115</b>		

**37 TBM driving**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Ventilation fans	CNP 241	2	108	100%			111	111	111	111
Tower crane	CNP 049	1	95	30%			90			
Bentonite Plant	CNP 162	1	105	100%						105
Pump, submersible	CNP 283	1	85	100%						85
Backhoe excavator	CNP 081	1	112	50%				109		
Fork lift truck	BS C7, 93	1	104	10%			94			
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	100%			107			
Allimak hoist	BS C7, 97	1	101	20%						94
Narrow gauge trains	EIA ref. 2	1	105	10%	Underground Plant	10				85
Dump Truck	CNP 067	8	117	30%					121	
<b>Total</b>							<b>113</b>	<b>121</b>	<b>111</b>	<b>112</b>
<b>Max</b>							<b>121</b>			

**38 Ventilation structure construction**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Mobile crane	CNP 048	1	112	50%			109		
Concrete pump	OCNP 007	2	109	75%				111	
Poker to Poker, vibratory, hand-held (electric)	OCNP 024	4	94	50%	Underground Plant	10			87
Generator, silenced	CNP 102	2	100	50%				100	100
Concrete Lorry Mixer	CNP 044	4	109	30%				110	
<b>Total</b>							<b>109</b>	<b>114</b>	<b>100</b>
<b>Max</b>							<b>114</b>		

**39 Access road construction**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref. <sup>(1)</sup>	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Mini Backhoe	OCNP 015	1	94	75%				93		
Breaker, mini-robot mounted	CNP 031	1	115	30%					110	
Trucks	CNP 067	1	117	30%				112		
Concrete Lorry Mixer	CNP 044	1	109	30%			104			
Poker, vibratory, hand-held (electric)	OCNP 024	1	94	50%						91
Generator, super silenced, 70dB(A) at 7m	CNP 103	1	95	75%						94
<b>Total</b>							<b>104</b>	<b>112</b>	<b>110</b>	<b>96</b>
<b>Max</b>							<b>112</b>			

**40 Nursery**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Backhoe (mini)	CNP 081	1	112	75%			111
Lorry	OCNP 020	1	101	30%			96
<b>Total</b>							<b>111</b>

**41 Operation of access road**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref. <sup>(1)</sup>	No. of Items	SWL/Item dB(A)
Dump Truck	CNP 067	16	117

**Remark:**

- (1) EIA Ref. 1 - SWL of Welding Plant refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).
- EIA Ref. 2 - SWL of narrow gauge trains refer to approved EIA Report of Drainage Improvement in Northern Hong Kong Island - Hong Kong West Drainage Tunnel (AEIAR-099/2006)
- BS - British Standard BS5228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites
- OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWL.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWL.pdf))

Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)

Works Area D, Shek Kong Stabling Sidings - TBM Driving to the South (SSS)

42 Possession of site and access road construction

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Excavator	CNP 081	1	112	75%			111		
Breaker, mini-robot mounted	CNP 031	1	115	30%			110		
Mobile Crane	CNP 048	1	112	30%				107	
Trucks	CNP 067	4	117	30%				118	
Concrete lorry mixer	CNP 044	2	109	30%					107
Poker, vibratory, hand-held (electric)	OCNP 024	2	94	50%					94
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	50%					104
Handheld breaker	CNP 024	2	108	30%					106
Generator, silenced	CNP 102	1	100	75%					99
<b>Total</b>							<b>113</b>	<b>118</b>	<b>111</b>
<b>Max</b>							<b>118</b>		

43 Diaphragm wall

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes with grab	BS C7, 105	6	108	30%			111		
Bentonite Plant	CNP 162	1	105	75%			104		
Pump, submersible	CNP 283	4	85	100%			91	91	91
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	75%			106		
Dump Trucks	CNP 067	6	117	30%					120
Concrete lorry mixer	CNP 044	4	109	30%				110	
Desilting Plant	CNP 283	1	85	75%			84		
<b>Total</b>							<b>112</b>	<b>110</b>	<b>120</b>
<b>Max</b>							<b>120</b>		

44 Bulk excavation/fill - soft

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	2	108	30%			106			
Excavator	CNP 081	3	112	75%	Underground Plant	5	111			
Ventilation fans	CNP 241	2	108	100%			111	111	111	111
Mobile generator	CNP 103	2	95	75%				97		
Dump Trucks	CNP 067	8	117	30%					121	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	50%						104
Mobile Crane	CNP 048	4	112	30%				113		
<b>Total</b>							<b>114</b>	<b>115</b>	<b>121</b>	<b>112</b>
<b>Max</b>							<b>121</b>			

45 Bulk excavation - rock

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	2	108	30%			106				
Drilling Rigs	OCNP 014	2	110	50%				110			
Hydraulic Breaker	CNP 028	3	122	50%	Underground Plant	5		119			
Ventilation fans	CNP 241	2	108	100%	Underground Plant	5	106	106	106	106	106
Mobile generator	CNP 103	1	95	75%					94		
Road Trucks	CNP 067	8	117	30%					121		
Shotcrete pump	OCNP 007	2	109	10%	Underground Plant	5					97
Grout pump	OCNP 017	2	105	10%	Underground Plant	5					93
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	75%						106	
Mobile Crane	CNP 048	4	112	30%						113	
Excavator	CNP 081	4	112	75%			117				
<b>Total</b>							<b>117</b>	<b>120</b>	<b>121</b>	<b>114</b>	<b>107</b>
<b>Max</b>							<b>121</b>				

**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area D: Shek Kong Stabling Sidings - TBM Driving to the South (SSS)**

**46 Concrete works**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	2	108	20%				104	
Concrete lorry mixer	CNP 044	4	109	30%			110		
Poker, vibratory, hand-held (electric)	OCNP 024	4	94	50%	Underground Plant	5			92
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	50%			104		
Concrete pump	OCNP 007	2	109	75%				111	
Ventilation fans	CNP 241	2	108	100%			111	111	111
Alimak hoist	BS C7, 97	2	101	20%	Underground Plant	5			92
Mobile generator	CNP 103	1	95	75%			94		94
<b>Total</b>							<b>116</b>	<b>112</b>	<b>111</b>
<b>Max</b>							<b>116</b>		

**47 TBM erection**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Mobile Crane	CNP 048	2	112	50%			112	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	30%			102	102
Ventilation fans	CNP 241	2	108	100%			111	111
Alimak hoist	BS C7, 97	2	101	20%	Underground Plant	10		87
Welding plant	EIA ref. 1	2	78	75%	Underground Plant	10		70
Articulated truck & flat bed	BS C11, 49	1	102	20%			95	
Mobile generator	CNP 103	1	95	75%	Underground Plant	10		84
<b>Total</b>							<b>115</b>	<b>112</b>
<b>Max</b>							<b>115</b>	

**48 TBM driving**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Ventilation fans	CNP 241	2	108	100%			111	111	111	111
Tower crane	CNP 049	1	95	30%			90			
Bentonite Plant	CNP 162	1	105	100%					105	
Pump, submersible	CNP 283	1	85	100%			85	85	85	85
Front end loader	CNP 081	1	112	50%					109	
Fork lift truck	BS C7, 93	1	104	10%			94			
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	100%			107	107	107	107
Alimak hoist	BS C7, 97	1	101	20%			94	94	94	94
Narrow gauge trains	EIA ref. 2	1	105	10%	Underground Plant	10				85
Road Trucks	CNP 067	8	117	30%					121	
<b>Total</b>							<b>113</b>	<b>122</b>	<b>113</b>	<b>113</b>
<b>Max</b>							<b>122</b>			

**49 Ventilation structure construction**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Mobile crane	CNP 048	1	112	50%			109		
Concrete pump	OCNP 007	2	109	75%				111	
Poker, vibratory, hand-held (electric)	OCNP 024	4	94	50%	Underground Plant	10			87
Generator, silenced	CNP 102	2	100	50%				100	100
Concrete Lorry Mixer	CNP 044	4	109	30%				110	
<b>Total</b>							<b>109</b>	<b>114</b>	<b>100</b>
<b>Max</b>							<b>114</b>		

**50 Operation of access road**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref. <sup>(1)</sup>	No. of Items	SWL/Item dB(A)
Dump Truck	CNP 067	16	117

**Remark:**

- (1) EIA Ref. 1 - SWL of Welding Plant refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).
- EIA Ref. 2 - SWL of narrow gauge trains refer to approved EIA Report of Drainage Improvement in Northern Hong Kong Island - Hong Kong West Drainage Tunnel (AEIAR-099/2006)
- BS - British Standard BSS228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites
- OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWLE.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLE.pdf))

**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area D: Shek Kong Stabling Sidings - Main Stabling & ERS (SSS)**

**51 Possession of site**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Backhoe	CNP 081	2	112	75%			114		
Truck	CNP 067	4	117	30%				118	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	3	104	50%					106
Handheld breaker	CNP 024	3	108	50%					110
<b>Total</b>							<b>114</b>	<b>118</b>	<b>111</b>
<b>Max</b>							<b>118</b>		

**52 Diaphragm wall**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes with grab	BS C7, 105	6	108	30%			111		
Bentonite Plant	CNP 162	1	105	75%			104		
Pump, submersible	CNP 283	4	85	100%			91	91	91
Dump Trucks	CNP 067	6	117	30%					120
Concrete lorry mixer	CNP 044	4	109	30%				110	
<b>Total</b>							<b>111</b>	<b>110</b>	<b>120</b>
<b>Max</b>							<b>120</b>		

**53 Piling**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Piling Rig	BS C11/2	4	112	75%			117	
Tracked cranes	BS C7, 105	2	108	30%				106
Light goods vehicle, gross vehicle weight < 5.5 tonne	OCNP 020	1	101	30%				96
Dumpers	CNP 066	1	106	30%				101
Concrete lorry mixer	CNP 044	1	109	30%				104
<b>Total</b>							<b>117</b>	<b>109</b>
<b>Max</b>							<b>117</b>	

**54 Bulk excavation/fill - soft (include river training)**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Excavator	CNP 081	3	112	75%	Underground Plant	5	111			
Dump trucks	CNP 067	8	117	30%						121
Bulldozer	CNP 030	2	115	50%				115		
Roller compactor	CNP 185	2	108	20%					104	
Graders	CNP 104	1	113	20%					108	
Mobile Crane	CNP 048	4	112	30%			113			
<b>Total</b>							<b>115</b>	<b>115</b>	<b>108</b>	<b>121</b>
<b>Max</b>							<b>121</b>			

**55 Bulk excavation - rock**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Drilling Rigs	OCNP 014	2	110	50%	Underground Plant	5		105	
Rippers	OCNP 032	1	105	75%	Underground Plant	5		99	
Hydraulic Breakers	CNP 028	2	122	75%	Underground Plant	5		119	
Dump Trucks	CNP 067	6	117	30%			120		
Mobile generator	CNP 103	1	95	75%					94
Mobile Crane	CNP 048	4	112	30%					113
Excavator	CNP 081	4	112	75%					117
<b>Total</b>							<b>120</b>	<b>119</b>	<b>118</b>
<b>Max</b>							<b>120</b>		

**56 Structural Steel Erection**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Tracked cranes	BS C7, 105	2	108	50%			108
Delivery Trucks	CNP 044	2	109	30%			107
<b>Total</b>							<b>110</b>

**57 Ventilation Building and Emergency Vehicular Access Construction**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	2	108	30%			106	
Concrete lorry mixer	CNP 044	4	109	30%				110
Poker, vibratory, hand-held (electric)	OCNP 024	4	94	50%				97
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	4	104	75%				109
<b>Total</b>							<b>106</b>	<b>112</b>
<b>Max</b>							<b>112</b>	

**58 Operation of access road**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref. <sup>(1)</sup>	No. of Items	SWL/Item dB(A)
Dump Truck	CNP 067	16	117

**Remark:**

- (1) EIA Ref. 1 - SWL of Welding Plant refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).
- EIA Ref. 2 - SWL of narrow gauge trains refer to approved EIA Report of Drainage Improvement in Northern Hong Kong Island - Hong Kong West Drainage Tunnel (AEIAR-099/2006)
- BS - British Standard BSS228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites
- OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidancefiles/OtherSWLe.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidancefiles/OtherSWLe.pdf))

**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area E: Tse Uk Tsuen Construction Shaft**

**59 Possession of site and access road construction**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Excavator	CNP 081	1	112	75%			111		
Breaker, mini-robot mounted	CNP 031	1	115	75%			114		
Mobile Crane	CNP 048	1	112	75%				111	
Trucks	CNP 067	2	117	75%				119	
Concrete lorry mixer	CNP 044	2	109	75%					111
Poker, vibratory, hand-held (electric)	OCNP 024	2	94	75%					96
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	75%					106
Handheld breaker	CNP 024	2	108	75%					110
Generator, silenced	CNP 102	1	100	75%					99
<b>Total</b>							<b>116</b>	<b>119</b>	<b>114</b>
<b>Max</b>							<b>119</b>		

**60 Sheet Pile Wall**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Piling, vibratory hammer	OCNP 023	1	115	75%			114		
Tracked cranes	BS C7.105	1	108	75%				107	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	75%			103		
Road Trucks	CNP 067	2	117	75%				119	
Concrete lorry mixer	CNP 044	2	109	75%				111	
<b>Total</b>							<b>116</b>	<b>119</b>	<b>119</b>
<b>Max</b>							<b>119</b>		

**61 Bulk Excavation/Fill - Soft**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7.105	1	108	75%			107		
Excavator	CNP 081	1	112	75%	Underground Plant	5			106
Ventilation fans	CNP 241	1	108	75%			107	107	107
Mobile generator	CNP 103	1	95	75%			94		
Road Trucks	CNP 067	3	117	75%				121	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	75%			103		
<b>Total</b>							<b>111</b>	<b>121</b>	<b>109</b>
<b>Max</b>							<b>121</b>		

**62 Bulk excavation - Rock**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7.105	1	108	75%			107		
Drilling Rigs	OCNP 014	1	110	75%					109
Hydraulic Breaker	CNP 028	1	122	75%	Underground Plant	5			116
Ventilation fans	CNP 241	1	108	75%	Underground Plant	5	102	102	102
Mobile generator	CNP 103	1	95	75%			94		
Road Trucks	CNP 067	3	117	75%				121	
Shotcrete pump	OCNP 007	1	109	75%	Underground Plant	5			103
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	75%			103		
<b>Total</b>							<b>109</b>	<b>121</b>	<b>117</b>
<b>Max</b>							<b>121</b>		

**63 TBM Removal**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Mobile Crane	CNP 048	2	112	50%			112	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	50%			101	
Low loader vehicle	OCNP 010	1	105	30%			100	
<b>Total</b>							<b>113</b>	

**64 TBM Removal**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Mobile Crane	CNP 048	2	112	50%			112	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	50%			101	
Low loader vehicle	OCNP 010	1	105	30%			100	
<b>Total</b>							<b>113</b>	

**65 Backfill**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Front end loader	CNP 081	1	112	50%				109
Road Truck	CNP 067	5	117	30%			119	
Roller compactor	CNP 185	1	108	50%				105
<b>Total</b>							<b>119</b>	<b>110</b>
<b>Max</b>							<b>119</b>	

**66 Operation of access road**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref. <sup>(1)</sup>	No. of Items	SWL/Item dB(A)
Dump Truck	CNP 067	6	117

**Remark:**

- (1) EIA Ref. 1 - SWL of Welding Plant refer to the approved EIA Report of Shaung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).
- EIA Ref. 2 - SWL of narrow gauge trains refer to approved EIA Report of Drainage Improvement in Northern Hong Kong Island - Hong Kong West Drainage Tunnel (AEIAR-099/2006)
- BS - British Standard BS5228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites
- OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWLe.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf))

**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area F: Pat Heung Ventilation Building (PHV)**

**67 Possession of site and access road construction**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Excavator	CNP 081	2	112	75%			114		
Breaker, mini-robot mounted	CNP 031	2	115	30%			113		
Mobile Crane	CNP 048	1	112	30%				107	
Trucks	CNP 067	4	117	30%				118	
Concrete lorry mixer	CNP 044	2	109	30%					107
Poker, vibratory, hand-held (electric)	OCNP 024	2	94	50%					94
Air compressor, air flow >30m³/min	CNP 003	2	104	50%					104
Handheld breaker	CNP 024	2	108	30%					106
Generator, silenced	CNP 102	1	100	75%					99
<b>Total</b>							<b>116</b>	<b>118</b>	<b>111</b>
<b>Max</b>							<b>118</b>		

**68 Tunnel Portal**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Drilling Jumbo	CNP 182	1	123	50%				120			
Breaker, mini-robot mounted	CNP 031	1	115	50%			112				
Grout pump	OCNP 017	1	105	30%			100				
Generator, silenced	CNP 102	1	100	75%			99				
Loader	CNP 081	1	112	75%			111				
Air compressor, air flow >30m³/min	CNP 003	2	104	50%			104				
Road Trucks	CNP 067	2	117	30%					115		
Concrete lorry mixer	CNP 044	2	109	30%			107				
Piling rig	BS C 11/2	1	112	75%						111	
Mobile crane	CNP 048	1	112	20%							105
<b>Total</b>							<b>116</b>	<b>120</b>	<b>115</b>	<b>111</b>	<b>105</b>
<b>Max</b>							<b>120</b>				

**69 Drill & Blast Tunneling**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Ventilation fans	CNP 241	2	108	100%			111	111	111
Drilling Jumbo	CNP 182	2	123	50%				123	
Hydraulic Breaker	CNP 028	2	122	50%	Underground Plant	10		112	
Grout pump	OCNP 017	1	105	20%	Underground Plant	10		88	
Road Trucks	CNP 067	12	117	30%	Underground Plant	10			113
Generator, silenced	CNP 102	2	100	100%			103		
Fork lift truck	BS C7, 93	2	104	50%	Underground Plant	10		94	
Loader	CNP 081	2	112	50%	Underground Plant	10		102	
Air compressor, air flow >30m³/min	CNP 003	2	104	75%			106		
Shotcrete pump	OCNP 007	2	109	20%	Underground Plant	10		95	
Welding plant	EIA ref. 1	2	78	20%	Underground Plant	10		64	
<b>Total</b>							<b>113</b>	<b>124</b>	<b>115</b>
<b>Max</b>							<b>124</b>		

**70 Ventilation Building and Emergency Vehicular Access Construction**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tower crane	CNP 049	1	95	50%			92				
Mobile crane	CNP 048	1	112	20%				105			
Concrete pump	OCNP 007	2	109	75%					111		
Poker, vibratory, hand-held (electric)	OCNP 024	4	94	50%						97	
Generator, silenced	CNP 102	2	100	50%					100	100	
Concrete Delivery Trucks	CNP 044	4	109	30%					110		
Air compressor, air flow >30m³/min	CNP 003	2	104	75%							106
<b>Total</b>							<b>92</b>	<b>105</b>	<b>114</b>	<b>102</b>	<b>106</b>
<b>Max</b>							<b>114</b>				

**71 Operation of access road**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref. <sup>(1)</sup>	No. of Items	SWL/Item dB(A)
Dump Truck	CNP 067	24	117

Remark:

(1) EIA Ref. 1 - SWL of Welding Plant refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).

EIA Ref. 2 - SWL of narrow gauge trains refer to approved EIA Report of Drainage Improvement in Northern Hong Kong Island - Hong Kong West Drainage Tunnel (AEIAR-099/2006)

BS - British Standard BSS228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites

OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWL.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWL.pdf))

**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area G: Shing Mun Ventilation Building (SMV)**

**72 Possession of site**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Mini Backhoe	OCNP 015	1	94	75%			93		
Mobile Crane	CNP 048	1	112	10%				102	
Trucks	CNP 067	2	117	30%				115	
Concrete lorry mixer	CNP 044	1	109	30%					104
Poker, vibratory, hand-held (electric)	OCNP 024	2	94	50%					94
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	50%					101
Handheld breaker	CNP 024	1	108	30%					103
Generator, silenced	CNP 102	1	100	75%					99
<b>Total</b>							<b>93</b>	<b>115</b>	<b>108</b>
<b>Max</b>							<b>115</b>		

**73 shaft excavation**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	1	108	50%			105				
Drilling Rig	OCNP 014	1	110	50%	Underground Plant	5					102
Breaker, mini-robot mounted	CNP 031	2	115	50%	Underground Plant	5		110			
Grout pump	OCNP 017	1	105	20%	Underground Plant	5		93			
Generator, silenced	CNP 102	1	100	75%	Underground Plant	5		94			
Excavator	CNP 081	1	112	50%	Underground Plant	5		104			
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	50%					104		
Road Trucks	CNP 067	3	117	30%						117	
<b>Total</b>							<b>105</b>	<b>111</b>	<b>104</b>	<b>117</b>	<b>102</b>
<b>Max</b>							<b>117</b>				

**74 shaft lining**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	1	108	50%			105		
Concrete lorry mixer	CNP 044	2	109	30%				107	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	30%					99
Poker, vibratory, hand-held (electric)	OCNP 024	4	94	50%					97
<b>Total</b>							<b>105</b>	<b>107</b>	<b>101</b>
<b>Max</b>							<b>107</b>		

**75 Ventilation building construction**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Tower crane	CNP 049	1	95	50%			92	
Concrete pump	OCNP 007	1	109	75%			108	
Poker, vibratory, hand-held (electric)	OCNP 024	4	94	50%			97	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	50%			101	
Concrete Delivery Trucks	CNP 044	2	109	30%				107
<b>Total</b>							<b>109</b>	<b>107</b>
<b>Max</b>							<b>109</b>	

**Remark:**

- (1) EIA Ref. 1 - SWL of Welding Plant refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).
- EIA Ref. 2 - SWL of narrow gauge trains refer to approved EIA Report of Drainage Improvement in Northern Hong Kong Island - Hong Kong West Drainage Tunnel (AEIAR-099/2006)
- BS - British Standard BSS228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites
- OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWLe.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf))

Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)

Works Area H: Shek Yam Construction Shaft

76 Possession of site

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Excavator	CNP 081	1	112	75%			111
Excavator with breaker	CNP 081	1	112	30%			107
Mobile Crane	CNP 048	1	112	30%			107
Trucks	CNP 067	2	117	30%			115
Concrete lorry mixer	CNP 044	2	109	30%			107
Poker, vibratory, hand-held (electric)	OCNP 024	2	94	50%			94
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	50%			101
Generator, silenced	CNP 102	1	100	75%			99
<b>Total</b>							<b>118</b>

77 Tunnel Portal

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Drilling Jumbo	CNP 182	1	123	50%			120				
Breaker, mini-robot mounted	CNP 031	1	115	50%			112				
Grout pump	OCNP 017	1	105	20%			98				
Generator, silenced	CNP 102	1	100	75%			99				
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	50%			104				
Trucks	CNP 067	2	117	30%				115			
Concrete lorry mixer	CNP 044	2	109	30%					107		
Piling rig	BS C11/2	1	112	75%						111	
Mobile crane	CNP 048	1	112	20%							105
<b>Total</b>							<b>121</b>	<b>115</b>	<b>107</b>	<b>111</b>	<b>105</b>
<b>Max</b>							<b>121</b>				

78 Drill & Blast Tunnelling

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Ventilation fans	CNP 241	2	108	100%			111	111	111
Drilling Jumbo	CNP 182	2	123	50%	Underground Plant	10		113	
Excavator	CNP 081	2	112	50%	Underground Plant	10		102	
Grout pump	OCNP 017	1	105	20%	Underground Plant	10		88	
Trucks	CNP 067	2	117	50%	Underground Plant	10		107	
Trucks	CNP 067	6	117	30%			120		
Generator	CNP 102	2	100	100%	Underground Plant	10		93	
Fork lift truck	BS C7, 93	1	104	50%			101		
Loader	CNP 081	1	112	50%	Underground Plant	10		99	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	75%			106	106	106
Shotcrete pump	OCNP 007	2	109	20%	Underground Plant	10		95	
Welding plant	EIA ref. 1	2	78	20%	Underground Plant	10		64	
Concrete lorry mixer	CNP 044	4	109	30%					110
Concret pump	OCNP 007	1	109	75%					108
<b>Total</b>							<b>120</b>	<b>116</b>	<b>115</b>
<b>Max</b>							<b>120</b>		

Remark:

- (1) EIA Ref. 1 - SWL of Welding Plant refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).  
 EIA Ref. 2 - SWL of narrow gauge trains refer to approved EIA Report of Drainage Improvement in Northern Hong Kong Island - Hong Kong West Drainage Tunnel (AEIAR-099/2006)  
 BS - British Standard BSS228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites  
 OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidancefiles/OtherSWLe.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidancefiles/OtherSWLe.pdf))



**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area I: Shek Yam Works Area**

**79 Possession of site**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Excavator	CNP 081	1	112	75%			111		
Breaker, mini-robot mounted	CNP 031	1	115	30%			110		
Mobile Crane	CNP 048	1	112	30%				107	
Trucks	CNP 067	2	117	30%				115	
Concrete lorry mixer	CNP 044	1	109	30%					104
Poker, vibratory, hand-held (electric)	OCNP 024	2	94	50%					94
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	50%					101
Handheld breaker	CNP 024	1	108	30%					103
Generator, silenced	CNP 102	1	100	75%					99
<b>Total</b>							<b>113</b>	<b>115</b>	<b>108</b>
<b>Max</b>							<b>115</b>		

**80 Site storage**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Fork lift truck	BS C7, 93	1	104	30%			99
Dump trucks	CNP 067	1	117	30%			112
<b>Total</b>							<b>112</b>

(1) EIA Ref. 1 - SWL of Welding Plant refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).

EIA Ref. 2 - SWL of narrow gauge trains refer to approved EIA Report of Drainage Improvement in Northern Hong Kong Island - Hong Kong West Drainage Tunnel (AEIAR-099/2006)

BS - British Standard BS5228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites

OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWLe.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf))

**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area J: Kwai Chung Ventilation Building (KCV)**

**81 Possession of site**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Excavator	CNP 081	1	112	75%			111
Breaker, mini-robot mounted	CNP 031	1	115	30%			110
Mobile Crane	CNP 048	1	112	30%			107
Trucks	CNP 067	2	117	30%			115
Concrete lorry mixer	CNP 044	2	109	30%			107
Poker, vibratory, hand-held (electric)	OCNP 024	2	94	50%			94
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	50%			101
Handheld breaker	CNP 024	2	108	30%			106
Generator, silenced	CNP 102	1	100	75%			99
<b>Total</b>							<b>118</b>

**82 Tunnel portal**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Drilling Jumbo	CNP 182	1	123	50%			120
Breaker, mini-robot mounted	CNP 031	1	115	50%			112
Grout pump	OCNP 017	1	105	20%			98
Generator	CNP 102	2	100	75%			102
Loader	CNP 067	2	117	30%			115
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	50%			104
Dump trucks	CNP 067	1	117	30%			112
Concrete lorry mixer	CNP 044	1	109	30%			104
<b>Total</b>							<b>122</b>

**83 Drill & Blast Tunnelling**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Ventilation Fans	CNP 241	2	108	100%			111	111	111	111
Drilling Jumbo	CNP 182	2	123	50%	Underground Plant	10		113		
Hydraulic Breaker	CNP 028	2	122	50%	Underground Plant	10		112		
Grout pump	OCNP 017	1	105	20%	Underground Plant	10		88		
Dump trucks	CNP 067	15	117	30%			124			
Generator	CNP 102	2	100	100%	Underground Plant	10		93		
Fork lift truck	BS C7_93	1	104	50%			101			
Loader	CNP 081	1	112	50%	Underground Plant	10		99	99	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	75%			106	106	106	106
Shotcrete pump	OCNP 007	2	109	20%				105		
Welding plant	EIA ref. 1	2	78	20%	Underground Plant	10		64		
Concrete lorry mixer	CNP 044	4	109	30%						110
Concret pump	OCNP 007	1	109	75%	Underground Plant	10				98
<b>Total</b>							<b>124</b>	<b>118</b>	<b>112</b>	<b>114</b>
<b>Max</b>							<b>124</b>			

**84 Ventilation building construction**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Tower crane	CNP 049	1	95	50%			92
Mobile crane	CNP 048	1	112	20%			105
Concrete pump	OCNP 007	2	109	75%			111
Poker, vibratory, hand-held (electric)	OCNP 024	4	94	50%			97
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	50%			104
Concrete Delivery Trucks	CNP 044	2	109	30%			107
<b>Total</b>							<b>114</b>

**Remark:**

- (1) EIA Ref. 1 - SWL of Welding Plant refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).
- EIA Ref. 2 - SWL of narrow gauge trains refer to approved EIA Report of Drainage Improvement in Northern Hong Kong Island - Hong Kong West Drainage Tunnel (AEIAR-099/2006)
- BS - British Standard BS5228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites
- OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWLe.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf))

**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area K: Kwai Chung Works Area**

**85 Possession of site**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Breaker, mini-robot mounted	CNP 031	1	115	75%			114		
Mobile Crane	CNP 048	1	112	30%				107	
Trucks	CNP 067	4	117	30%				118	
Concrete lorry mixer	CNP 044	2	109	30%					107
Forker, vibratory, hand-held (electric)	OCNP 024	2	94	30%					92
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	50%					104
Handheld breaker	CNP 024	2	108	50%					108
Generator, silenced	CNP 102	1	100	75%					99
							<b>Total</b>	<b>114</b>	<b>118</b>
							<b>Max</b>	<b>118</b>	<b>112</b>

**86 Site storage**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	
Fork lift truck	BS C7, 93	1	104	30%			99	
Road Trucks	CNP 067	1	117	30%			112	
							<b>Total</b>	<b>112</b>

**Remark:**

- (1) EIA Ref. 1 - SWL of Welding Plant refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).  
 EIA Ref. 2 - SWL of narrow gauge trains refer to approved EIA Report of Drainage Improvement in Northern Hong Kong Island - Hong Kong West Drainage Tunnel (AEIAR-099/2006)  
 BS - British Standard BS5228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites  
 OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWLe.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf))

**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area L: Mei Lei Road Construction Shaft**

**87 Possession of Site**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	
Excavator	CNP 081	1	112	30%			107				
Mobile Crane	CNP 048	1	112	30%				107			
Trucks	CNP 067	1	117	30%					112		
Generator, silenced	CNP 102	1	100	75%						99	
<b>Total</b>							<b>107</b>	<b>107</b>	<b>112</b>	<b>99</b>	
<b>Max</b>							<b>112</b>				

**88 Shaft Piling**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	
Drilling rig	OCNP 014	1	110	75%			109			
Mobile crane	CNP 048	1	112	20%				105		
Crane lorry	OCNP 022	1	105	20%					98	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	75%			103			
<b>Total</b>							<b>110</b>	<b>105</b>	<b>98</b>	
<b>Max</b>							<b>110</b>			

**89 Excavate Shaft**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Overhead gantry crane	CNP 049	1	95	30%			90				
Breaker, mini-robot mounted	CNP 031	1	115	50%	Underground Plant	5				107	
Grout pump	OCNP 017	1	105	20%	Underground Plant	5				93	
Generator, silenced	CNP 102	1	100	75%	Underground Plant	5				94	
Backhoe	CNP 081	1	112	50%				109			
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	75%				103			
Road Trucks	CNP 067	1	117	30%			112				
Concrete lorry mixer	CNP 044	1	109	30%				104			
Road Trucks	CNP 067	1	117	10%						107	
Concrete lorry mixer	CNP 044	1	109	10%							99
<b>Total</b>							<b>112</b>	<b>111</b>	<b>107</b>	<b>107</b>	<b>99</b>
<b>Max</b>							<b>112</b>				

**90 Drill & Blast Tunneling**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Mobile Crane	CNP 048	1	112	30%			107		
Ventilation fans	CNP 241	1	108	100%			108	108	108
Drilling Jumbo	CNP 162	1	123	50%	Underground Plant	10			110
Breaker, mini-robot mounted	CNP 031	1	115	50%	Underground Plant	10			102
Grout pump	OCNP 017	1	105	20%	Underground Plant	10			88
Dump trucks	CNP 067	2	117	50%	Underground Plant	10			107
Generator	CNP 102	1	100	100%	Underground Plant	10			90
Loader	CNP 081	1	112	50%	Underground Plant	10			99
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	75%	Underground Plant	10		96	96
Alimak hoist	BS C7, 97	1	101	20%				94	
Shotcrete pump	OCNP 007	1	109	20%	Underground Plant	10			92
Welding plant	EIA ref. 1	2	78	20%	Underground Plant	10			64
<b>Total</b>							<b>110</b>	<b>108</b>	<b>114</b>
<b>Max</b>							<b>114</b>		

**91 TBM Removal**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Mobile Crane	CNP 048	2	112	30%			110		
Low loader vehicle	OCNP 010	1	105	10%				95	
Alimak hoist	BS C7, 97	1	101	20%					94
<b>Total</b>							<b>110</b>	<b>95</b>	<b>94</b>
<b>Max</b>							<b>110</b>		

**92 TBM Removal**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Mobile Crane	CNP 048	2	112	30%			110		
Low loader vehicle	OCNP 010	1	105	10%				95	
Alimak hoist	BS C7, 97	1	101	20%					94
<b>Total</b>							<b>110</b>	<b>95</b>	<b>94</b>
<b>Max</b>							<b>110</b>		

**Remark:**

- (1) EIA Ref. 1 - SWL of Welding Plant refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).
- EIA Ref. 2 - SWL of narrow gauge trains refer to approved EIA Report of Drainage Improvement in Northern Hong Kong Island - Hong Kong West Drainage Tunnel (AEIAR-099/2006)
- BS - British Standard BS5228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites
- OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWLe.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf))

**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area M: Lai Chi Kok Works Area**

**93 Excavate Shaft**

Powered Mechanical Equipment (PME)	TM Ref. / BS / other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	1	108	30%				103	
Breaker, mini-robot mounted	CNP 031	1	115	50%	Underground Plant	5			107
Drilling Rig	OCNP 014	1	110	50%	Underground Plant	5			102
Grout pump	OCNP 017	1	105	20%	Underground Plant	5			93
Generator, silenced	CNP 102	1	100	75%	Underground Plant	5			94
Road Trucks	CNP 067	2	117	30%			115		
Concrete lorry mixer	CNP 044	1	109	30%				104	
Generator, silenced	CNP 102	1	100	75%				99	
<b>Total</b>							<b>115</b>	<b>105</b>	<b>108</b>
<b>Max</b>							<b>115</b>		

**94 Possession of work site**

Powered Mechanical Equipment (PME)	TM Ref. / BS / other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Breaker, mini-robot mounted	CNP 031	1	115	75%			114
Mobile Crane	CNP 048	1	112	30%			107
Trucks	CNP 067	4	117	30%			118
Concrete lorry mixer	CNP 044	2	109	30%			107
Poker, vibratory, hand-held (electric)	OCNP 024	2	94	30%			92
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	50%			104
Handheld breaker	CNP 024	2	108	50%			108
Generator, silenced	CNP 102	1	100	75%			99
<b>Total</b>							<b>120</b>

**95 Storage at work site**

Powered Mechanical Equipment (PME)	TM Ref. / BS / other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Fork lift truck	BS C7, 93	1	104	30%			99
Road Trucks	CNP 067	1	117	30%			112
<b>Total</b>							<b>112</b>

**96 Possession of works area**

Powered Mechanical Equipment (PME)	TM Ref. / BS / other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Breaker, mini-robot mounted	CNP 031	1	115	75%			114
Mobile Crane	CNP 048	1	112	30%			107
Trucks	CNP 067	4	117	30%			118
Concrete lorry mixer	CNP 044	2	109	30%			107
Poker, vibratory, hand-held (electric)	OCNP 024	2	94	30%			92
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	50%			104
Handheld breaker	CNP 024	2	108	50%			108
Generator, silenced	CNP 102	1	100	75%			99
<b>Total</b>							<b>120</b>

**97 Storage at works area**

Powered Mechanical Equipment (PME)	TM Ref. / BS / other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Fork lift truck	BS C7, 93	1	104	30%			99
Road Trucks	CNP 067	1	117	30%			112
<b>Total</b>							<b>112</b>

**98 Remove foundations**

Powered Mechanical Equipment (PME)	TM Ref. / BS / other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Tracked cranes	BS C7, 105	1	108	30%			103
Oscillator & casings	CNP 165	1	115	50%			112
Breaker, mini-robot mounted	CNP 031	1	115	20%			108
Road Trucks	CNP 067	1	117	20%			110
<b>Total</b>							<b>115</b>

**Remark:**

- (1) EIA Ref. 1 - SWL of Welding Plant refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).
- EIA Ref. 2 - SWL of narrow gauge trains refer to approved EIA Report of Drainage Improvement in Northern Hong Kong Island - Hong Kong West Drainage Tunnel (AEIAR-099/2006)
- BS - British Standard BS5228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites
- OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidancefiles/OtherSWLe.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidancefiles/OtherSWLe.pdf))

**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area N, C: Lai Chi Kok Works Area**

**99 Remove superstructure**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Mobile crane	CNP 048	1	112	20%				105	
Saw, Wire	OCNP 033	1	101	80%					100
Road Trucks	CNP 067	1	117	20%			110		
<b>Total</b>							<b>110</b>	<b>105</b>	<b>100</b>
<b>Max</b>							<b>110</b>		

**100 Remove foundations**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Mobile Crane	CNP 048	1	112	30%			107		
Piling rig (bored)	BS C11.2	1	112	50%				108	109
Breaker, mini-robot mounted	CNP 031	1	115	20%					
Road Trucks	CNP 067	1	117	20%			110		
<b>Total</b>							<b>112</b>	<b>108</b>	<b>109</b>
<b>Max</b>							<b>112</b>		

**101 Remove superstructure**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Mobile crane	CNP 048	1	112	20%				105	
Saw, Wire	OCNP 033	1	101	80%					100
Road Trucks	CNP 067	1	117	20%			110		
<b>Total</b>							<b>110</b>	<b>105</b>	<b>100</b>
<b>Max</b>							<b>110</b>		

**102 Remove foundations**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Mobile Crane	CNP 048	1	112	30%			107	
Breaker, mini-robot mounted	CNP 031	1	115	30%				110
Road Trucks	CNP 067	1	117	20%			110	
<b>Total</b>							<b>112</b>	<b>110</b>
<b>Max</b>							<b>112</b>	

**103 Remove superstructure**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Mobile crane	CNP 048	1	112	20%				105	
Saw, Wire	OCNP 033	1	101	80%					100
Road Trucks	CNP 067	1	117	20%			110		
<b>Total</b>							<b>110</b>	<b>105</b>	<b>100</b>
<b>Max</b>							<b>110</b>		

**104 Remove foundations**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Mobile Crane	CNP 048	1	112	30%			107		
Oscillator & casings	CNP 165	1	115	50%				112	
Breaker, mini-robot mounted	CNP 031	1	115	20%					108
Road Trucks	CNP 067	1	117	20%			110		
<b>Total</b>							<b>112</b>	<b>112</b>	<b>108</b>
<b>Max</b>							<b>112</b>		

**105 Reprovisioning of Bridge**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Mobile crane	CNP 048	1	112	30%			107			
Tracked cranes	BS C7.105	1	108	30%				103		
Saw, Wire	OCNP 033	1	101	30%					96	96
Concrete pump	OCNP 007	1	109	75%			108			
Poker, vibratory, hand-held (electric)	OCNP 024	2	94	50%			94			
Generator, silenced	CNP 102	1	100	75%			99			99
Concrete Delivery Trucks	CNP 044	1	109	50%			106			
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	50%					101	
Handheld breaker	CNP 024	1	108	50%					105	
<b>Total</b>							<b>112</b>	<b>108</b>	<b>107</b>	<b>101</b>
<b>Max</b>							<b>112</b>			

Remark:

(1) EIA Ref. 1 - SWL of Welding Plant refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).

EIA Ref. 2 - SWL of narrow gauge trains refer to approved EIA Report of Drainage Improvement in Northern Hong Kong Island - Hong Kong West Drainage Tunnel (AEIAR-099/2006)

BS - British Standard BS5228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites

OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWLe.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf))

Powered Mechanical Equipment (PME) for Different  
Construction Tasks during Normal Daytime Working Hours  
(Unmitigated Scenario)

Works Area P: Nam Cheong Ventilation Building (NCV)

106 Possession of site

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Excavator	CNP 081	1	112	75%			111		
Breaker, mini-robot mounted	CNP 031	1	115	30%			110		
Mobile Crane	CNP 048	1	112	30%				107	
Trucks	CNP 067	2	117	30%				115	
Concrete lorry mixer	CNP 044	2	109	30%					107
Poker, vibratory, hand-held (electric)	OCNP 024	2	94	50%					94
Air compressor, air flow >30m³/min	CNP 003	1	104	50%					101
Handheld breaker	CNP 024	1	108	30%					103
Generator, silenced	CNP 102	1	100	75%					99
<b>Total</b>							<b>113</b>	<b>115</b>	<b>110</b>
<b>Max</b>							<b>115</b>		

107 Diaphragm Wall

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Hydraulic extractor	CNP 163	4	90	75%			95			
Tracked cranes	BS C7, 105	4	108	30%				109		
Bentonite Plant	CNP 162	2	105	75%			107			
Pump, submersible	CNP 283	2	85	100%			88			
Air compressor, air flow >30m³/min	CNP 003	2	104	75%			106			
Generator, silenced	CNP 102	2	100	75%			102			
Road Trucks	CNP 067	5	117	30%					119	
Concrete lorry mixer	CNP 044	5	109	30%						111
<b>Total</b>							<b>110</b>	<b>109</b>	<b>119</b>	<b>111</b>
<b>Max</b>							<b>119</b>			

108 Bulk Excavation/Fill - Soft

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	4	108	30%			109			
Excavator	CNP 081	6	112	75%	Underground Plant	5			114	
Ventilation fans	CNP 241	4	108	100%			114	114	114	114
Mobile generator	CNP 103	2	95	75%						97
Road Trucks	CNP 067	12	117	30%				123		
Air compressor, air flow >30m³/min	CNP 003	4	104	50%			107			
Mobile crane	CNP 048	4	112	50%						115
<b>Total</b>							<b>116</b>	<b>123</b>	<b>117</b>	<b>118</b>
<b>Max</b>							<b>123</b>			

109 Concrete Works

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tower crane	CNP 049	3	95	30%				95		
Concrete Delivery Trucks	CNP 044	6	109	30%			112			
Poker, vibratory, hand-held (electric)	OCNP 024	8	94	50%	Underground Plant	5	95			
Air compressor, air flow >30m³/min	CNP 003	3	104	50%						106
Concrete pump	OCNP 007	2	109	75%			111			
Ventilation fans	CNP 241	4	108	100%			114	114	114	114
Alimak hoist	BS C7, 97	2	101	20%	Underground Plant	5	92			
Mobile generator	CNP 103	2	95	75%			97		97	
Mobile crane	CNP 048	2	112	30%					110	
<b>Total</b>							<b>117</b>	<b>114</b>	<b>115</b>	<b>115</b>
<b>Max</b>							<b>117</b>			

110 TBM Erection

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Mobile Crane	CNP 048	2	112	50%			112	
Air compressor, air flow >30m³/min	CNP 003	2	104	30%			102	102
Ventilations fans	CNP 241	2	108	100%			111	111
Alimak hoist	BS C7, 97	2	101	20%	Underground Plant	10	87	87
Welding plant	EIA ref. 1	2	78	75%	Underground Plant	10	70	70
Articulated truck & flat bed	BS C11, 49	1	102	20%			95	
Mobile generator	CNP 103	1	95	75%	Underground Plant	10	84	
<b>Total</b>							<b>115</b>	<b>112</b>
<b>Max</b>							<b>115</b>	

111 TBM Driving

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Ventilation fans	CNP 241	4	108	100%			114	114	114	114
Overhead gantry crane	CNP 049	3	95	30%			95			
Bentonite Plant	CNP 162	2	105	100%						108
Pump, submersible	CNP 283	2	85	100%			88	88	88	88
Excavator	CNP 081	2	112	50%				112		
Fork lift truck	BS C7, 93	2	104	10%			97			
Air compressor, air flow >30m³/min	CNP 003	4	104	100%			110	110	110	110
Alimak hoist	BS C7, 97	2	101	20%			97	97	97	97
Narrow gauge trains	EIA ref. 2	3	105	10%	Underground Plant	10			90	
Road Trucks	CNP 067	12	117	30%				123		
Desilting Plant	CNP 283	1	85	100%			85	85		
<b>Total</b>							<b>116</b>	<b>124</b>	<b>116</b>	<b>116</b>
<b>Max</b>							<b>124</b>			

**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area P: Nam Cheong Ventilation Building (NCV)**

**112 Ventilation building construction**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tower crane	CNP 049	1	95	50%			92			
Mobile crane	CNP 048	1	112	20%				105		
Concrete pump	OCNP 007	2	109	75%					111	
Poker, vibratory, hand-held (electric)	OCNP 024	4	94	50%						97
Generator, silenced	CNP 102	2	100	50%					100	100
Concrete Delivery Trucks	CNP 044	4	109	30%					110	
<b>Total</b>							<b>92</b>	<b>105</b>	<b>114</b>	<b>102</b>
<b>Max</b>							<b>92</b>	<b>105</b>	<b>114</b>	<b>102</b>

Remark:

- (1) EIA Ref. 1 - SWL of Welding Plant refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).
- EIA Ref. 2 - SWL of narrow gauge trains refer to approved EIA Report of Drainage Improvement in Northern Hong Kong Island - Hong Kong West Drainage Tunnel (AEIAR-099/2006)
- BS - British Standard BS5228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites
- OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWLe.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf))



**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area C: Nam Cheong Works Area (Removal of Property Foundations)**

**113 Possession of site**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Excavator	CNP 081	1	112	75%			111		
Breaker, mini-robot mounted	CNP 031	1	115	30%			110		
Mobile Crane	CNP 048	1	112	30%				107	
Trucks	CNP 067	2	117	30%				115	
Concrete lorry mixer	CNP 044	2	109	30%					107
Poker, vibratory, hand-held (electric)	OCNP 024	2	94	50%					94
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	50%					101
Handheld breaker	CNP 024	1	108	30%					103
Generator, silenced	CNP 102	1	100	75%					99
<b>Total</b>							<b>113</b>	<b>115</b>	<b>110</b>
<b>Max</b>							<b>115</b>		

**114 Demolition of Existing Pile Cap**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Piling, Vibrating Hammer	OCNP 023	1	115	30%			110		
Hydraulic Breaker	CNP 028	3	122	50%				124	
Excavator	CNP 081	1	112	30%				107	
Saw, wire	OCNP 033	5	101	100%				108	
Tracked cranes	BS C7, 105	1	108	30%			103		
Dump Trucks	CNP 067	1	117	30%				112	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	50%					101
Generator, silenced	CNP 102	2	100	50%			100		
Handheld breaker	CNP 024	2	108	50%					108
<b>Total</b>							<b>111</b>	<b>124</b>	<b>109</b>
<b>Max</b>							<b>124</b>		

**115 Extension of H-piles**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	3	108	50%			110	
Drilling rig	OCNP 014	5	110	75%				116
Piling, Vibrating Hammer	OCNP 023	2	115	50%			115	
Crane Lorry	OCNP 022	1	105	30%			100	100
<b>Total</b>							<b>116</b>	<b>116</b>
<b>Max</b>							<b>116</b>	

**116 Removal of Bored Piles**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes with grab	BS C7, 105	1	108	75%				107	
Piling rig (bored)	BS C11, 2	1	112	100%			112		
Concrete Delivery Trucks	CNP 044	1	109	30%					104
<b>Total</b>							<b>112</b>	<b>107</b>	<b>104</b>
<b>Max</b>							<b>112</b>		

**117 Piling Works**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	2	108	50%				106
Piling rig (bored)	BS C11, 2	2	112	75%			114	
Concrete Delivery Trucks	CNP 044	2	109	30%				107
Bentonite Plant	CNP 162	1	105	75%			104	
<b>Total</b>							<b>114</b>	<b>110</b>
<b>Max</b>							<b>114</b>	

**118 Construction of Pile Cap**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Mobile Crane	CNP 048	1	112	30%			107
Piling, Vibrating Hammer	OCNP 023	2	115	50%			115
Concrete Delivery Trucks	CNP 044	2	109	30%			107
Concrete Pump	OCNP 007	1	109	75%			108
<b>Total</b>							<b>117</b>
<b>Max</b>							<b>117</b>

**Remark:**

- (1) EIA Ref. 1 - SWL of Welding Plant refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).
- EIA Ref. 2 - SWL of narrow gauge trains refer to approved EIA Report of Drainage Improvement in Northern Hong Kong Island - Hong Kong West Drainage Tunnel (AEIAR-099/2006)
- BS - British Standard BS5228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites
- OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWLe.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf))

**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area R: Nam Cheong Works Area**

**119 Site storage**

Powered Mechanical Equipment (PME)	TMR/R/RS/other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Fork lift truck	BS C7, 93	1	104	30%			99
Road Trucks	CNP 067	1	117	30%			112
<b>Total</b>							<b>112</b>

**120 Diversion of utils**

Powered Mechanical Equipment (PME)	TMR/R/RS/other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Tracked cranes	BS C7, 105	1	108	30%			103
Oscillator & casings	CNP 165	1	115	50%			112
Excavator	CNP 081	1	112	20%			105
Road Trucks	CNP 067	2	117	20%			113
Generator, silenced	CNP 102	1	100	75%			99
<b>Total</b>							<b>116</b>

**Works Area S: Nam Cheong Works Area**

**121 Diversion of utils**

Powered Mechanical Equipment (PME)	TMR/R/RS/other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Tracked cranes	BS C7, 105	1	108	30%			103
Oscillator & casings	CNP 165	1	115	50%			112
Breaker, mini-robot mounted	CNP 031	1	115	20%			108
Road Trucks	CNP 067	2	117	20%			113
Generator, silenced	CNP 102	1	100	75%			99
<b>Total</b>							<b>117</b>

**122 Site storage**

Powered Mechanical Equipment (PME)	TMR/R/RS/other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Fork lift truck	BS C7, 93	1	104	30%			99
Road Trucks	CNP 067	1	117	30%			112
<b>Total</b>							<b>112</b>

**123 Remove superstructure**

Powered Mechanical Equipment (PME)	TMR/R/RS/other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Mobile crane	CNP 048	1	112	20%				105	
Saw, Wire	OCNP 033	1	101	80%					100
Road Trucks	CNP 067	1	117	20%			110		
<b>Total</b>							<b>110</b>	<b>105</b>	<b>100</b>
<b>Max</b>							<b>110</b>		

**124 Remove foundations**

Powered Mechanical Equipment (PME)	TMR/R/RS/other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Mobile Crane	CNP 048	1	112	30%			107		
Oscillator & casings	CNP 165	1	115	50%				112	
Breaker, mini-robot mounted	CNP 031	1	115	20%					108
Road Trucks	CNP 067	1	117	20%			110		
<b>Total</b>							<b>112</b>	<b>112</b>	<b>108</b>
<b>Max</b>							<b>112</b>		

**125 Repronising of Bridge**

Powered Mechanical Equipment (PME)	TMR/R/RS/other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Mobile crane	CNP 048	1	112	30%			107			
Tracked cranes	BS C7, 105	1	108	30%				103		
Saw, Wire	OCNP 033	1	101	30%					96	96
Concrete pump	OCNP 007	1	109	75%			108			
Poker, vibratory, hand-held (electric)	OCNP 024	2	94	50%			94			
Generator, silenced	CNP 102	1	100	75%			99			99
Concrete Delivery Trucks	CNP 044	1	109	50%			106			
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	50%					101	
Handheld breaker	CNP 024	1	108	50%					105	
<b>Total</b>							<b>112</b>	<b>108</b>	<b>107</b>	<b>101</b>
<b>Max</b>							<b>112</b>			

**Works Area T: Nam Cheong Works Area**

**126 Possession of site**

Powered Mechanical Equipment (PME)	TMR/R/RS/other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Breaker, mini-robot mounted	CNP 031	1	115	75%			114
Mobile Crane	CNP 048	1	112	75%			111
Trucks	CNP 067	2	117	30%			115
Concrete lorry mixer	CNP 044	2	109	30%			107
Poker, vibratory, hand-held (electric)	OCNP 024	2	94	50%			94
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	50%			104
Handheld breaker	CNP 024	2	108	30%			106
Generator, silenced	CNP 102	1	100	75%			99
<b>Total</b>							<b>119</b>

**127 Site storage**

Powered Mechanical Equipment (PME)	TMR/R/RS/other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Fork lift truck	BS C7, 93	1	104	30%			99
Road Trucks	CNP 067	1	117	30%			112
<b>Total</b>							<b>112</b>

**Remark:**

- (1) EIA Ref. 1 - SWL of Welding Plant refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).
- EIA Ref. 2 - SWL of narrow gauge trains refer to approved EIA Report of Drainage Improvement in Northern Hong Kong Island - Hong Kong West Drainage Tunnel (AEIAR-099/2006)
- BS - British Standard BS5228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites
- OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWLe.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf))

**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area U: Hoi Ting Road Works Area**

**130 Possession of site**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Breaker, mini-robot mounted	CNP 031	1	115	75%			114	
Mobile Crane	CNP 048	1	112	30%				107
Trucks	CNP 067	2	117	30%				115
Concrete lorry mixer	CNP 044	1	109	30%				104
Poker, vibratory, hand-held (electric)	OCNP 024	2	94	30%				92
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	50%				104
Handheld breaker	CNP 024	2	108	50%				108
Generator, silenced	CNP 102	1	100	75%				99
<b>Total</b>							<b>114</b>	<b>117</b>
<b>Max</b>							<b>117</b>	

**131 Site storage**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Fork lift truck	BS C7, 93	1	104	30%			99
Road Trucks	CNP 067	1	117	30%			112
<b>Total</b>							<b>112</b>

**Remark:**

- (1) EIA Ref. 1 - SWL of Welding Plant refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).
- EIA Ref. 2 - SWL of narrow gauge trains refer to approved EIA Report of Drainage Improvement in Northern Hong Kong Island - Hong Kong West Drainage Tunnel (AEIAR-099/2006)
- BS - British Standard BS5228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites
- OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWLe.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf))

**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area V: Hoi Ting Road Works Area**

**132 Possession of site**

Powered Mechanical Equipment (PME)	TM Ref./RSJ/other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Excavator	CNP 081	1	112	75%			111		
Breaker, mini-robot mounted	CNP 063	1	112	30%			107		
Mobile Crane	CNP 048	1	112	30%				107	
Trucks	CNP 067	4	117	30%				118	
Concrete lorry mixer	CNP 044	2	109	30%					107
Vibratory poker	OCNP 024	2	94	50%					94
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	50%					104
Handheld breaker	CNP 024	2	108	30%					106
Generator, silenced	CNP 102	1	100	75%					99
<b>Total</b>							<b>112</b>	<b>118</b>	<b>111</b>
<b>Max</b>							<b>118</b>		

**133 Diaphragm Wall**

Powered Mechanical Equipment (PME)	TM Ref./other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes with grab	BS C7_105	4	108	60%				112		
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	60%			105			
Hydraulic Extractor	CNP 163	1	90	60%			88			
Excavator	CNP 081	2	112	60%			113			
Grout mixer	OCNP 016	1	90	60%			86			
Pump, submersible	CNP 283	1	85	60%			81			
Dump Truck	CNP 067	4	117	30%					118	
Concrete Lorry Mixer	CNP 044	4	109	60%						113
<b>Total</b>							<b>113</b>	<b>112</b>	<b>118</b>	<b>113</b>
<b>Max</b>							<b>118</b>			

**134 Bulk Excavation/Fill - Soft**

Powered Mechanical Equipment (PME)	TM Ref./other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7_105	2	108	25%			105		
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	60%				102	
Excavator	CNP 081	3	112	60%	Underground Plant	5	110		
Generator	CNP 102	1	100	60%				98	
Dump Truck	CNP 067	6	117	30%					120
Mobile Crane	CNP 048	2	112	30%				110	
<b>Total</b>							<b>111</b>	<b>111</b>	<b>120</b>
<b>Max</b>							<b>120</b>		

**135 Concrete Works**

Powered Mechanical Equipment (PME)	TM Ref./other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tower Crane	CNP 049	1	95	60%			93		
Mobile Crane	CNP 048	1	112	60%			110		
Crane Lorry	OCNP 022	1	105	60%			103		
Concrete Pump	OCNP 007	1	109	60%				107	
High Pressure Water Jet	OCNP 035	1	94	60%				92	
Concrete Poker	OCNP 024	2	94	60%				95	
Rebar Bending Machine	CNP 021	2	90	60%					91
Generator	CNP 102	2	100	60%					101
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	60%				101	
Concrete Lorry Mixer	CNP 044	2	109	60%				110	
<b>Total</b>							<b>111</b>	<b>112</b>	<b>101</b>
<b>Max</b>							<b>112</b>		

**136 TBM Removal**

Powered Mechanical Equipment (PME)	TM Ref./RSJ/other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Mobile Crane	CNP 048	2	112	50%			112
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	50%			101
Low loader vehicle	OCNP 010	1	105	30%			100
<b>Total</b>							<b>113</b>

137 Ventilation building construction

Powered Mechanical Equipment (PME)	TM Ref./ RS/ other Ref.	No. of Items	SWL/Item m dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL	Total SWL	Total SWL
							dB(A)	dB(A)	dB(A)
Tower Crane	CNP 049	1	95	60%			93		
Mobile Crane	CNP 048	1	112	60%			110		
Crane Lorry	OCNP 022	1	105	60%			103		
Concrete Pump	OCNP 007	1	109	60%				107	
High Pressure Water Jet	OCNP 035	1	94	60%				92	
Concrete Poker	OCNP 024	2	94	60%				95	
Rebar Bending Machine	CNP 021	2	90	60%					91
Generator	CNP 102	2	100	60%					101
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	60%				101	
Concrete Lorry Mixer	CNP 044	2	109	60%				110	
<b>Total</b>							<b>111</b>	<b>112</b>	<b>101</b>
<b>Max</b>							<b>112</b>		

138 Backfilling

Powered Mechanical Equipment (PME)	TM Ref./ RS/ other Ref.	No. of Items	SWL/Item m dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL
							dB(A)
Backhoe	CNP 081	1	112	30%			107
Dump Truck	CNP 067	1	117	30%			112
Compaction Roller	CNP 185	1	108	60%			106
Generator	CNP 102	1	100	60%			98
Compaction Plate	BS C8/30	2	101	60%			102
Power Rammer	CNP 169	1	108	60%			106
<b>Total</b>							<b>115</b>

Remark:

(1) EIA Ref. 1 - The SWL of Welding Set refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).

BS - British Standard BS5228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites

OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWLe.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf))

**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area V: WKT- Zone 1**

**139 Possession of site**

Powered Mechanical Equipment (PME)	TM Ref. or other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Excavator	CNP 081	1	112	60%			110		
Breaker, mini-robot mounted	CNP 063	1	112	60%			110		
Mobile Crane	CNP 048	1	112	60%				110	
Dump Truck	CNP 067	2	117	30%				115	
Concrete Lorry Mixer	CNP 044	1	109	60%					107
Poker, vibratory, hand-held (electric)	OCNP 024	1	94	60%					92
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	60%					105
Handheld Breaker	CNP 024	2	108	60%					109
Generator	CNP 102	1	100	60%					98
<b>Total</b>							<b>113</b>	<b>116</b>	<b>112</b>
<b>Max</b>							<b>113</b>	<b>116</b>	<b>112</b>

**140 Diaphragm Wall**

Powered Mechanical Equipment (PME)	TM Ref. or other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes with grab	BS C7, 105	2	108	60%				109
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	60%			105	
Hydraulic Extractor	CNP 163	1	90	60%			88	
Excavator	CNP 081	2	112	60%			113	
Grout mixer	OCNP 016	1	90	60%			86	
Pump, submersible	CNP 283	1	85	60%			81	
Dump Truck	CNP 067	1	117	30%				112
Concrete Lorry Mixer	CNP 044	1	109	60%				107
<b>Total</b>							<b>114</b>	<b>114</b>
<b>Max</b>							<b>114</b>	<b>114</b>

**141 Foundation Works (H-pile, B-pile)**

Powered Mechanical Equipment (PME)	TM Ref. or other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	2	108	25%			105	105		
Backhoe	CNP 081	2	112	25%			109	109		
Piling Rig	BS C11, 2	2	112	60%			113	113		
Drill Rig	OCNP 014	2	110	60%			111	111		
Excavator	CNP 081	2	112	60%			113	113		
Grab and Chisel	CNP 164	2	115	60%			116	116		
Piling, large diameter bored, reverse circulation drill	CNP 166	2	100	60%			101	101		
Oscillator	CNP 165	2	115	60%			116	116		
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	60%			105	105		
Grout Mixer	OCNP 016	2	90	60%					91	
Grout Pump	OCNP 017	2	105	60%					106	
Generator	CNP 102	2	100	60%					101	
Dump Truck	CNP 067	1	117	30%					112	
Concrete Truck	CNP 044	1	109	60%					107	
Rebar Bending Machine	CNP 021	1	90	60%					89	
Welding Set	EIA ref. 1	2	78	60%						78
Generator	CNP 102	1	100	60%						98
<b>Total</b>							<b>121</b>	<b>121</b>	<b>114</b>	<b>98</b>
<b>Max</b>							<b>121</b>	<b>121</b>	<b>114</b>	<b>98</b>

**142 Bulk Excavation- Soft**

Powered Mechanical Equipment (PME)	TM Ref. or other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	2	108	25%			105		
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	60%			105		
Excavator	CNP 081	4	112	60%				116	
Generator	CNP 102	4	100	60%			104		
Dump Truck	CNP 067	6	117	30%					120
Conveyor system	CNP 041	1	90	60%					88
<b>Total</b>							<b>109</b>	<b>116</b>	<b>120</b>
<b>Max</b>							<b>109</b>	<b>116</b>	<b>120</b>

**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area V: WKT- Zone 1**

**143 Bulk Excavation- Hard**

Powered Mechanical Equipment (PME)	TW, REB/RS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7_105	1	108	25%			102	
Drill Rig	OCNP 014	3	110	25%			109	
Hydraulic Breaker	CNP 028	3	122	25%			121	
Excavator	CNP 081	5	112	60%			117	
Generator	CNP 102	3	100	60%			103	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	3	104	60%			107	
Dump Truck	CNP 067	5	117	30%				119
<b>Total</b>							<b>123</b>	<b>119</b>
<b>Max</b>							<b>123</b>	

**144 Concrete Works**

Powered Mechanical Equipment (PME)	TW, REB/RS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tower Crane	CNP 049	2	95	60%			96		
Mobile Crane	CNP 048	2	112	60%			113		
Crane Lorry	OCNP 022	3	105	60%			108		
Concrete Pump	OCNP 007	4	109	60%				113	
Poker, vibratory, hand-held (electric)	OCNP 024	15	94	60%				104	
Rebar Bending Machine	CNP 021	2	90	60%					91
Generator	CNP 102	4	100	60%				104	104
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	60%				101	
Concrete Lorry Mixer	CNP 044	4	109	60%				113	
<b>Total</b>							<b>114</b>	<b>116</b>	<b>104</b>
<b>Max</b>							<b>116</b>		

**145 Top Down Excavation (Soft)**

Powered Mechanical Equipment (PME)	TW, REB/RS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7_105	5	108	25%			109		
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	6	104	60%	Underground Plant	10			100
Excavator	CNP 081	12	112	60%	Underground Plant	10			111
Generator	CNP 102	6	100	60%	Underground Plant	10			96
Dump Truck	CNP 067	1	117	30%				112	
Conveyor system	CNP 041	1	90	60%				88	
<b>Total</b>							<b>109</b>	<b>112</b>	<b>111</b>
<b>Max</b>							<b>112</b>		

**146 Top Down Concrete Works**

Powered Mechanical Equipment (PME)	TW, REB/RS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Tower Crane	CNP 049	2	95	60%	Underground Plant	10	86	
Mobile Crane	CNP 048	2	112	60%	Underground Plant	10	103	
Crane Lorry	OCNP 022	3	105	60%	Underground Plant	10	98	
Concrete Pump	OCNP 007	3	109	60%	Underground Plant	10	102	
Poker, vibratory, hand-held (electric)	OCNP 024	15	94	60%	Underground Plant	10	94	
Rebar Bending Machine	CNP 021	2	90	60%	Underground Plant	10	81	
Generator	CNP 102	4	100	60%	Underground Plant	10	94	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	60%	Underground Plant	10	91	
Concrete Lorry Mixer	CNP 044	2	109	60%				110
<b>Total</b>							<b>107</b>	<b>110</b>
<b>Max</b>							<b>110</b>	

**147 Top Down Excavation (Hard)**

Powered Mechanical Equipment (PME)	TW, REB/RS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7_105	8	108	25%	Underground Plant	10	101	
Drill Rig	OCNP 014	21	110	60%	Underground Plant	10	111	
Hydraulic Breaker	CNP 028	21	122	60%	Underground Plant	10	123	
Excavator w/ breaker	CNP 028	41	122	60%	Underground Plant	10	126	
Generator	CNP 102	21	100	60%	Underground Plant	10	101	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	21	104	60%	Underground Plant	10	105	
Dump Truck	CNP 067	3	117	30%				117
<b>Total</b>							<b>128</b>	<b>117</b>
<b>Max</b>							<b>128</b>	

**148 Backfilling**

Powered Mechanical Equipment (PME)	TW, REB/RS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Backhoe	CNP 081	1	112	30%			107
Dump Truck	CNP 067	1	117	30%			112
Compaction Roller	CNP 185	1	108	60%			106
Generator	CNP 102	1	100	60%			98
Compaction Plate	BS C8/30	2	101	60%			102
Power Rammer	CNP 169	1	108	60%			106
<b>Total</b>							<b>115</b>

**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area V: WKT- Zone 1**

**149 Concrete Batching Plant - Construction Stage**

Powered Mechanical Equipment (PME)	Item Ref. or other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Generator	CNP 102	2	100	60%			101		101
Excavator	CNP 081	1	112	60%			110		
Mobile Crane	CNP 048	2	112	60%				113	
Dump Truck	CNP 067	2	117	30%				115	
Poker, vibratory, hand-held (electric)	OCNP 024	2	94	60%					95
Breaker, excavator mounted	CNP 028	1	122	60%			120		
Air compressor, air flow>10m <sup>3</sup> /min and ≤30m <sup>3</sup> /min	CNP 002	1	102	60%					100
Concrete Lorry Mixer	CNP 044	2	109	60%					110
<b>Total</b>							<b>120</b>	<b>117</b>	<b>111</b>
<b>Max</b>							<b>120</b>		

**150 Concrete Batching Plant - Operation Stage**

Powered Mechanical Equipment (PME)	Item Ref. or other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Wheel Loader	CNP 081	1	112	60%						110
Concrete mixer (electric)	CNP 045	1	96	60%			94			
Generator	CNP 102	2	100	60%			101			
Concrete mixer (petrol)	CNP 046	3	96	60%			99			
Tipper Truck	BS C3/112	1	113	30%					108	
Concrete Lorry Mixer	CNP 044	3	109	60%			112			
Batching Plant	CNP 022	1	108	60%				106		
Air compressor, air flow>10m <sup>3</sup> /min and ≤30m <sup>3</sup> /min	CNP 002	2	102	60%			103			
<b>Total</b>							<b>113</b>	<b>106</b>	<b>108</b>	<b>110</b>
<b>Max</b>							<b>113</b>			

**151 Concrete Batching Plant - Demolition**

Powered Mechanical Equipment (PME)	Item Ref. or other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Tracked cranes	BS C7_105	1	108	60%			106
Generator	CNP 102	1	100	60%			98
Welding set	EIA ref. 1	1	78	60%			76
<b>Total</b>							<b>106</b>
<b>Max</b>							<b>106</b>

Remark:

(1) EIA Ref. 1 - The SWL of Welding Set refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).

BS - British Standard BS5228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites

OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWLe.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf))



**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area V: WKT- Zone 2**

**152 Possession of site**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Excavator	CNP 081	1	112	60%			110		
Breaker, mini-robot mounted	CNP 063	1	112	60%			110		
Mobile Crane	CNP 048	1	112	60%				110	
Dump Truck	CNP 067	2	117	30%				115	
Concrete Lorry Mixer	CNP 044	1	109	60%					107
Poker, vibratory, hand-held (electric)	OCNP 024	1	94	60%					92
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	60%					105
Handheld Breaker	CNP 024	2	108	60%					109
Generator	CNP 102	1	100	60%					98
<b>Total</b>							<b>113</b>	<b>116</b>	<b>112</b>
<b>Max</b>							<b>116</b>		

**153 Diaphragm Wall**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes with grab	BS C7, 105	2	108	60%				109
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	60%	Enclosure/Shed*	15	90	
Hydraulic Extractor	CNP 163	1	90	60%			88	
Excavator	CNP 081	2	112	60%			113	
Grout mixer	OCNP 016	1	90	60%			86	
Pump, submersible	CNP 283	1	85	60%			81	
Dump Truck	CNP 067	1	117	30%				112
Concrete Lorry Mixer	CNP 044	1	109	60%				107
<b>Total</b>							<b>114</b>	<b>114</b>
<b>Max</b>							<b>114</b>	

**154 Foundation Works (H-pile, B-pile)**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	4	108	25%			108	108		
Backhoe	CNP 081	4	112	25%			112	112		
Piling Rig	BS C11, 2	4	112	60%			116	116		
Drill Rig	OCNP 014	4	110	60%			114	114		
Excavator	CNP 081	4	112	60%			116	116		
Grab and Chisel	CNP 164	3	115	60%			118	118		
Piling, large diameter bored, reverse circulation drill	CNP 166	3	100	60%			103	103		
Oscillator	CNP 165	3	115	60%			118	118		
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	3	104	60%			107	107		
Grout Mixer	OCNP 016	3	90	60%					93	
Grout Pump	OCNP 017	3	105	60%					108	
Rebar Bending Machine	CNP 021	2	90	60%					91	
Generator	CNP 102	1	100	60%					98	
Dump Truck	CNP 067	1	117	30%					112	
Concrete Lorry Mixer	CNP 044	1	109	60%					107	
Welding Set	EIA ref. 1	2	78	60%						79
Generator	CNP 102	2	100	60%						101
<b>Total</b>							<b>124</b>	<b>124</b>	<b>115</b>	<b>101</b>
<b>Max</b>							<b>124</b>			

**155 Bulk Excavation- Soft**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	2	108	25%			105		
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	60%			104		
Excavator	CNP 081	4	112	60%				116	
Generator	CNP 102	4	100	60%			104		
Dump Truck	CNP 067	5	117	30%					119
<b>Total</b>							<b>109</b>	<b>116</b>	<b>119</b>
<b>Max</b>							<b>119</b>		

**Powered Mechanical Equipment (PME) for Different  
Construction Tasks during Normal Daytime Working Hours  
(Unmitigated Scenario)**

**Works Area V: WKT- Zone 2**

**156 Concrete Works**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tower Crane	CNP 049	2	95	60%			96		
Mobile Crane	CNP 048	3	112	60%			115		
Crane Lorry	OCNP 022	4	105	60%			109		
Concrete Pump	OCNP 007	5	109	60%				114	
Poker, vibratory, hand-held (electric)	OCNP 024	21	94	60%				105	
Rebar Bending Machine	CNP 021	3	90	60%					93
Generator	CNP 102	5	100	60%				105	105
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	60%				102	
Concrete Lorry Mixer	CNP 044	4	109	60%				113	
<b>Total</b>							<b>116</b>	<b>117</b>	<b>105</b>
<b>Max</b>							<b>117</b>		

**157 Top Down Excavation (Soft)**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	6	108	25%			110		
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	8	104	60%	Underground Plant	10			101
Excavator	CNP 081	16	112	60%	Underground Plant	10			112
Generator	CNP 102	8	100	60%	Underground Plant	10			97
Dump Truck	CNP 067	6	117	30%				120	
<b>Total</b>							<b>110</b>	<b>120</b>	<b>112</b>
<b>Max</b>							<b>120</b>		

**158 Top Down Concrete Works**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Tower Crane	CNP 049	3	95	60%	Underground Plant	10	88	
Mobile Crane	CNP 048	3	112	60%	Underground Plant	10	105	
Crane Lorry	OCNP 022	4	105	60%	Underground Plant	10	99	
Concrete Pump	OCNP 007	5	109	60%	Underground Plant	10	104	
Rebar Bending Machine	CNP 021	3	90	60%	Underground Plant	10	83	
Generator	CNP 102	3	100	60%	Underground Plant	10	93	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	60%	Underground Plant	10	92	
Concrete Lorry Mixer	CNP 044	2	109	60%				110
<b>Total</b>							<b>108</b>	<b>110</b>
<b>Max</b>							<b>110</b>	

**159 Top Down Excavation (Hard)**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	3	108	25%	Underground Plant	10	97	
Drill Rig	OCNP 014	8	110	60%	Underground Plant	10	107	
Hydraulic Breaker	CNP 028	8	122	60%	Underground Plant	10	119	
Excavator w/ breaker	CNP 028	15	122	60%	Underground Plant	10	122	
Generator	CNP 102	8	100	60%	Underground Plant	10	97	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	8	104	60%	Underground Plant	10	101	
Dump Truck	CNP 067	3	117	30%				117
<b>Total</b>							<b>124</b>	<b>117</b>
<b>Max</b>							<b>124</b>	

**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area V: WKT- Zone 2**

**160 Backfilling**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Backhoe	CNP 081	1	112	30%			107
Dump Truck	CNP 067	1	117	30%			112
Compaction Roller	CNP 185	1	108	60%			106
Generator	CNP 102	1	100	60%			98
Compaction Plate	BS C8/30	2	101	60%			102
Power Rammer	CNP 169	1	108	60%			106
<b>Total</b>							<b>115</b>

**161 ABWF Works**

Powered Mechanical Equipment (PME)	z2 other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Grinding Machine	CNP 065	10	96	60%	Underground Plant	10	96
Screed Mixer & Pump	CNP 281	7	88	60%	Underground Plant	10	84
Backhoe	CNP 081	7	112	60%	Underground Plant	10	108
Fork Lift	BS C7, 93	7	104	60%	Underground Plant	10	100
Material Hoist	CNP 123	7	104	60%	Underground Plant	10	100
<b>Total</b>							<b>109</b>

Remark:

- (1) EIA Ref. 1 - The SWL of Welding Set refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).  
 BS - British Standard BS5228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites  
 CNCN - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWLe.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf))

**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area V: WKT-Zone 3**

**162 Possession of site**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Excavator	CNP 081	1	112	60%			110		
Breaker, mini-robot mounted	CNP 063	1	112	60%			110		
Mobile Crane	CNP 048	1	112	60%				110	
Dump Truck	CNP 067	2	117	30%				115	
Concrete Lorry Mixer	CNP 044	1	109	60%					107
Poker, vibratory, hand-held (electric)	OCNP 024	1	94	60%					92
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	60%					105
Handheld Breaker	CNP 024	2	108	60%					109
Generator	CNP 102	1	100	60%					98
<b>Total</b>							<b>113</b>	<b>116</b>	<b>112</b>
<b>Max</b>							<b>116</b>		

**163 Diaphragm Wall**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes with grab	BS C7, 105	1	108	60%				106
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	60%			105	
Hydraulic Extractor	CNP 163	1	90	60%			88	
Excavator	CNP 081	2	112	60%			113	
Grout mixer	OCNP 016	1	90	60%			86	
Pump, submersible	CNP 283	1	85	60%			81	
Dump Truck	CNP 067	1	117	30%				112
Concrete Lorry Mixer	CNP 044	1	109	60%			107	
<b>Total</b>							<b>114</b>	<b>113</b>
<b>Max</b>							<b>114</b>	

**164 Foundation Works (H-pile, B-pile)**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	2	108	25%			105	105		
Backhoe	CNP 081	2	112	20%			108	108		
Piling Rig	BS C11, 2	2	112	60%			113	113		
Drill Rig	OCNP 014	2	110	60%			111	111		
Excavator	CNP 081	2	112	60%			113	113		
Grab and Chisel	CNP 164	3	115	60%			118	118		
Piling, large diameter bored, reverse circulation drill	CNP 166	3	100	60%			103	103		
Oscillator	CNP 165	3	115	60%			118	118		
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	60%			105	105		
Rebar Bending Machine	CNP 021	2	90	60%					91	
Grout Mixer	OCNP 016	1	90	60%					88	
Grout Pump	OCNP 017	1	105	60%					103	
Generator	CNP 102	1	100	60%					98	
Dump Truck	CNP 067	1	117	30%					112	
Concrete Lorry Mixer	CNP 044	1	109	60%					108	
Welding Set	EIA ref. 1	2	78	60%						79
Generator	CNP 102	2	100	60%						101
<b>Total</b>							<b>123</b>	<b>123</b>	<b>114</b>	<b>101</b>
<b>Max</b>							<b>123</b>			

**165 Bulk Excavation- Soft**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	2	108	25%			105		
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	60%			104		
Excavator	CNP 081	3	112	60%				115	
Generator	CNP 102	4	100	60%			104		
Dump Truck	CNP 067	5	117	30%					119
<b>Total</b>							<b>109</b>	<b>115</b>	<b>119</b>
<b>Max</b>							<b>119</b>		

**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area V: WKT-Zone 3**

**166 Bulk Excavation- Hard**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	2	108	25%			105		
Drill Rig	OCNP 014	4	110	25%			110		
Hydraulic Breaker	CNP 028	4	122	25%				122	
Excavator	CNP 081	9	112	60%			119		
Generator	CNP 102	4	100	60%				104	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	4	104	60%			108		
Dump Truck	CNP 067	5	117	30%				119	119
<b>Total</b>							<b>120</b>	<b>124</b>	<b>119</b>
<b>Max</b>							<b>124</b>		

**167 Concrete Works**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tower Crane	CNP 049	3	95	60%			98		
Mobile Crane	CNP 048	2	112	60%			113		
Crane Lorry	OCNP 022	3	105	60%			108		
Concrete Pump	OCNP 007	4	109	60%				113	
Concrete Poker	OCNP 024	15	94	60%				104	
Rebar Bending Machine	CNP 021	2	90	60%					91
Generator	CNP 102	4	100	60%					104
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	60%				101	
Concrete Lorry Mixer	CNP 044	3	109	60%				112	
<b>Total</b>							<b>114</b>	<b>116</b>	<b>104</b>
<b>Max</b>							<b>116</b>		

**168 Top Down Excavation (Soft)**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	12	108	25%			113		
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	15	104	60%	Underground Plant	10			104
Excavator	CNP 081	30	112	60%	Underground Plant	10			115
Generator	CNP 102	15	100	60%	Underground Plant	10			100
Dump Truck	CNP 067	8	117	30%				121	
<b>Total</b>							<b>113</b>	<b>121</b>	<b>115</b>
<b>Max</b>							<b>121</b>		

**169 Top Down Concrete Works**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Tower Crane	CNP 049	3	95	60%	Underground Plant	10	88	
Mobile Crane	CNP 048	2	112	60%	Underground Plant	10	103	
Crane Lorry	OCNP 022	3	105	60%	Underground Plant	10	98	
Concrete Pump	OCNP 007	4	109	60%	Underground Plant	10	103	
Poker, vibratory, hand-held (electric)	OCNP 024	14	94	60%	Underground Plant	10	93	
Rebar Bending Machine	CNP 021	2	90	60%	Underground Plant	10	81	
Generator	CNP 102	4	100	60%	Underground Plant	10	94	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	60%	Underground Plant	10	91	
Concrete Lorry Mixer	CNP 044	2	109	60%				110
<b>Total</b>							<b>107</b>	<b>110</b>
<b>Max</b>							<b>110</b>	

**Powered Mechanical Equipment (PME) for Different  
Construction Tasks during Normal Daytime Working Hours  
(Unmitigated Scenario)**

**Works Area V: WKT-Zone 3**

**170 Top Down Excavation (Hard)**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7/105	5	108	25%	Underground Plant	10	99	
Drill Rig	OCNP 014	13	110	60%	Underground Plant	10	109	
Hydraulic Breaker	CNP 028	13	122	60%	Underground Plant	10	121	
Excavator w/ breaker	CNP 028	26	122	60%	Underground Plant	10	124	
Generator	CNP 102	13	100	60%	Underground Plant	10	99	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	13	104	60%	Underground Plant	10	103	
Dump Truck	CNP 067	6	117	30%				120
<b>Total</b>							<b>126</b>	<b>120</b>
<b>Max</b>							<b>126</b>	

**171 Backfilling**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Backhoe	CNP 081	1	112	30%			107
Dump Truck	CNP 067	1	117	30%			112
Compaction Roller	CNP 185	1	108	60%			106
Generator	CNP 102	1	100	60%			98
Compaction Plate	BS C8/30	2	101	60%			102
Power Rammer	CNP 169	1	108	60%			106
<b>Total</b>							<b>115</b>

**172 ABWF Works**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Grinding Machine	CNP 065	10	98	60%	Underground Plant	10	96
Screed Mixer & Pump	CNP 281	7	88	60%	Underground Plant	10	84
Backhoe	CNP 081	7	112	60%	Underground Plant	10	108
Fork Lift	BS C7, 93	7	104	60%	Underground Plant	10	100
Material Hoist	CNP 123	7	104	60%	Underground Plant	10	100
<b>Total</b>							<b>109</b>

**Remark:**

- (1) EIA Ref. 1 - The SWL of Welding Set refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).  
BS - British Standard BS5228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites  
OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWL\\_e.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWL_e.pdf))

**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area V: C&C Tunnel Zone 4**

**173 Diaphragm Wall**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes with grab	BS C7, 105	2	108	60%				109	109
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	60%			105		
Hydraulic Extractor	CNP 163	1	90	60%				88	
Excavator	CNP 081	2	112	60%				113	
Grout mixer	OCNP 016	1	90	60%				86	
Pump, submersible	CNP 283	1	85	60%				81	
Dump Truck	CNP 067	1	117	30%					112
Concrete Lorry Mixer	CNP 044	1	109	60%				107	
<b>Total</b>							<b>114</b>	<b>114</b>	<b>114</b>
<b>Max</b>							<b>114</b>		

**174 Foundation Works (H-pile, B-pile)**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	2	108	60%				109		
Backhoe	CNP 081	2	112	60%				113		
Piling Rig	BS C11, 2	2	112	60%				113		
Drill Rig	OCNP 014	2	110	60%				111		
Excavator	CNP 081	2	112	60%				113		
Grab and Chisel	CNP 164	1	115	60%				113		
Piling, large diameter bored, reverse circulation drill	CNP 166	1	100	60%				98		
Oscillator	CNP 165	1	115	60%				113		
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	60%				105		
Grout Mixer	OCNP 016	1	90	60%					88	
Grout Pump	OCNP 017	1	105	60%					103	
Generator	CNP 102	1	100	60%					98	
Dump Truck	CNP 067	1	117	30%					112	
Concrete Lorry Mixer	CNP 044	1	109	60%					108	
Welding Set	EIA ref. 1	1	78	60%						76
Generator	CNP 102	1	100	60%						98
<b>Total</b>							<b>121</b>	<b>109</b>	<b>114</b>	<b>98</b>
<b>Max</b>							<b>121</b>			

**175 Bulk Excavation- Soft**

Powered Mechanical Equipment (PME)	TM Ref. / BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	4	108	25%				108
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	3	104	60%				107
Excavator	CNP 081	4	112	60%				116
Generator	CNP 102	4	100	60%				104
<b>Total</b>							<b>111</b>	<b>116</b>
<b>Max</b>							<b>116</b>	

Powered Mechanical Equipment (PME) for Different  
Construction Tasks during Normal Daytime Working Hours  
(Unmitigated Scenario)

**Works Area V: C&C Tunnel Zone 4**

**176 Bulk Excavation- Hard**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	2	108	25%			105	
Drill Rig	OCNP 014	3	110	25%			109	
Hydraulic Breaker	CNP 028	3	122	25%			121	
Excavator	CNP 081	6	112	60%			118	
Generator	CNP 102	3	100	60%			103	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	3	104	60%			107	
Dump Truck	CNP 067	5	117	30%				119
<b>Total</b>							<b>123</b>	<b>119</b>
<b>Max</b>							<b>123</b>	

**177 Concrete Works**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tower Crane	CNP 049	2	95	60%			96		
Mobile Crane	CNP 048	1	112	60%			110		
Crane Lorry	OCNP 022	1	105	60%			103		
Concrete Pump	OCNP 007	1	109	60%				107	
High Pressure Water Jet	OCNP 035	1	94	60%				92	
Poker, vibratory, hand-held (electric)	OCNP 024	2	94	60%				95	
Rebar Bending Machine	CNP 021	2	90	60%					91
Generator	CNP 102	2	100	60%				101	101
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	60%				101	
Concrete Lorry Mixer	CNP 044	2	109	60%				110	
<b>Total</b>							<b>111</b>	<b>112</b>	<b>101</b>
<b>Max</b>							<b>112</b>		

**178 ABWF Works**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Grinding Machine	CNP 065	10	98	60%	Underground Plant	10	96
Screed Mixer & Pump	CNP 281	7	88	60%	Underground Plant	10	84
Backhoe	CNP 081	7	112	60%	Underground Plant	10	108
Fork Lift	BS C7, 93	7	104	60%	Underground Plant	10	100
Material Hoist	CNP 123	7	104	60%	Underground Plant	10	100
<b>Total</b>							<b>109</b>

**179 Backfilling**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Backhoe	CNP 081	1	112	30%			107
Dump Truck	CNP 067	1	117	30%			112
Compaction Roller	CNP 185	1	108	60%			106
Generator	CNP 102	1	100	60%			98
Compaction Plate	BS C8/30	2	101	60%			102
Power Rammer	CNP 169	1	108	60%			106
<b>Total</b>							<b>115</b>

Remark:

- (1) EIA Ref. 1 - The SWL of Welding Set refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).  
BS - British Standard BS5228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites  
OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWLe.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf))



**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area V: C&C Tunnel Zone 5**

**180 Diaphragm Wall**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes with grab	BS C7, 105	2	108	60%				109	109
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	60%			105		
Hydraulic Extractor	CNP 163	1	90	60%			88		
Excavator	CNP 081	2	112	60%			113		
Grout mixer	OCNP 016	1	90	60%			86		
Pump, submersible	CNP 283	1	85	60%			81		
Dump Truck	CNP 067	1	117	30%				112	112
Concrete Lorry Mixer	CNP 044	1	109	60%				107	
<b>Total</b>							<b>114</b>	<b>114</b>	<b>114</b>
<b>Max</b>							<b>114</b>		

**181 Bulk Excavation- Soft**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tracked cranes	BS C7, 105	1	108	25%			102	102	
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	60%			102	102	
Excavator	CNP 081	1	112	60%					110
Generator	CNP 102	1	100	60%			98	98	
<b>Total</b>							<b>106</b>	<b>106</b>	<b>110</b>
<b>Max</b>							<b>110</b>		

**182 Concrete Works**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)	Total SWL dB(A)
Tower Crane	CNP 049	1	95	60%			93		
Mobile Crane	CNP 048	1	112	60%			110		
Crane Lorry	OCNP 022	1	105	60%			103		
Concrete Pump	OCNP 007	1	109	60%				107	
High Pressure Water Jet	OCNP 035	1	94	60%				92	
Poker, vibratory, hand-held (electric)	OCNP 024	2	94	60%				95	
Rebar Bending Machine	CNP 021	2	90	60%					91
Generator	CNP 102	2	100	60%				101	101
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	1	104	60%				101	
Concrete Lorry Mixer	CNP 044	2	109	60%				110	
<b>Total</b>							<b>111</b>	<b>112</b>	<b>101</b>
<b>Max</b>							<b>112</b>		

**183 Backfilling**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Backhoe	CNP 081	1	112	30%			107
Dump Truck	CNP 067	1	117	30%			112
Compaction Roller	CNP 185	1	108	60%			106
Generator	CNP 102	1	100	60%			98
Compaction Plate	BS C8/30	2	101	60%			102
Power Rammer	CNP 169	1	108	60%			106
<b>Total</b>							<b>115</b>

Remark:

(1) EIA Ref. 1 - The SWL of Welding Set refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).

BS - British Standard BS5228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites

OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWLe.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf))

**Powered Mechanical Equipment (PME) for Different  
Construction Tasks during Normal Daytime Working Hours  
(Unmitigated Scenario)**

**Works Area W: Barging and Stockpiling**

**184 Barging and Stockpiling**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Barge	CNP 061	5	104	60%			109	
Tug Boat	CNP 221	5	110	60%			115	
Dump truck	CNP 067	30	117	30%				127
Excavator	CNP 081	2	112	60%				113
Conveyor	CNP 041	2	90	60%				91
<b>Total</b>							<b>116</b>	<b>127</b>
<b>Max</b>								<b>127</b>

**Remark:**

(1) EIA Ref. 1 - The SWL of Welding Set refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).

BS - British Standard BS5228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites

OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWLe.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf))

**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area Y: Nam Cheong Works Area**

**128 Conveyor Belt**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Conveyor belt	CNP 041	1	90	75%			89
<b>Total</b>							<b>89</b>

**129 Nam Cheong Barging Point**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Barge	CNP 061	3	104	30%			104
Dump trucks	CNP 067	20	117	30%			125
Conveyor belt	CNP 041	1	90	75%			89
Backhoe	CNP 081	3	112	75%			116
Flat bed truck	CNP 067	1	117	30%			112
Fork lift	BS C7, 93	1	104	75%			103
<b>Total</b>							<b>126</b>

**Works Area Z: Rambler Channel Barging Point**

**185 Rambler Channel Barging Point**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Barge	CNP 061	2	104	30%			102
Dump trucks	CNP 067	10	117	30%			122
Backhoe	CNP 081	2	112	75%			114
<b>Total</b>							<b>122</b>

**Works Area AA: Siu Lam Barging Point**

**186 Siu Lam Barging Point**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)	Total SWL dB(A)
Barge	CNP 061	3	104	30%			104	
Dump trucks	CNP 067	20	117	30%			125	
Backhoe	CNP 081	3	112	75%			116	
Mobile Crane	CNP 048	1	112	50%				109
<b>Total</b>							<b>125</b>	<b>109</b>
<b>Max</b>							<b>125</b>	

**Works Area AB: Siu Lang Shui Plant Nursery**

**187 Nursery**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Excavator, mini-robot mounted (electric)	OCNP 015	1	94	75%			93
<b>Total</b>							<b>93</b>

**Works Area AC: So Kwun Wat Magazine Site**

**188 Nursery**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Excavator	CNP 081	1	112	75%			111
Lorry	OCNP 020	1	101	30%			96
<b>Total</b>							<b>111</b>

**189 Establish Magazine**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Dump trucks	CNP 067	1	117	30%			112
Excavator	CNP 081	1	112	75%			111
Fork lift	BS C7, 93	1	104	75%			103
Generator, silenced	CNP 102	1	100	75%			99
<b>Total</b>							<b>115</b>

**190 Magazine**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Dump trucks	CNP 067	2	117	30%			115
<b>Total</b>							<b>115</b>

**191 Upgrade road**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Dump trucks	CNP 067	2	117	30%			115
Excavator	CNP 081	1	112	50%			109
Generator, silenced	CNP 102	1	100	75%			99
Concrete lorry mixer	CNP 044	2	109	30%			107
Poker, vibratory, hand-held (electric)	OCNP 024	2	94	50%			94
Air compressor, air flow >30m <sup>3</sup> /min	CNP 003	2	104	75%			106
<b>Total</b>							<b>117</b>

**Powered Mechanical Equipment (PME) for Different Construction Tasks during Normal Daytime Working Hours (Unmitigated Scenario)**

**Works Area AE: Tai Shu Ha Road West Magazine Site**

**192 Establish Magazine**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Dump trucks	CNP 067	1	117	30%			112
Excavator	CNP 081	1	112	75%			111
Fork lift	BS C7, 93	1	104	75%			103
Generator, silenced	CNP 102	1	100	75%			99
<b>Total</b>							<b>115</b>

**193 Magazine**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Dump trucks	CNP 067	2	117	30%			115
<b>Total</b>							<b>115</b>

**194 Upgrade road**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Dump trucks	CNP 067	2	117	30%			115
Excavator	CNP 081	1	112	75%			111
Generator, silenced	CNP 102	1	100	75%			99
Concrete lorry mixer	CNP 044	2	109	30%			107
Poker, vibratory, hand-held (electric)	OCNP 024	2	94	50%			94
Air compressor, air flow >30m³/min	CNP 003	2	104	75%			106
<b>Total</b>							<b>117</b>

**Works Area AF: Lung Kwu Sheung Tan Barging Point**

**195 Dredging**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Tug boat	CNP 221	2	110	30%			108
Barge	CNP 061	2	104	75%			106
Dredger, grab	CNP 112	2	113	75%			115
<b>Total</b>							<b>116</b>

**196 Lung Kwu Sheung Tan Barging Point**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Barges	CNP 061	1	104	30%			99
Dump trucks	CNP 067	10	117	30%			122
Excavator	CNP 081	2	112	75%			114
<b>Total</b>							<b>122</b>

**Works Area AG: Tsing Chau Tsai Barging Point**

**197 Tsing Chau Tsai Barging Point**

Powered Mechanical Equipment (PME)	TM Ref./ BS/ other Ref.	No. of Items	SWL/Item dB(A)	On-time %	Noise Mitigation Measure	Noise Barrier Reduction	Total SWL dB(A)
Barge	CNP 061	1	104	30%			99
Dump trucks	CNP 067	10	117	30%			122
Excavator	CNP 081	2	112	75%			114
<b>Total</b>							<b>122</b>

**Remark:**

- (1) EIA Ref. 1 - SWL of Welding Plant refer to the approved EIA Report of Sheung Shui to Lok Ma Chau Spur Line (AEIAR-052/2002).
- EIA Ref. 2 - SWL of narrow gauge trains refer to approved EIA Report of Drainage Improvement in Northern Hong Kong Island - Hong Kong West Drainage Tunnel (AEIAR-099/2006)
- BS - British Standard BS5228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites
- OCNP - SWL refer to the other PME documented by the Noise Control Authority ([http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWLe.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf))