

**Spittal to Loch Buidhe to Beauly 400 kV
OHL Connection
Environmental Impact Assessment
Volume 5 | Technical Appendix**

Appendix 15.2 | Construction Activities

July 2025



VOLUME 5: APPENDIX 15.2 – CONSTRUCTION ACTIVITIES

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1. INTRODUCTION

- 1.1.1 The purpose of this appendix is to provide the conservative assumptions of equipment utilisation used for the Construction Noise Impact Assessment (CNIA). Each table provides the expected equipment for a construction phase for a section of the Proposed Development, as well as the percentage of time each piece of equipment is expected to be used in a standard working day. Information was collated from estimations provided by contractors due to work on the project and sound power levels from Annex C of BS5228-1 Code of practice for noise and vibration control on construction and open sites. Results of our calculations to obtain a corrected sound power level based on the expected quantity and on time of the equipment have also been included. If changes occur to the planned equipment an updated CNIA will be prepared.

2. CONSTRUCTION EQUIPMENT

Table 1: Worst Case Construction Activities And Associated Noise Levels For Felling on Spittal-Loch Buidhe-Beauly

Activity	Plant Item	Quantity	Utilisation %	Sound Power, LW (dB(A))	Sound Power corrected for quantity and utilisation, LW (dB(A))	L _{Aeq} at 10 m (dB)
Felling	Forwarder	1	100%	84	84	56
	Harvester	1	100%	92	92	64
	Wood Chipper	1	70%	119	117	89
	D2.14 Petrol Driven Chain Saw	1	90%	114	114	86
	Mulcher	1	90%	105	105	97
	C2.2 Tracked Excavator	2	85%	105	107	79
Total					119	91

Table 2: Worst Case Construction Activities And Associated Noise Levels For Civil Works on Loch Buidhe-Beauly

Activity	Plant Item	Quantity	Utilisation %	Sound Power, LW (dB(A))	Sound Power corrected for quantity and utilisation, LW (dB(A))	LAeq at 10 m (dB)
Civil Works	C4.75 Tractor (Towing Trailer)	2	25%	107	104	76
	C2.19 Tracked Excavator	6	100%	105	113	85
	C2.38 Roller	3	75%	101	105	77
	C4.4 Dumper	3	75%	104	107	79
	C2.19 Tracked Excavator	2	50%	105	105	77
	C4.4 Dumper	6	100%	104	111	83
	C4.86 Diesel Generator	1	100%	93	94	66
	C4.15 Fuel Tanker Lorry	2	5%	104	94	66
Total					117	89

Table 3: Worst Case Construction Activities And Associated Noise Levels For Foundations on Loch Buidhe-Beauly

Activity	Plant Item	Quantity	Utilisation %	Sound Power, LW (dB(A))	Sound Power corrected for quantity and utilisation, LW (dB(A))	L _{Aeq} at 10 m (dB)
Foundations	C4.75 Tractor (Towing Trailer)	2	25%	107	104	76
	C2.19 Tracked Excavator	2	100%	105	108	80
	C3.8 Vibratory Piling Rig	2	100%	116	119	91
	C2.35 Telescopic Handler	2	75%	99	100	72
	C4.20 Concrete Mixer Truck	3	75%	108	112	84
	C3.19 Compressor For Mini Piling	2	75%	103	105	77
	C4.15 Fuel Tanker Lorry	1	5%	104	91	63
	C4.86 Diesel Generator	1	100%	93	93	65
Total					120	92

Table 4: Worst Case Construction Activities And Associated Noise Levels For Tower Assembly and Erection on Loch Buidhe-Beauly

Activity	Plant Item	Quantity	Utilisation %	Sound Power, LW (dB(A))	Sound Power corrected for quantity and utilisation, LW (dB(A))	L _{Aeq} at 10 m (dB)
Tower Assembly and Erection	C3.28 Tracked Mobile Crane	1	75%	95	93	65
	C3.28 Tracked Mobile Crane	1	75%	95	93	65
	C11.9 Lorry	3	100%	110	115	87
	C2.35 Telescopic Handler	3	75%	99	102	74
	C4.75 Tractor (Towing Trailer)	3	50%	107	109	81
	C4.15 Fuel Tanker Lorry	2	5%	104	94	66
	C4.86 Diesel Generator	1	100%	93	93	66
Total					116	88

Table 5: Worst Case Construction Activities And Associated Noise Levels For Stringing on Loch Buidhe-Beauly

Activity	Plant Item	Quantity	Utilisation %	Sound Power, LW (dB(A))	Sound Power corrected for quantity and utilisation, LW (dB(A))	L _{Aeq} at 10 m (dB)
Stringing	C4.75 Tractor (Towing Trailer)	2	25%	107	104	76
	Puller/Tensioner	2	75%	96	98	70
	Erection Winches	5	75%	90	96	68
	C4.74 Tractor (Towing Equipment)	4	75%	108	113	85
	C11.9 Lorry	2	25%	110	107	79
	C2.35 Telescopic Handler	2	75%	99	100	72
	C4.15 Fuel Tanker Lorry	1	5%	104	91	63
Total					115	87

Table 6: Worst Case Construction Activities And Associated Noise Levels For Civil Works on Spittal-Loch Buidhe

Activity	Plant Item	Quantity	Utilisation %	Sound Power, LW (dB(A))	Sound Power corrected for quantity and utilisation, LW (dB(A))	LAeq at 10 m (dB)
Access/Workpads/ Bellmouths	C4.27 Concrete Mixer Truck	1	5%	107	94	66
	C4.24 Concrete Pump + Cement Mixer Truck (Discharging)	1	5%	95	82	54
	C4.4 Dumper	2	50%	104	104	76
	C2.19 Tracked Excavator	2	100%	105	108	80
	C4.14 Wheeled Backhoe Loader	1	50%	95	92	64
	C2.38 Roller	1	50%	104	101	73
	C4.67 Mini Tracked Excavator	2	50%	102	102	74
	C4.86 Diesel Generator	1	100%	93	93	66
	C4.15 Fuel Tanker Lorry	1	5%	104	91	63
	C4.90 Road Sweeper	1	5%	104	91	63
Total					111	83

Table 7: Worst Case Construction Activities And Associated Noise Levels For Foundations on Spittal-Loch Buidhe

Activity	Plant Item	Quantity	Utilisation %	Sound Power, LW (dB(A))	Sound Power corrected for quantity and utilisation, LW (dB(A))	LAeq at 10 m (dB)
Foundations	C4.27 Concrete Mixer Truck	1	5%	107	94	66
	C4.24 Concrete Pump + Cement Mixer Truck (Discharging)	1	5%	95	82	54
	C4.4 Dumper	2	50%	104	104	76
	C2.19 Tracked Excavator	2	100%	105	108	80
	C4.14 Wheeled Backhoe Loader	1	50%	95	92	64
	C2.38 Roller	1	50%	104	101	73
	C4.67 Mini Tracked Excavator	2	50%	102	102	74
	C4.86 Diesel Generator	1	100%	93	93	66
	C4.15 Fuel Tanker Lorry	1	5%	104	91	63
	C4.90 Road Sweeper	1	5%	104	91	63
Total					111	83

Table 8: Worst Case Construction Activities And Associated Noise Levels For Tower Assembly and Erection on Spittal-Loch Buidhe

Activity	Plant Item	Quantity	Utilisation %	Sound Power, LW (dB(A))	Sound Power corrected for quantity and utilisation, LW (dB(A))	L _{Aeq} at 10 m (dB)
Tower Assembly and Erection	C4.49 Tower Crane	1	50%	105	102	74
	C2.35 Telescopic Handler	2	50%	99	99	71
	C4.69 Core Drill (Electric)	4	25%	113	113	85
	Winch	1	25%	90	84	56
	C3.15 Tracked Drilling Rig With Hydraulic Drifter	2	25%	110	107	79
	Grinder	2	5%	114	104	76
	C4.86 Diesel Generator	1	100%	93	93	66
	C4.15 Fuel Tanker Lorry	1	5%	104	91	63
Total					114	86

Table 9: Worst Case Construction Activities And Associated Noise Levels For Stringing on Spittal-Loch Buidhe

Activity	Plant Item	Quantity	Utilisation %	Sound Power, LW (dB(A))	Sound Power corrected for quantity and utilisation, LW (dB(A))	LAeq at 10 m (dB)
Stringing	Puller	1	50%	96	93	65
	Tensioner	1	50%	96	93	65
	C2.3 Tracked Excavator	2	50%	106	106	78
	C2.35 Telescopic Handler	2	50%	99	99	71
	C2.34 Lorry	1	50%	108	105	77
	Winch	1	50%	90	87	59
	C4.86 Diesel Generator	1	100%	93	93	66
	C4.15 Fuel Tanker Lorry	1	5%	104	91	63
Total					109	81