

Volume 5: Appendix 15.2 – Construction Activity

CONTENTS

LIST OF ABBREVIATIONS	3
1. CONSTRUCTION ACTIVITY	4
1.1 Introduction	4

LIST OF ABBREVIATIONS

dB: Decibels

EIA: Environmental Impact Assessment

EIAR: Environmental Impact Assessment Report

$L_{a_{eq}}$: Total A-weighted Equivalent Noise Level

LW: Sound Power Level

OHL: Overhead Line

1. CONSTRUCTION ACTIVITY

1.1 Introduction

- 1.1.1 This appendix presents information on the construction activities and associated noise levels for the Proposed Development. It should be read in conjunction with **Volume 2, Chapter 15: Noise and Vibration** and **Volume 1, Chapter 3: Project Description** of the EIAR for full details of the Proposed Development.
- 1.1.2 The information has been supplied by the two Principal Contractors (PCs) for the Proposed Development. Where there were any differences in the information supplied by the two PCs, an average has been used.
- 1.1.3 **Tables 15.2.1 to 15.2.9** detail the worst case construction activities during different phases of development and the associated noise levels:
- felling / vegetation clearance works (**Table 15.2.1: Worst Case Construction Activities and Associated Noise Levels for Felling / Vegetation Clearance Works**);
 - access / enabling works (**Table 15.2.2: Worst Case Construction Activities and Associated Noise Levels for Access / Enabling Works**);
 - foundation works (**Table 15.2.3: Worst Case Construction Activities and Associated Noise Levels for Foundation Works**);
 - noise levels for piling works (**Table 15.2.4: Worst Case Construction Activities and Associated Noise Levels for Noise Levels for Piling Works**);
 - tower erection works (**Table 15.2.5: Worst Case Construction Activities and Associated Noise Levels for Tower Erection Works**);
 - downleads works (**Table 15.2.6: Worst Case Construction Activities and Associated Noise Levels for Downleads Works**);
 - stringing works (**Table 15.2.7: Worst Case Construction Activities and Associated Noise Levels for Stringing Works**);
 - dismantling works (**Table 15.2.8: Worst Case Construction Activities and Associated Noise Levels for Dismantling Works**); and
 - scaffold / yard (**Table 15.2.9: Worst Case Construction Activities and Associated Noise Levels for Scaffold / Yard**).

Table 15.2.1: Worst Case Construction Activities and Associated Noise Levels for Felling/Vegetation Clearance Works

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)
C4.74 Tractor (towing equipment)	2	50%	108	108	80
Harvester	2	50%	92	92	64
C4.84 Diesel generator	2	50%	102	102	74
Wood chipper	2	50%	119	119	91
D2.14. Petrol driven chain saw	4	50%	114	117	89
Stump grinder	2	50%	114	114	86
Brush cutter	4	50%	114	117	89
Flail mower	2	50%	90	90	62
Total				123	95

Table 15.2.2: Worst Case Construction Activities and Associated Noise Levels for Access/Enabling Works

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)
C2.37 Roller (rolling fill)	6	50%	108	112	84
C1.9 Breaker mounted on excavator	6	80%	118	125	97
C2.27 Wheeled loader	6	80%	108	115	87
C2.45 Water pump	12	20%	93	97	69
C4.54 Telescopic handler	1	50%	107	104	76
C4.3 Dumper	1	80%	104	103	75
C2.37 Roller (rolling fill)	1	80%	108	107	79

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)
C2.3 Tracked excavator	2	100%	106	109	81
C4.70 Petrol hand-held circular saw	2	25%	119	116	88
C4.84 Diesel generator	2	50%	102	102	74
C6.22 Road lorry (empty)	20	50%	111	121	93
Total				115	87

Table 15.2.3: Worst Case Construction Activities and Associated Noise Levels for Foundations Works

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)
C4.20 Concrete Mixer Truck	4	29%	108	109	81
C1.12 Tracked Excavator	1	67%	110	109	81
C4.33 Poker Vibrator	2	29%	106	104	76
C2.45 Water Pump	2	48%	93	93	65
C6.22 Road Lorry (Empty)	1	19%	111	104	76
C2.37 Roller (Rolling Fill)	1	19%	108	100	72
C4.3 Dumper	1	48%	104	101	73
C4.84 Diesel Generator	2	29%	102	99	71
C6.22 Road Lorry (Empty)	1	10%	111	101	73

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)
C2.43 Cable Percussion Drilling Rig	1	29%	102	97	69
C1.7 Hand-Held Hydraulic Breaker	1	29%	121	116	88
C4.69 Core Drill (Electric)	1	10%	113	103	75
Total				118	90

Table 15.2.4: Worst Case Construction Activities and Associated Noise Levels for Piling Works

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)
C4.20 Concrete Mixer Truck	2	30%	108	106	78
C3.25 Concrete Pump	2	30%	106	104	76
C1.9 Breaker Mounted On Excavator	2	40%	118	117	89
C3.19 Compressor For Mini Piling	2	20%	108	104	76
C2.45 Water Pump	2	30%	106	104	76
C4.54 Telescopic Handler	2	20%	93	89	61
C4.84 Diesel Generator	2	10%	111	104	76
C3.3 Hydraulic Hammer Rig	1	70%	107	105	77
Total				117	89

Table 15.2.5: Worst Case Construction Activities and Associated Noise Levels for Tower Erection Works

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)
C4.54 Telescopic Handler	1	67%	107	105	77
C4.54 Telescopic Handler	2	57%	107	107	79
C3.28 Tracked Mobile Crane	1	10%	95	85	57
C2.34 Lorry	1	10%	108	98	70
Total				109	81

Table 15.2.6: Worst Case Construction Activities and Associated Noise Levels for Downloads Works

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)
C4.57 Lifting Platform	1	50%	95	92	64
C4.53 Lorry With Lifting Boom	1	50%	105	102	74
C4.74 Tractor (Towing Equipment)	2	80%	108	110	82
Total				111	83

Table 15.2.7: Worst Case Construction Activities and Associated Noise Levels for Stringing Works

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)
C6.22 Road Lorry (Empty)	1	19%	111	104	76

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)
C4.54 Telescopic Handler	1	38%	107	102	74
Puller/Tensioner	2	33%	96	94	66
C4.84 Diesel Generator	1	38%	108	104	76
C2.34 Lorry	1	14%	108	100	72
C2.34 Lorry Hiab	1	33%	90	85	57
Service Winch	1	10%	90	80	52
Trailer Press	2	38%	108	107	79
C4.74 Tractor (Towing Equipment)	1	19%	111	104	76
Total				111	83

Table 15.2.8: Worst Case Construction Activities and Associated Noise Levels for Dismantling Works

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)
C4.74 Tractor (Towing Equipment)	1	33%	108	103	75
C3.28 Tracked Mobile Crane	1	10%	95	85	57
C4.54 Telescopic Handler	1	10%	107	97	69
C1.9 Breaker Mounted On Excavator	1	48%	118	115	87
N/A Estimated	1	19%	90	83	55
C4.70 Petrol Hand-Held Circular Saw	1	19%	119	111	83

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)
C2.34 Lorry	1	19%	108	101	73
C2.34 Lorry	1	10%	108	98	70
Total				117	89

Table 15.2.9: Worst Case Construction Activities and Associated Noise Levels for Scaffold/Yard

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)
C4.95 Handheld Cordless Nail Gun	4	60%	101	105	77
C4.84 Diesel Generator	1	20%	102	95	67
C4.54 Telescopic Handler	2	80%	107	109	81
Total				109	81