

Springwell Solar Farm

Environmental Statement

Appendix 12.2 - Construction Noise Plant Tables and Results

Volume 3

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Springwell Energyfarm Ltd

APFP Regulation 5(2)(a)
Planning Act 2008
Infrastructure Planning
(Applications: Prescribed Forms
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1. Construction Assessment Details

1.1. Plant list of Construction Activities

Table 1 Task 1, Site Clearance construction noise plant list

Plant	BS 5228-1 reference	Number of plant items	On-Time percentage, %	Screening, dB	Sound pressure level at 10 m, dB(A)	Sound power level, dB(A)
Timberwolf TW 190TFTR Wood Chipper	M1.1	1	80	0	88	116
Tracked excavator	C2.24	1	60	0	71	99
Dumper	C4.4	2	80	0	78	106
Bulldozer	C5.15	1	20	0	76	104
Chain saw	D2.14	2	80	0	88	116
Total					91	119

Table 2 Task 2, Primary and Secondary Construction Compound noise plant list

Plant	BS 5228-1 reference	Number of plant items	On-Time percentage, %	Screening, dB	Sound pressure level at 10 m, dB(A)	Sound power level, dB(A)
Lorry	C2.34	2	10	0	73	101
Lorry with lifting boom	C4.53	1	10	0	67	95
Tracked excavator	C2.24	2	70	0	74	102
Telescopic handler	C2.35	1	80	0	70	98
Dumper	C4.4	2	80	0	78	106
Roller	C2.38	1	30	0	68	96
Diesel generator	C4.86	1	70	5	58	86
Road sweeper	C4.90	1	30	0	71	99
Tractor (towing water bowser)	C6.38	1	40	0	79	107
Total					84	112

Table 3 Task 3, Internal Tracks Installation noise plant list

Plant	BS 5228-1 reference	Number of plant items	On-Time percentage, %	Screening, dB	Sound pressure level at 10 m, dB(A)	Sound power level, dB(A)
Tracked excavator	C5.18	1	20	0	73	101
Bulldozer	C5.15	1	20	0	76	104
Lorry	C11.17	1	10	0	68	96
Vibratory roller	C5.20	1	20	0	68	96
Total					79	107

Table 4 Task 4, Solar Panel Frame Installation and Piling noise plant list

Plant	BS 5228-1 reference	Number of plant items	On-Time percentage, %	Screening, dB	Sound pressure level at 10 m, dB(A)	Sound power level, dB(A)
Mini piling rig	C3.17	2	60	0	77	105
Tracked excavator	C5.18	1	20	0	73	101
Lorry	C2.34	1	10	0	70	98
Telescopic handler	C2.35	1	20	0	64	92
Makita - 1.5kg Impact Wrench	M2.1	1	10	0	63	91
Total					79	107

Table 5 Task 5, Cut and Fill Earthworks in Field Tb2 noise plant list

Plant	BS 5228-1 reference	Number of plant items	On-Time percentage, %	Screening, dB	Sound pressure level at 10 m, dB(A)	Sound power level, dB(A)
Tracked excavator	C1.12	1	80	0	81	109
Dump truck (tipping fill)	C2.30	1	80	0	78	106
Dozer	C5.12	1	80	0	76	104
Roller	C2.38	1	50	0	70	98
Total					84	112

Table 6 Task 6, BESS Installation noise plant list

Plant	BS 5228-1 reference	Number of plant items	On-Time percentage, %	Screening, dB	Sound pressure level at 10 m, dB(A)	Sound power level, dB(A)
Tracked excavator	C5.18	1	20	0	73	101
Vibratory roller	C5.20	1	20	0	68	96
Lorry	C2.34	1	10	0	70	98
Wheeled mobile crane	C4.43	1	10	0	60	88
Telescopic handler	C2.35	2	80	0	73	101
Lorry with lifting boom	C4.53	1	20	0	70	98
Total					78	106

Table 7 Task 7, Satellite Collector Compound and Substation installation noise plant list

Plant	BS 5228-1 reference	Number of plant items	On-Time percentage, %	Screening, dB	Sound pressure level at 10 m, dB(A)	Sound power level, dB(A)
Tracked excavator	C5.18	1	20	0	73	101
Vibratory roller	C5.20	1	20	0	68	96
Lorry	C2.34	1	10	0	70	98
Lorry with lifting boom	C4.53	1	20	0	70	98
Total					77	105

Table 8 Task 8, Cable Trenching noise plant list

Plant	BS 5228-1 reference	Number of plant items	On-Time percentage, %	Screening, dB	Sound pressure level at 10 m, dB(A)	Sound power level, dB(A)
Tracked excavator	C4.65	1	60	0	69	97
Vibratory roller	C5.20	1	20	0	68	96
Lorry	C9.25	2	20	0	78	106
Tracked excavator	C2.25	1	50	0	66	94
Mobile telescopic crane	C4.39	1	20	0	70	98
Lorry with lifting boom	C4.53	1	20	0	70	98
Lump hammer	C1.19	2	40	0	68	96
Total					80	108

Table 9 Task 9, Concreting in Field Tb2 and Satellite Collector Compounds noise plant list

Plant	BS 5228-1 reference	Number of plant items	On-Time percentage, %	Screening, dB	Sound pressure level at 10 m, dB(A)	Sound power level, dB(A)
Tracked excavator	C2.19	2	80	0	79	107
Dumper	C4.4	3	80	0	80	108
Concrete mixer truck (discharging) & concrete pump (pumping)	C4.28	1	50	0	72	100
Lorry	C2.34	1	20	0	73	101
Concrete pump	C3.26	1	20	0	68	96
Concrete mixer truck	C4.20	2	20	0	76	104
Total					84	112

Table 10 Task 10, Jointing Works noise plant list

Plant	BS 5228-1 reference	Number of plant items	On-Time percentage, %	Screening, dB	Sound pressure level at 10 m, dB(A)	Sound power level, dB(A)
Tracked excavator	C2.3	3	90	0	82	110
Lorry	C2.34	2	10	0	73	101
Dumper	C4.4	1	100	0	76	104
Dumper	C4.6	1	90	0	79	107
Tracked excavator	C2.21	1	80	0	70	98
Tractor (towing equipment)	C4.74	1	75	0	79	107
Rolling (rolling fill)	C2.37	1	60	0	77	105
Dozer	C2.13	1	100	0	78	106
Diesel generator	C4.84	2	100	0	77	105
Roller	C2.38	2	90	0	76	104
Tipper lorry	C8.20	4	80		84	112
Total					89	117

Table 11 Task 11, Horizontal Directional Drill noise plant list

Plant	BS 5228-1 reference	Number of plant items	On-Time percentage, %	Screening, dB	Sound pressure level at 10 m, dB(A)	Sound power level, dB(A)
Tracked excavator	C2.15	2	80	0	78	106
Tracked excavator	C2.21	1	75	0	70	98
Lorry	C2.34	2	10	0	73	101
Roller	C2.38	1	30	0	68	96
Dumper	C4.4	1	60	0	74	102
Rolling (rolling fill)	C2.37	1	60	0	77	105
Tracked drilling rig with hydraulic drifter	C3.15	1	20	0	75	103
Diesel generator for submersible pump	C8.23	1	20	0	55	83
Diesel surface water pump	C8.22	1	20	0	64	92
Tractor (towing water bowser)	C6.38	1	40	0	79	107
Wheeled backhoe loader	C2.8	1	30		63	91

Plant	BS 5228-1 reference	Number of plant items	On-Time percentage, %	Screening, dB	Sound pressure level at 10 m, dB(A)	Sound power level, dB(A)
Diesel generator	C4.85	2	30		64	92
Angle grinder (grinding steel)	C4.93	1	30		75	103
Air Compressor & Blasting Equipment	M5.1	1	30		73	101
Total					85	113

1.1.1. Task 12, internal haul route noise assessment is based on a sound power level of 109 dB(A), reference C.4.1, articulated dump truck, ten vehicles per hour, and a speed of 15mph (21.1kmh)

1.2. Construction assessment results

Table 12 – Construction assessment modelling results

Receptor	Task											
	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8	Task 9	Task 10	Task 11	Task 12
Gorse Hill Farm	52	45	34	31	45	39	0	44	45	39	35	7
The Bungalow, Gorse Hill Road	53	46	35	31	46	40	0	45	46	40	36	7

Receptor	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8	Task 9	Task 10	Task 11	Task 12
14 Martin Court, Mallory Road, RAF Digby	44	37	42	37	0	0	30	45	37	0	46	13
13 Howard Road, RAF Digby	47	40	52	43	0	0	32	53	39	0	59	18
Rowston Cottages, Digby	52	45	45	54	0	0	37	46	44	0	48	15
The Lodge, Digby	54	47	44	50	0	0	40	45	47	0	45	15
Scopwick Mill	52	45	65	41	0	0	34	66	41	0	51	26
Mill Cottages, Scopwick	49	42	63	38	0	0	31	64	38	0	44	25
52 Heath Road, Scopwick	45	38	58	37	0	0	29	59	36	0	49	22
29 Heath Road, Scopwick	44	37	54	38	0	0	27	55	34	0	54	19
1 Vicarage Lane, Scopwick	47	40	60	37	0	0	28	61	35	0	69	23

Receptor	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8	Task 9	Task 10	Task 11	Task 12
Scopwick House, Scopwick	49	42	54	36	0	0	28	55	35	0	62	20
The Old Rectory, Blankney	48	41	33	38	0	0	29	33	36	0	34	6
The Hall Cottage, Blankney	50	43	34	43	0	0	32	33	39	0	34	7
Hall Farm, Blankney	50	43	34	43	0	0	33	33	40	0	33	8
Staging Post, Blankney	45	38	32	42	0	0	29	30	36	0	0	5
Brickyard Farm, Blankney	43	36	40	43	0	0	27	29	34	0	0	7
Scopwick Low Field Farm, Kirkby Green	53	46	45	58	0	0	34	46	41	0	32	15
The Mills, Kirkby Green	43	36	37	38	0	0	26	38	33	0	0	8
Harefield, Kirkby Green	42	35	35	40	0	0	27	36	34	0	34	8

Receptor	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8	Task 9	Task 10	Task 11	Task 12
Braemar Residential Park, Kirkby Green	44	37	39	44	0	0	29	40	36	0	36	10
Longfields, Scopwick	46	39	37	42	0	0	30	38	37	0	42	10
4 Springfield Estate, Scopwick	48	41	43	42	0	0	30	44	37	0	48	13
1 Glebe Close, Scopwick	47	40	50	38	0	0	28	51	35	0	56	17
6 Farriers Court, Scopwick	46	39	56	37	0	0	27	57	34	0	64	20
35 Becksde, Scopwick	44	37	50	40	0	0	28	51	35	0	51	17
4 Almonds Court, Scopwick	45	38	46	41	0	0	26	47	33	0	53	14
Sheffield House, Scopwick	45	38	31	58	0	0	30	32	37	0	35	5
The Hayloft, Rowston Top	53	46	48	48	0	0	37	49	44	0	44	16

Receptor	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8	Task 9	Task 10	Task 11	Task 12
Glebe Farm, Digby	45	38	53	38	0	0	30	54	37	0	57	19
The Garden House, Digby	44	37	38	35	0	0	29	40	36	0	44	10
The Lodge, Ashby de la Launde	43	36	37	35	0	0	25	40	32	0	41	8
Slate House, Ashby de la Launde	45	38	42	46	0	0	29	43	36	0	40	13
Mount Farm, Ashby de la Launde	46	40	37	37	0	0	0	33	0	0	39	7
Peacock Lodge Cottages, Ashby de la Launde	54	47	42	61	0	0	25	40	32	0	47	13
Hill Farm Cottages, Brauncewell	39	33	32	28	0	0	0	0	0	0	33	-1
Manor House, Brauncewell	45	38	37	37	0	0	0	27	0	0	36	5
Church House, Brauncewell	48	41	38	42	0	0	0	28	0	0	39	7

Receptor	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8	Task 9	Task 10	Task 11	Task 12
School Row, Brauncewell	46	39	32	44	0	0	0	27	0	0	37	3
7 Thompson's Bottom, Ashby de la Launde	55	48	40	46	40	34	37	41	44	33	39	10
1 Thompson's Bottom, Ashby de la Launde	54	47	42	49	42	36	36	43	43	34	40	11
Ashby Lodge, Ashby de la Launde	57	50	53	53	40	34	33	54	40	34	49	19
Toll Bar Cottages, Ashby de la Launde	57	50	52	51	50	44	29	56	50	38	60	19

