

SEWELLS RESERVOIR CONSTRUCTION LIMITED (SRC) 4798 18-Dec-19 PWC

DOLLYMANS FARM, ESSEX

Receiver Height : 1.5 m  
Plant Site Height : 12 m AOD

Ref	Plant Item	Comments on Plant	Activity LAeq @ 10 m	Power LWA or LWA / m	1 hour On-time %	Capacity Tonnes	Source Height	2 way flow Q per hour	Speed V kph	Plant Set back(m)	BS5228 method
1	Soundproof generator for site offices (daytime only)	WBM plant noise database	63	91	100	2				0 m back	1 Activity
2	Washing plant for recycling (including screen)	WBM plant noise database	79	107	100	3				0 m back	1 Activity
3	Loading shovel for recycling (stockpiles / HGV)	WBM plant noise database	80	108	100	2				0 m back	1 Activity
4	Infill HGVs on internal haul road	WBM plant noise database	76	104	100	2	6	15		0 m back	4 Haul Road
5	Dozer spreading restoration material	WBM plant noise database	80	108	100	2				0 m back	1 Activity
6	Infill HGVs on site access road	WBM plant noise database	76	104	100	2	12	15		0 m back	4 Haul Road
7	Dump truck movements on internal haul road	WBM plant noise database	78	106	100	2	6	15		0 m back	4 Haul Road
8	Plant Item 8		-1027	-999	100	2				0 m back	1 Activity
9	Plant Item 9		-1027	-999	100	2				0 m back	1 Activity
10	Plant Item 10		-1027	-999	100	2				0 m back	1 Activity
11	Excavator for proposed lagoons & final restoration	Temporary operations	76	104	100	2				0 m back	1 Activity
12	Dump truck movements for proposed lagoons & final restoration	Temporary operations	78	106	100	2				5 m back	1 Activity
13	Dozer for proposed lagoons & final restoration	Temporary operations	80	108	100	2				10 m back	1 Activity
14	Loading shovel for proposed lagoons & final restoration	Temporary operations	80	108	100	2				15 m back	1 Activity
15	Plant Item 15		-1027	-999	100	2				0 m back	1 Activity

Location No. 1 Cottages adjacent Doublegate Lane

Receiver Height 11.5 m AOD

Site Noise Level for Items 1 to 7 46 dB LAeq, 1 hour, free field

Site Noise Level for Items 11 to 14 49 dB LAeq, 1 hour, free field

Ref	Plant Item	Plan Distance	Working Distance	Ground Height	Working Height/depth	Source Height	Angle Degrees	Range Metres	Barrier -Receiver	Barrier Height	Path Diff.	Barrier Atten.	Soft Ground %	Ground Atten.	Resultant LAeq
1	Soundproof generator for site offices (daytime only)	330	330	12.0	0.0	14.0	0	0	0	0.0	-1.000	0.0	90.0	5.0	27.6
2	Washing plant for recycling (including screen)	550	550	12.0	0.0	15.0	0	0	0	0.0	-1.000	0.0	90.0	5.6	38.6
3	Loading shovel for recycling (stockpiles / HGV)	550	550	12.0	0.0	14.0	0	0	0	0.0	-1.000	0.0	90.0	6.0	39.2
4	Infill HGVs on internal haul road	550	550	15.0	0.0	17.0	50	0	0	0.0	-1.000	0.0	90.0	6.0	28.0
5	Dozer spreading restoration material	470	470	15.0	0.0	17.0	0	0	0	0.0	-1.000	0.0	90.0	5.7	40.8
6	Infill HGVs on site access road	200	200	10.0	0.0	12.0	110	0	0	0.0	-1.000	0.0	90.0	4.1	40.8
7	Dump truck movements on internal haul road	550	550	15.0	0.0	17.0	50	0	0	0.0	-1.000	0.0	90.0	6.0	30.0
8	Plant Item 8	10000	10000	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	0.0	0.0	-1087.0
9	Plant Item 9	10000	10000	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	0.0	0.0	-1087.0
10	Plant Item 10	10000	10000	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	0.0	0.0	-1087.0
11	Excavator for proposed lagoons & final restoration	320	320	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	90.0	5.0	40.9
12	Dump truck movements for proposed lagoons & final restoration	320	325	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	90.0	5.0	42.8
13	Dozer for proposed lagoons & final restoration	320	330	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	90.0	5.0	44.6
14	Loading shovel for proposed lagoons & final restoration	320	335	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	90.0	5.1	44.4
15	Plant Item 15	10000	10000	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	0.0	0.0	-1087.0

LINEAR short term Leqs  
Frequency Octave Band

	125	250	500	1000	2000	A
	-16	-9	-3	0	1	
27.11.08 Little Melton	72	68	62	61	57	66
26.09.06 Runfold	78	74	75	74	73	79
13.06.03 Homefield	65	63	62	63	66	69
28.02.98 Reigate Road	76	76	78	74	75	80
07.04.00 Reigate Road	88	81	76	81	76	84
28.02.98 Reigate Road	76	76	78	74	75	80
08.10.08 Wingmoor Farm	84	78	76	73	70	78
	0	0	93	0	0	90
	0	0	93	0	0	90
	0	0	93	0	0	90
23.02.06 South Holmwood	78	73	68	68	65	73
08.10.08 Wingmoor Farm	84	78	76	73	70	78
07.04.00 Reigate Road	88	81	76	81	76	84
13.06.03 Homefield	65	63	62	63	66	69
	0	0	93	0	0	90

Note: The GA Table is a linear regression to zero

Height	G.A. Limit
0	1.00
2	1.00
3	0.92
4	0.85
5	0.77
6	0.69
7	0.62
8	0.54
9	0.46
10	0.38
11	0.31
12	0.23
13	0.15
14	0.08
15	0.00

Note: The Range Table uses Table D2

Distance ratio	Correction
0	1.00
0.5	1.00
0.7	0.80
1	0.63
1.5	0.50
2	0.40
3	0.28
4	0.20
5	0.16
6	0.13
7	0.10
8	0.09
9	0.08
10	0.08
11	0.06

Note to model: Check individual LAeq lines for all sources

Note to model: Barrier illuminated zone is set to zero

Note to model: Method for mobile plant in a defined area is for slow moving plant typically of speeds from 5 km/h to 10 km/h working over short traverses

Conveyor LAeq, T = LWA / m + 10 log (on time %/100) - 5 - 10 log (distance) + 10 log (angle / 180) - barrier or ground attenuation

From p 130 Figure F.3	14	18	22	24	28	dB
BS5228 Upper Limit	14	18	22	24	28	dB

Rank	Resultant level from source spectrum minus calculated barrier reduction (frequency related)						BS5228 methods					Additional Method	Max Source or Receiver		
	125	250	500	1000	2000	A	1	2	3	4	5	Height	G.A.factor	Ref	
	Activity	Power	Defined Area	Haul Road	Conveyor										
11	72	68	62	61	57	66	27.6	27.6	27.6	-999.0	-999.0	574.9643	2	1.0	1
8	78	74	75	74	73	79	38.6	38.6	38.6	-999.0	-999.0	7286.326	3	0.9	2
7	65	63	62	63	66	69	39.2	39.2	39.2	-999.0	-999.0	8243.496	2	1.0	3
10	76	76	78	74	75	80	35.2	35.2	35.2	28.0	60.0	634.2078	2	1.0	4
5	88	81	76	81	76	84	40.8	40.8	40.8	-999.0	-999.0	12116.03	2	1.0	5
6	76	76	78	74	75	80	45.9	45.9	45.9	40.8	69.8	12098.09	2	1.0	6
9	84	78	76	73	70	78	37.2	37.2	37.2	30.0	62.0	1005.152	2	1.0	7
12	0	0	93	0	0	90	-1087.0	-1087.0	-1087.0	-999.0	-999.0	2E-109	2	1.0	8
12	0	0	93	0	0	90	-1087.0	-1087.0	-1087.0	-999.0	-999.0	2E-109	2	1.0	9
12	0	0	93	0	0	90	-1087.0	-1087.0	-1087.0	-999.0	-999.0	2E-109	2	1.0	10
4	78	73	68	68	65	73	40.9	40.9	40.9	-999.0	-999.0	12370.37	2	1.0	11
3	84	78	76	73	70	78	42.8	42.8	42.8	-999.0	-999.0	18874.95	2	1.0	12
1	88	81	76	81	76	84	44.6	44.6	44.6	-999.0	-999.0	28816.47	2	1.0	13
2	65	63	62	63	66	69	44.4	44.4	44.4	-999.0	-999.0	27774.11	2	1.0	14
12	0	0	93	0	0	90	-1087.0	-1087.0	-1087.0	-999.0	-999.0	2E-109	2	1.0	15

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DOLLYMANS FARM, ESSEX

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1	Soundproof generator for site offices (daytime only)	WBM plant noise database	63	91	100	2				0 m back	1 Activity
2	Washing plant for recycling (including screen)	WBM plant noise database	79	107	100	3				0 m back	1 Activity
3	Loading shovel for recycling (stockpiles / HGV)	WBM plant noise database	80	108	100	2				0 m back	1 Activity
4	Infill HGVs on internal haul road	WBM plant noise database	76	104	100	2		6	15	0 m back	4 Haul Road
5	Dozer spreading restoration material	WBM plant noise database	80	108	100	2				0 m back	1 Activity
6	Infill HGVs on site access road	WBM plant noise database	76	104	100	2		12	15	0 m back	4 Haul Road
7	Dump truck movements on internal haul road	WBM plant noise database	78	106	100	2		6	15	0 m back	4 Haul Road
8	Plant Item 8		-1027	-999	100	2				0 m back	1 Activity
9	Plant Item 9		-1027	-999	100	2				0 m back	1 Activity
10	Plant Item 10		-1027	-999	100	2				0 m back	1 Activity
11	Excavator for proposed lagoons & final restoration	Temporary operations	76	104	100	2				0 m back	1 Activity
12	Dump truck movements for proposed lagoons & final restoration	Temporary operations	78	106	100	2				5 m back	1 Activity
13	Dozer for proposed lagoons & final restoration	Temporary operations	80	108	100	2				10 m back	1 Activity
14	Loading shovel for proposed lagoons & final restoration	Temporary operations	80	108	100	2				15 m back	1 Activity
15	Plant Item 15		-1027	-999	100	2				0 m back	1 Activity

Location No. 2 House at Dollymans Farm

Receiver Height 13.5 m AOD

Site Noise Level for Items 1 to 7 49 dB LAeq, 1 hour, free field

Site Noise Level for Items 11 to 14 52 dB LAeq, 1 hour, free field

Ref	Plant Item	Plan Distance	Working Distance	Ground Height	Working Height/depth	Source Height	Angle Degrees	Range Metres	Barrier -Receiver	Barrier Height	Path Diff.	Barrier Atten.	Soft Ground %	Ground Atten.	Resultant LAeq
1	Soundproof generator for site offices (daytime only)	250	250	12.0	0.0	14.0	0	0	0	0.0	-1.000	0.0	90.0	4.5	30.6
2	Washing plant for recycling (including screen)	500	500	12.0	0.0	15.0	0	0	0	0.0	-1.000	0.0	90.0	5.4	39.6
3	Loading shovel for recycling (stockpiles / HGV)	500	500	12.0	0.0	14.0	0	0	0	0.0	-1.000	0.0	90.0	5.8	40.2
4	Infill HGVs on internal haul road	500	500	15.0	0.0	17.0	50	0	0	0.0	-1.000	0.0	90.0	5.8	28.6
5	Dozer spreading restoration material	420	420	15.0	0.0	17.0	0	0	0	0.0	-1.000	0.0	90.0	5.5	42.0
6	Infill HGVs on site access road	100	100	10.0	0.0	12.0	130	0	0	0.0	-1.000	0.0	90.0	2.7	45.9
7	Dump truck movements on internal haul road	500	500	15.0	0.0	17.0	50	0	0	0.0	-1.000	0.0	90.0	5.8	30.6
8	Plant Item 8	10000	10000	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	0.0	0.0	-1087.0
9	Plant Item 9	10000	10000	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	0.0	0.0	-1087.0
10	Plant Item 10	10000	10000	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	0.0	0.0	-1087.0
11	Excavator for proposed lagoons & final restoration	250	250	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	90.0	4.5	43.6
12	Dump truck movements for proposed lagoons & final restoration	250	255	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	90.0	4.5	45.3
13	Dozer for proposed lagoons & final restoration	250	260	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	90.0	4.6	47.1
14	Loading shovel for proposed lagoons & final restoration	250	265	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	90.0	4.6	46.9
15	Plant Item 15	10000	10000	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	0.0	0.0	-1087.0

Note: The GA Table is a linear regression to zero

Note: The Range Table uses Table D2

LINEAR short term Leqs					
Frequency Octave Band					
	125	250	500	1000	2000
	-16	-9	-3	0	1
27.11.08 Little Melton	72	68	62	61	57
26.09.06 Runfold	78	74	75	74	73
13.06.03 Homefield	65	63	62	63	66
28.02.98 Reigate Road	76	76	78	74	75
07.04.00 Reigate Road	88	81	76	81	76
28.02.98 Reigate Road	76	76	78	74	75
08.10.08 Wingmoor Farm	84	78	76	73	70
	0	0	93	0	0
	0	0	93	0	0
	0	0	93	0	0
23.02.06 South Holmwood	78	73	68	68	65
08.10.08 Wingmoor Farm	84	78	76	73	70
07.04.00 Reigate Road	88	81	76	81	76
13.06.03 Homefield	65	63	62	63	66
	0	0	93	0	0

Height	G.A. Limit
0	1.00
2	1.00
3	0.92
4	0.85
5	0.77
6	0.69
7	0.62
8	0.54
9	0.46
10	0.38
11	0.31
12	0.23
13	0.15
14	0.08
15	0.00

Distance ratio	Correction
0	1.00
0.5	1.00
0.7	0.80
1	0.63
1.5	0.50
2	0.40
3	0.28
4	0.20
5	0.16
6	0.13
7	0.10
8	0.09
9	0.08
10	0.08
11	0.06

Note to model: Check individual LAeq lines for all sources

Note to model: Barrier illuminated zone is set to zero

Note to model: Method for mobile plant in a defined area is for slow moving plant typically of speeds from 5 km/h to 10 km/h working over short traverses

Conveyor LAeq, T = LWA / m + 10 log (on time %/100) - 5 - 10 log (distance) + 10 log (angle / 180) - barrier or ground attenuation

From p 130 Figure F.3	14	18	22	24	28	dB
BS5228 Upper Limit	14	18	22	24	28	dB

Rank	Resultant level from source spectrum minus calculated barrier reduction (frequency related)						BS5228 methods					Additional Method	Max Source or Receiver		
	125	250	500	1000	2000	A	1	2	3	4	5		Height	G.A.factor	Ref
	Activity	Power	Defined Area	Haul Road	Conveyor										
10	72	68	62	61	57	66	30.6	30.6	30.6	-999.0	-999.0	1135.134	2	1.0	1
8	78	74	75	74	73	79	39.6	39.6	39.6	-999.0	-999.0	9172.502	3	0.9	2
7	65	63	62	63	66	69	40.2	40.2	40.2	-999.0	-999.0	10411.74	2	1.0	3
11	76	76	78	74	75	80	36.2	36.2	36.2	28.6	60.6	728.2005	2	1.0	4
6	88	81	76	81	76	84	42.0	42.0	42.0	-999.0	-999.0	15960.23	2	1.0	5
3	76	76	78	74	75	80	53.3	53.3	53.3	45.9	74.9	39062.57	2	1.0	6
9	84	78	76	73	70	78	38.2	38.2	38.2	30.6	62.6	1154.12	2	1.0	7
12	0	0	93	0	0	90	-1087.0	-1087.0	-1087.0	-999.0	-999.0	2E-109	2	1.0	8
12	0	0	93	0	0	90	-1087.0	-1087.0	-1087.0	-999.0	-999.0	2E-109	2	1.0	9
12	0	0	93	0	0	90	-1087.0	-1087.0	-1087.0	-999.0	-999.0	2E-109	2	1.0	10
5	78	73	68	68	65	73	43.6	43.6	43.6	-999.0	-999.0	22648.89	2	1.0	11
4	84	78	76	73	70	78	45.3	45.3	45.3	-999.0	-999.0	34196.1	2	1.0	12
1	88	81	76	81	76	84	47.1	47.1	47.1	-999.0	-999.0	51679.14	2	1.0	13
2	65	63	62	63	66	69	46.9	46.9	46.9	-999.0	-999.0	49322.79	2	1.0	14
12	0	0	93	0	0	90	-1087.0	-1087.0	-1087.0	-999.0	-999.0	2E-109	2	1.0	15

SEWELLS RESERVOIR CONSTRUCTION LIMITED (SRC) 4798 18-Dec-19 PWC

DOLLYMANS FARM, ESSEX

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Plant Site Height : 12 m AOD

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2	Washing plant for recycling (including screen)	WBM plant noise database	79	107	100	3				0 m back	1 Activity
3	Loading shovel for recycling (stockpiles / HGV)	WBM plant noise database	80	108	100	2				0 m back	1 Activity
4	Infill HGVs on internal haul road	WBM plant noise database	76	104	100	2		6	15	0 m back	4 Haul Road
5	Dozer spreading restoration material	WBM plant noise database	80	108	100	2				0 m back	1 Activity
6	Infill HGVs on site access road	WBM plant noise database	76	104	100	2		12	15	0 m back	4 Haul Road
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12	Dump truck movements for proposed lagoons & final restoration	Temporary operations	78	106	100	2				5 m back	1 Activity
13	Dozer for proposed lagoons & final restoration	Temporary operations	80	108	100	2				10 m back	1 Activity
14	Loading shovel for proposed lagoons & final restoration	Temporary operations	80	108	100	2				15 m back	1 Activity
15	Plant Item 15		-1027	-999	100	2				0 m back	1 Activity

Location No. 3 Wethersfield Way, Wickford

Receiver Height 11.5 m AOD

Site Noise Level for Items 1 to 7 41 dB LAeq, 1 hour, free field

Site Noise Level for Items 11 to 14 43 dB LAeq, 1 hour, free field

Ref	Plant Item	Plan Distance	Working Distance	Ground Height	Working Height/depth	Source Height	Angle Degrees	Range Metres	Barrier -Receiver	Barrier Height	Path Diff.	Barrier Atten.	Soft Ground %	Ground Atten.	Resultant LAeq
1	Soundproof generator for site offices (daytime only)	600	600	12.0	0.0	14.0	0	0	0	0.0	-1.000	0.0	90.0	6.2	21.2
2	Washing plant for recycling (including screen)	800	800	12.0	0.0	15.0	0	0	0	0.0	-1.000	0.0	90.0	6.2	34.7
3	Loading shovel for recycling (stockpiles / HGV)	800	800	12.0	0.0	14.0	0	0	0	0.0	-1.000	0.0	90.0	6.8	35.2
4	Infill HGVs on internal haul road	400	400	15.0	0.0	17.0	10	0	0	0.0	-1.000	0.0	90.0	5.4	23.0
5	Dozer spreading restoration material	750	750	12.0	0.0	14.0	0	0	0	0.0	-1.000	0.0	90.0	6.6	35.9
6	Infill HGVs on site access road	520	520	10.0	0.0	12.0	90	0	0	0.0	-1.000	0.0	90.0	5.9	33.9
7	Dump truck movements on internal haul road	400	400	15.0	0.0	17.0	10	0	0	0.0	-1.000	0.0	90.0	5.4	25.0
8	Plant Item 8	10000	10000	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	0.0	0.0	-1087.0
9	Plant Item 9	10000	10000	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	0.0	0.0	-1087.0
10	Plant Item 10	10000	10000	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	0.0	0.0	-1087.0
11	Excavator for proposed lagoons & final restoration	600	600	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	90.0	6.2	34.2
12	Dump truck movements for proposed lagoons & final restoration	600	605	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	90.0	6.2	36.1
13	Dozer for proposed lagoons & final restoration	600	610	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	90.0	6.2	38.1
14	Loading shovel for proposed lagoons & final restoration	600	615	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	90.0	6.2	38.0
15	Plant Item 15	10000	10000	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	0.0	0.0	-1087.0

LINEAR short term Leqs  
Frequency Octave Band

	125	250	500	1000	2000	A
	-16	-9	-3	0	1	
27.11.08 Little Melton	72	68	62	61	57	66
26.09.06 Runfold	78	74	75	74	73	79
13.06.03 Homefield	65	63	62	63	66	69
28.02.98 Reigate Road	76	76	78	74	75	80
07.04.00 Reigate Road	88	81	76	81	76	84
28.02.98 Reigate Road	76	76	78	74	75	80
08.10.08 Wingmoor Farm	84	78	76	73	70	78
	0	0	93	0	0	90
	0	0	93	0	0	90
	0	0	93	0	0	90
23.02.06 South Holmwood	78	73	68	68	65	73
08.10.08 Wingmoor Farm	84	78	76	73	70	78
07.04.00 Reigate Road	88	81	76	81	76	84
13.06.03 Homefield	65	63	62	63	66	69
	0	0	93	0	0	90

Note: The GA Table is a linear regression to zero

Height	G.A. Limit
0	1.00
2	1.00
3	0.92
4	0.85
5	0.77
6	0.69
7	0.62
8	0.54
9	0.46
10	0.38
11	0.31
12	0.23
13	0.15
14	0.08
15	0.00

Note: The Range Table uses Table D2

Distance ratio	Correction
0	1.00
0.5	1.00
0.7	0.80
1	0.63
1.5	0.50
2	0.40
3	0.28
4	0.20
5	0.16
6	0.13
7	0.10
8	0.09
9	0.08
10	0.08
11	0.06

Note to model: Check individual LAeq lines for all sources

Note to model: Barrier illuminated zone is set to zero

Note to model: Method for mobile plant in a defined area is for slow moving plant typically of speeds from 5 km/h to 10 km/h working over short traverses

Conveyor LAeq, T = LWA / m + 10 log (on time %/100) - 5 - 10 log (distance) + 10 log (angle / 180) - barrier or ground attenuation

From p 130 Figure F.3	14	18	22	24	28	dB
BS5228 Upper Limit	14	18	22	24	28	dB

Rank	Resultant level from source spectrum minus calculated barrier reduction (frequency related)						BS5228 methods					Additional Method	Max Source or Receiver		
	125	250	500	1000	2000	A	1	2	3	4	5	Height	G.A.factor	Ref	
	Activity	Power	Defined Area	Haul Road	Conveyor										
11	72	68	62	61	57	66	21.2	21.2	21.2	-999.0	-999.0	132.9014	2	1.0	1
6	78	74	75	74	73	79	34.7	34.7	34.7	-999.0	-999.0	2947.539	3	0.9	2
5	65	63	62	63	66	69	35.2	35.2	35.2	-999.0	-999.0	3291.77	2	1.0	3
10	76	76	78	74	75	80	38.5	38.5	38.5	23.0	55.0	201.2799	2	1.0	4
4	88	81	76	81	76	84	35.9	35.9	35.9	-999.0	-999.0	3855.67	2	1.0	5
8	76	76	78	74	75	80	35.8	35.8	35.8	33.9	62.9	2476.596	2	1.0	6
9	84	78	76	73	70	78	40.5	40.5	40.5	25.0	57.0	319.0072	2	1.0	7
12	0	0	93	0	0	90	-1087.0	-1087.0	-1087.0	-999.0	-999.0	2E-109	2	1.0	8
12	0	0	93	0	0	90	-1087.0	-1087.0	-1087.0	-999.0	-999.0	2E-109	2	1.0	9
12	0	0	93	0	0	90	-1087.0	-1087.0	-1087.0	-999.0	-999.0	2E-109	2	1.0	10
7	78	73	68	68	65	73	34.2	34.2	34.2	-999.0	-999.0	2651.731	2	1.0	11
3	84	78	76	73	70	78	36.1	36.1	36.1	-999.0	-999.0	4118.123	2	1.0	12
1	88	81	76	81	76	84	38.1	38.1	38.1	-999.0	-999.0	6396.493	2	1.0	13
2	65	63	62	63	66	69	38.0	38.0	38.0	-999.0	-999.0	6269.833	2	1.0	14
12	0	0	93	0	0	90	-1087.0	-1087.0	-1087.0	-999.0	-999.0	2E-109	2	1.0	15

SEWELLS RESERVOIR CONSTRUCTION LIMITED (SRC) 4798 18-Dec-19 PWC

DOLLYMANS FARM, ESSEX

Receiver Height : 1.5 m  
Plant Site Height : 12 m AOD

Ref	Plant Item	Comments on Plant	Activity LAeq @ 10 m	Power LWA or LWA / m	1 hour On-time %	Capacity Tonnes	Source Height	2 way flow Q per hour	Speed V kph	Plant Set back(m)	BS5228 method
1	Soundproof generator for site offices (daytime only)	WBM plant noise database	63	91	100	2				0 m back	1 Activity
2	Washing plant for recycling (including screen)	WBM plant noise database	79	107	100	3				0 m back	1 Activity
3	Loading shovel for recycling (stockpiles / HGV)	WBM plant noise database	80	108	100	2				0 m back	1 Activity
4	Infill HGVs on internal haul road	WBM plant noise database	76	104	100	2	6	15		0 m back	4 Haul Road
5	Dozer spreading restoration material	WBM plant noise database	80	108	100	2				0 m back	1 Activity
6	Infill HGVs on site access road	WBM plant noise database	76	104	100	2	12	15		0 m back	4 Haul Road
7	Dump truck movements on internal haul road	WBM plant noise database	78	106	100	2	6	15		0 m back	4 Haul Road
8	Plant Item 8		-1027	-999	100	2				0 m back	1 Activity
9	Plant Item 9		-1027	-999	100	2				0 m back	1 Activity
10	Plant Item 10		-1027	-999	100	2				0 m back	1 Activity
11	Excavator for proposed lagoons & final restoration	Temporary operations	76	104	100	2				0 m back	1 Activity
12	Dump truck movements for proposed lagoons & final restoration	Temporary operations	78	106	100	2				5 m back	1 Activity
13	Dozer for proposed lagoons & final restoration	Temporary operations	80	108	100	2				10 m back	1 Activity
14	Loading shovel for proposed lagoons & final restoration	Temporary operations	80	108	100	2				15 m back	1 Activity
15	Plant Item 15		-1027	-999	100	2				0 m back	1 Activity

Location No. 4 Bersheda, north of A127

Receiver Height 15.5 m AOD

Site Noise Level for Items 1 to 7 43 dB LAeq, 1 hour, free field

Site Noise Level for Items 11 to 14 45 dB LAeq, 1 hour, free field

Ref	Plant Item	Plan Distance	Working Distance	Ground Height	Working Height/depth	Source Height	Angle Degrees	Range Metres	Barrier -Receiver	Barrier Height	Path Diff.	Barrier Atten.	Soft Ground %	Ground Atten.	Resultant LAeq
1	Soundproof generator for site offices (daytime only)	920	920	12.0	0.0	14.0	0	0	0	0.0	-1.000	0.0	90.0	7.0	16.7
2	Washing plant for recycling (including screen)	650	650	12.0	0.0	15.0	0	0	0	0.0	-1.000	0.0	90.0	5.9	36.9
3	Loading shovel for recycling (stockpiles / HGV)	650	650	12.0	0.0	14.0	0	0	0	0.0	-1.000	0.0	90.0	6.4	37.4
4	Infill HGVs on internal haul road	600	600	15.0	0.0	17.0	40	0	0	0.0	-1.000	0.0	90.0	6.2	26.5
5	Dozer spreading restoration material	500	500	18.0	0.0	20.0	0	0	0	0.0	-1.000	0.0	90.0	5.8	40.2
6	Infill HGVs on site access road	100	100	10.0	0.0	12.0	1	0	0	0.0	-1.000	0.0	90.0	2.7	24.8
7	Dump truck movements on internal haul road	600	600	15.0	0.0	17.0	40	0	0	0.0	-1.000	0.0	90.0	6.2	28.5
8	Plant Item 8	10000	10000	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	0.0	0.0	-1087.0
9	Plant Item 9	10000	10000	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	0.0	0.0	-1087.0
10	Plant Item 10	10000	10000	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	0.0	0.0	-1087.0
11	Excavator for proposed lagoons & final restoration	500	500	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	90.0	5.8	36.2
12	Dump truck movements for proposed lagoons & final restoration	500	505	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	90.0	5.9	38.1
13	Dozer for proposed lagoons & final restoration	500	510	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	90.0	5.9	40.0
14	Loading shovel for proposed lagoons & final restoration	500	515	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	90.0	5.9	39.9
15	Plant Item 15	10000	10000	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	0.0	0.0	-1087.0

LINEAR short term Leqs  
Frequency Octave Band

	125	250	500	1000	2000	A
	-16	-9	-3	0	1	
27.11.08 Little Melton	72	68	62	61	57	66
26.09.06 Runfold	78	74	75	74	73	79
13.06.03 Homefield	65	63	62	63	66	69
28.02.98 Reigate Road	76	76	78	74	75	80
07.04.00 Reigate Road	88	81	76	81	76	84
28.02.98 Reigate Road	76	76	78	74	75	80
08.10.08 Wingmoor Farm	84	78	76	73	70	78
	0	0	93	0	0	90
	0	0	93	0	0	90
	0	0	93	0	0	90
23.02.06 South Holmwood	78	73	68	68	65	73
08.10.08 Wingmoor Farm	84	78	76	73	70	78
07.04.00 Reigate Road	88	81	76	81	76	84
13.06.03 Homefield	65	63	62	63	66	69
	0	0	93	0	0	90

Note: The GA Table is a linear regression to zero

Height	G.A. Limit
0	1.00
2	1.00
3	0.92
4	0.85
5	0.77
6	0.69
7	0.62
8	0.54
9	0.46
10	0.38
11	0.31
12	0.23
13	0.15
14	0.08
15	0.00

Note: The Range Table uses Table D2

Distance ratio	Correction
0	1.00
0.5	1.00
0.7	0.80
1	0.63
1.5	0.50
2	0.40
3	0.28
4	0.20
5	0.16
6	0.13
7	0.10
8	0.09
9	0.08
10	0.08
11	0.06

Note to model: Check individual LAeq lines for all sources

Note to model: Barrier illuminated zone is set to zero

Note to model: Method for mobile plant in a defined area is for slow moving plant typically of speeds from 5 km/h to 10 km/h working over short traverses

Conveyor LAeq, T = LWA / m + 10 log (on time %/100) - 5 - 10 log (distance) + 10 log (angle / 180) - barrier or ground attenuation

From p 130 Figure F.3	14	18	22	24	28	dB
BS5228 Upper Limit	14	18	22	24	28	dB

Rank	Resultant level from source spectrum minus calculated barrier reduction (frequency related)						BS5228 methods					Additional Method	Max Source or Receiver		
	125	250	500	1000	2000	A	1	2	3	4	5	Height	G.A.factor	Ref	
	Activity	Power	Defined Area	Haul Road	Conveyor										
11	72	68	62	61	57	66	16.7	16.7	16.7	-999.0	-999.0	46.63584	2	1.0	1
6	78	74	75	74	73	79	36.9	36.9	36.9	-999.0	-999.0	4867.106	3	0.9	2
5	65	63	62	63	66	69	37.4	37.4	37.4	-999.0	-999.0	5474.725	2	1.0	3
9	76	76	78	74	75	80	34.2	34.2	34.2	26.5	58.5	447.2272	2	1.0	4
1	88	81	76	81	76	84	40.2	40.2	40.2	-999.0	-999.0	10411.74	2	1.0	5
10	76	76	78	74	75	80	53.3	53.3	53.3	24.8	53.7	300.4813	2	1.0	6
8	84	78	76	73	70	78	36.2	36.2	36.2	28.5	60.5	708.8073	2	1.0	7
12	0	0	93	0	0	90	-1087.0	-1087.0	-1087.0	-999.0	-999.0	2E-109	2	1.0	8
12	0	0	93	0	0	90	-1087.0	-1087.0	-1087.0	-999.0	-999.0	2E-109	2	1.0	9
12	0	0	93	0	0	90	-1087.0	-1087.0	-1087.0	-999.0	-999.0	2E-109	2	1.0	10
7	78	73	68	68	65	73	36.2	36.2	36.2	-999.0	-999.0	4144.99	2	1.0	11
4	84	78	76	73	70	78	38.1	38.1	38.1	-999.0	-999.0	6411.153	2	1.0	12
2	88	81	76	81	76	84	40.0	40.0	40.0	-999.0	-999.0	9918.661	2	1.0	13
3	65	63	62	63	66	69	39.9	39.9	39.9	-999.0	-999.0	9684.39	2	1.0	14
12	0	0	93	0	0	90	-1087.0	-1087.0	-1087.0	-999.0	-999.0	2E-109	2	1.0	15

SEWELLS RESERVOIR CONSTRUCTION LIMITED (SRC) 4798 18-Dec-19 PWC

DOLLYMANS FARM, ESSEX

Receiver Height : 1.5 m  
Plant Site Height : 12 m AOD

Ref	Plant Item	Comments on Plant	Activity LAeq @ 10 m	Power LWA or LWA / m	1 hour On-time %	Capacity Tonnes	Source Height	2 way flow Q per hour	Speed V kph	Plant Set back(m)	BS5228 method
1	Soundproof generator for site offices (daytime only)	WBM plant noise database	63	91	100	2				0 m back	1 Activity
2	Washing plant for recycling (including screen)	WBM plant noise database	79	107	100	3				0 m back	1 Activity
3	Loading shovel for recycling (stockpiles / HGV)	WBM plant noise database	80	108	100	2				0 m back	1 Activity
4	Infill HGVs on internal haul road	WBM plant noise database	76	104	100	2		6	15	0 m back	4 Haul Road
5	Dozer spreading restoration material	WBM plant noise database	80	108	100	2				0 m back	1 Activity
6	Infill HGVs on site access road	WBM plant noise database	76	104	100	2		12	15	0 m back	4 Haul Road
7	Dump truck movements on internal haul road	WBM plant noise database	78	106	100	2		6	15	0 m back	4 Haul Road
8	Plant Item 8		-1027	-999	100	2				0 m back	1 Activity
9	Plant Item 9		-1027	-999	100	2				0 m back	1 Activity
10	Plant Item 10		-1027	-999	100	2				0 m back	1 Activity
11	Excavator for proposed lagoons & final restoration	Temporary operations	76	104	100	2				0 m back	1 Activity
12	Dump truck movements for proposed lagoons & final restoration	Temporary operations	78	106	100	2				5 m back	1 Activity
13	Dozer for proposed lagoons & final restoration	Temporary operations	80	108	100	2				10 m back	1 Activity
14	Loading shovel for proposed lagoons & final restoration	Temporary operations	80	108	100	2				15 m back	1 Activity
15	Plant Item 15		-1027	-999	100	2				0 m back	1 Activity

Location No. 5 Little Spinney, London Road

Receiver Height 11.5 m AOD

Site Noise Level for Items 1 to 7 41 dB LAeq, 1 hour, free field

Site Noise Level for Items 11 to 14 44 dB LAeq, 1 hour, free field

Ref	Plant Item	Plan Distance	Working Distance	Ground Height	Working Height/depth	Source Height	Angle Degrees	Range Metres	Barrier -Receiver	Barrier Height	Path Diff.	Barrier Atten.	Soft Ground %	Ground Atten.	Resultant LAeq
1	Soundproof generator for site offices (daytime only)	880	880	12.0	0.0	14.0	0	0	0	0.0	-1.000	0.0	90.0	7.0	17.2
2	Washing plant for recycling (including screen)	950	950	12.0	0.0	15.0	0	0	0	0.0	-1.000	0.0	90.0	6.6	32.9
3	Loading shovel for recycling (stockpiles / HGV)	950	950	12.0	0.0	14.0	0	0	0	0.0	-1.000	0.0	90.0	7.1	33.3
4	Infill HGVs on internal haul road	750	750	15.0	0.0	17.0	30	0	0	0.0	-1.000	0.0	90.0	6.6	23.9
5	Dozer spreading restoration material	600	600	12.0	0.0	14.0	0	0	0	0.0	-1.000	0.0	90.0	6.2	38.2
6	Infill HGVs on site access road	850	850	10.0	0.0	12.0	60	0	0	0.0	-1.000	0.0	90.0	6.9	29.1
7	Dump truck movements on internal haul road	750	750	15.0	0.0	17.0	30	0	0	0.0	-1.000	0.0	90.0	6.6	25.9
8	Plant Item 8	10000	10000	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	0.0	0.0	-1087.0
9	Plant Item 9	10000	10000	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	0.0	0.0	-1087.0
10	Plant Item 10	10000	10000	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	0.0	0.0	-1087.0
11	Excavator for proposed lagoons & final restoration	550	550	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	90.0	6.0	35.2
12	Dump truck movements for proposed lagoons & final restoration	550	555	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	90.0	6.0	37.1
13	Dozer for proposed lagoons & final restoration	550	560	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	90.0	6.1	39.0
14	Loading shovel for proposed lagoons & final restoration	550	565	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	90.0	6.1	38.9
15	Plant Item 15	10000	10000	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	0.0	0.0	-1087.0

Note: The GA Table is a linear regression to zero

Note: The Range Table uses Table D2

LINEAR short term Leqs					
Frequency Octave Band					
	125	250	500	1000	2000
	-16	-9	-3	0	1
27.11.08 Little Melton	72	68	62	61	57
26.09.06 Runfold	78	74	75	74	73
13.06.03 Homefield	65	63	62	63	66
28.02.98 Reigate Road	76	76	78	74	75
07.04.00 Reigate Road	88	81	76	81	76
28.02.98 Reigate Road	76	76	78	74	75
08.10.08 Wingmoor Farm	84	78	76	73	70
	0	0	93	0	0
	0	0	93	0	0
	0	0	93	0	0
23.02.06 South Holmwood	78	73	68	68	65
08.10.08 Wingmoor Farm	84	78	76	73	70
07.04.00 Reigate Road	88	81	76	81	76
13.06.03 Homefield	65	63	62	63	66
	0	0	93	0	0

Height	G.A. Limit
0	1.00
2	1.00
3	0.92
4	0.85
5	0.77
6	0.69
7	0.62
8	0.54
9	0.46
10	0.38
11	0.31
12	0.23
13	0.15
14	0.08
15	0.00

Distance ratio	Correction
0	1.00
0.5	1.00
0.7	0.80
1	0.63
1.5	0.50
2	0.40
3	0.28
4	0.20
5	0.16
6	0.13
7	0.10
8	0.09
9	0.08
10	0.08
11	0.06

Note to model: Check individual LAeq lines for all sources

Note to model: Barrier illuminated zone is set to zero

Note to model: Method for mobile plant in a defined area is for slow moving plant typically of speeds from 5 km/h to 10 km/h working over short traverses

Conveyor LAeq, T = LWA / m + 10 log (on time %/100) - 5 - 10 log (distance) + 10 log (angle / 180) - barrier or ground attenuation

From p 130 Figure F.3	14	18	22	24	28	dB
BS5228 Upper Limit	14	18	22	24	28	dB

Rank	Resultant level from source spectrum minus calculated barrier reduction (frequency related)						BS5228 methods					Additional Method	Max Source or Receiver		
	125	250	500	1000	2000	A	1	2	3	4	5	Height	G.A.factor	Ref	
	Activity	Power	Defined Area	Haul Road	Conveyor										
11	72	68	62	61	57	66	17.2	17.2	17.2	-999.0	-999.0	52.00169	2	1.0	1
7	78	74	75	74	73	79	32.9	32.9	32.9	-999.0	-999.0	1946.214	3	0.9	2
6	65	63	62	63	66	69	33.3	33.3	33.3	-999.0	-999.0	2160.614	2	1.0	3
10	76	76	78	74	75	80	31.9	31.9	31.9	23.9	55.8	242.7001	2	1.0	4
3	88	81	76	81	76	84	38.2	38.2	38.2	-999.0	-999.0	6660.847	2	1.0	5
8	76	76	78	74	75	80	30.5	30.5	30.5	29.1	58.1	809.676	2	1.0	6
9	84	78	76	73	70	78	33.9	33.9	33.9	25.9	57.8	384.6537	2	1.0	7
12	0	0	93	0	0	90	-1087.0	-1087.0	-1087.0	-999.0	-999.0	2E-109	2	1.0	8
12	0	0	93	0	0	90	-1087.0	-1087.0	-1087.0	-999.0	-999.0	2E-109	2	1.0	9
12	0	0	93	0	0	90	-1087.0	-1087.0	-1087.0	-999.0	-999.0	2E-109	2	1.0	10
5	78	73	68	68	65	73	35.2	35.2	35.2	-999.0	-999.0	3281.795	2	1.0	11
4	84	78	76	73	70	78	37.1	37.1	37.1	-999.0	-999.0	5087.24	2	1.0	12
1	88	81	76	81	76	84	39.0	39.0	39.0	-999.0	-999.0	7887.499	2	1.0	13
2	65	63	62	63	66	69	38.9	38.9	38.9	-999.0	-999.0	7717.583	2	1.0	14
12	0	0	93	0	0	90	-1087.0	-1087.0	-1087.0	-999.0	-999.0	2E-109	2	1.0	15