ALLEN NEWPORT LTD (PDE CONSULTING LTD) **4980** **03-Nov-20** **PWC**

Receiver Height : 1.5 m

Infill Barrier Height : 3 m for Mill Farm House

MINOR EXTENSION TO CAVENHAM QUARRY SUFFOLK

Plant Site Ground Height : 19 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	10 Plant Set back(m)		BS5228 method	
1	Excavator for mineral extraction (campaign basis)		76	104	1		2			10	m back	1	Activity
2	Dump trucks for mineral extraction (campaign basis)		78	106	1		2	12	16	10	m back	4	Haul Road
3	Dozer for tipped material (most days)		80	108	100		2			10	m back	1	Activity
4	Washing plant for processing the mineral		80	108	1		5			0	m back	1	Activity
5	Loading shovel for processed mineral		78	106	1		2			0	m back	1	Activity
6	Loading shovel for recycled material		78	106	100		2			0	m back	1	Activity
7	Screens x 2 for recycling facility		85	113	100		4			0	m back	1	Activity
8	Crusher for recycling facility		82	110	100		4			0	m back	1	Activity
9	Excavator for recycling facility		76	104	100		4			0	m back	1	Activity
10	Dump trucks plant site to working area		78	106	1		2	12	16	0	m back	4	Haul Road
11	HGVs on access road (north south)		76	104	100		2	12	16	0	m back	4	Haul Road
12	HGVs on access road (east west)		76	104	100		2	12	16	0	m back	4	Haul Road
13	Excavator (soils and overburden / bund removal)	final restoration operations	76	104	100		2			0	m back	1	Activity
14	Dump Trucks (soils and overburden / bund removal)	final restoration operations	78	106	100		2			10	m back	3	Defined Area
15	Dozer (soils and overburden / bund removal)	final restoration operations	80	108	100		2			10	m back	1	Activity

Location No. **3** **Cavenham (junction The Street)**

Receiver Height 20.5 m AOD

Site Noise Level for Items 3, 6 to 9, 11 & 12 **42** dB LAeq, 1 hour, free field infill + recycling facility + access road

Site Noise Level for Items 13 to 15 **41** dB LAeq, 1 hour, free field temporary operations (soils and overburden stripping, bund formation and final restoration)

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	Excavator for mineral extraction (campaign basis)	600	610	22.0	0.0	24.0	0	0	0	0.0	-1.000	0.0	90.0	6.2	14.1
2	Dump trucks for mineral extraction (campaign basis)	600	610	22.0	0.0	24.0	10	100	0	0.0	-1.000	0.0	90.0	6.2	5.1
3	Dozer for tipped material (most days)	600	610	22.0	0.0	24.0	0	0	0	0.0	-1.000	0.0	90.0	6.2	38.1
4	Washing plant for processing the mineral	1200	1200	19.0	0.0	24.0	0	0	0	0.0	-1.000	0.0	90.0	5.8	12.6
5	Loading shovel for processed mineral	1200	1200	19.0	0.0	21.0	0	0	0	0.0	-1.000	0.0	90.0	7.6	8.9
6	Loading shovel for recycled material	1250	1250	19.0	0.0	21.0	0	0	0	0.0	-1.000	0.0	90.0	7.6	28.4
7	Screens x 2 for recycling facility	1250	1250	19.0	0.0	23.0	0	0	0	0.0	-1.000	0.0	90.0	6.5	36.6
8	Crusher for recycling facility	1250	1250	19.0	0.0	23.0	0	0	0	0.0	-1.000	0.0	90.0	6.5	33.6
9	Excavator for recycling facility	1250	1250	19.0	0.0	23.0	0	0	0	0.0	-1.000	0.0	90.0	6.5	27.6
10	Dump trucks plant site to working area	150	150	0.0	0.0	2.0	10	0	0	0.0	-1.000	0.0	90.0	3.5	13.9
11	HGVs on access road (north south)	150	150	0.0	0.0	2.0	10	0	0	0.0	-1.000	0.0	90.0	3.5	31.9
12	HGVs on access road (east west)	650	650	0.0	0.0	2.0	35	0	0	0.0	-1.000	0.0	90.0	6.4	28.2
13	Excavator (soils and overburden / bund removal)	590	590	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	90.0	6.2	34.4
14	Dump Trucks (soils and overburden / bund removal)	590	600	0.0	0.0	2.0	0	300	0	0.0	-1.000	0.0	90.0	6.2	36.2
15	Dozer (soils and overburden / bund removal)	590	600	0.0	0.0	2.0	0	0	0	0.0	-1.000	0.0	90.0	6.2	38.2

Note: The GA Table is a linear regresion 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

LINEAR short term Leqs

	Frequency	Octave Band				
	125	250	500	1000	2000	A
	-16	-9	-3	0	1	
East Leake 11.07.07	70	68	67	65	63	70
Wingmoor Farm 08.10.(	84	78	76	73	70	78
Freehay Quarry 11.01.1	82	72	75	74	71	78
Uttoxeter 07.05.09	75	79	81	83	79	86
Hengrove Farm 04.09.0	78	74	72	71	68	75
Hengrove Farm 04.09.0	78	74	72	71	68	75
Bryants & Reach 19.10.	73	69	66	65	62	69
Bryants & Reach 19.10.	73	69	66	65	62	69
East Leake 11.07.07	70	68	67	65	63	70
Wingmoor Farm 08.10.(	84	78	76	73	70	78
Husbands Bosworth 02.	79	75	79	75	73	80
Husbands Bosworth 02.	79	75	79	75	73	80
East Leake 11.07.07	70	68	67	65	63	70
Wingmoor Farm 08.10.(	84	78	76	73	70	78
Freehay Quarry 11.01.1	82	72	75	74	71	78

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		
							1	2	3	4	5		Height	G.A.factor	Ref
	125	250	500	1000	2000	A	Activity	Power	Defined Area	Haul Road	**Conveyor**				
11	70	68	67	65	63	70	14.1	14.1	14.1	-999.0	-999.0	25.4649	2	1.0	1
15	84	78	76	73	70	78	16.1	16.1	16.1	5.1	34.4	3.243848	2	1.0	2
2	82	72	75	74	71	78	38.1	38.1	38.1	-999.0	-999.0	6396.493	2	1.0	3
13	75	79	81	83	79	86	12.6	12.6	12.6	-999.0	-999.0	18.21304	5	0.8	4
14	78	74	72	71	68	75	8.9	8.9	8.9	-999.0	-999.0	7.69141	2	1.0	5
8	78	74	72	71	68	75	28.4	28.4	28.4	-999.0	-999.0	695.9379	2	1.0	6
3	73	69	66	65	62	69	36.6	36.6	36.6	-999.0	-999.0	4571.396	4	0.8	7
6	73	69	66	65	62	69	33.6	33.6	33.6	-999.0	-999.0	2291.125	4	0.8	8
10	70	68	67	65	63	70	27.6	27.6	27.6	-999.0	-999.0	575.5047	4	0.8	9
12	84	78	76	73	70	78	31.0	31.0	31.0	13.9	43.2	24.80027	2	1.0	10
7	79	75	79	75	73	80	49.0	49.0	49.0	31.9	61.2	1564.791	2	1.0	11
9	79	75	79	75	73	80	33.4	33.4	33.4	28.2	57.4	653.3298	2	1.0	12
5	70	68	67	65	63	70	34.4	34.4	34.4	-999.0	-999.0	2763.202	2	1.0	13
4	84	78	76	73	70	78	36.2	36.2	36.2	-999.0	-999.0	4202.71	2	1.0	14
1	82	72	75	74	71	78	38.2	38.2	38.2	-999.0	-999.0	6660.847	2	1.0	15