planning
transport
design
environment
infrastructure

APPENDIX 7.3: Construction Noise Model Input Data

Wheelabrator Kemsley Generating Station (K3) and Wheelabrator Kemsley North (WKN) Waste to Energy Facility DCO

S42 Draft ES **PINS ref: EN010083**

Appendix 7.3: Construction Noise Model Input Data

Noise Model Input Data

Table 1: Prediction of L_{Aeq} Levels

Source	%on-time	Sound Power Level, L_W (dB) per Octave Band							
		63Hz	*125Hz*	*250Hz*	*500Hz*	*1kHz*	*2kHz*	*4kHz*	*8kHz*
Ground Excavations									
Dozer . (2.12) (x 2)	80	113	102	104	101	100	106	90	84
Tracked Excavator . (2.14) (x 2)	80	113	106	105	105	101	99	96	91
Dumper (Idling) . (4.5) (x 2)	100	101	92	83	83	88	84	78	71
Lorry. (2.34) (dB/m of line source) [60 mpd]	60 mpd*	68	73	73	73	69	68	63	61
Pre-cast Concrete Piling - Hydraulic Hammer Rig									
Dozer . (2.12)	80	113	102	104	101	100	106	90	84
Tracked Excavator . (2.14)	80	113	106	105	105	101	99	96	91
Hydraulic Hammer Rig . (3.1)	30	110	110	110	117	111	106	103	98
Tracked Mobile Crane . (3.29)	50	109	105	97	95	90	88	89	79
Diesel Generator . (4.77)	100	98	90	90	85	81	80	76	69
Diesel Generator . (4.87)	100	105	100	92	88	87	85	82	70
Building Construction									
Dumper (Idling) . (4.5)	100	101	92	83	83	88	84	78	71
Concrete Mixer Truck (Discharging) & Concrete Pump (Pumping) . (4.28)	100	107	108	101	100	97	96	87	81
Poker Vibrator . (4.34)	80	90	98	98	92	90	89	87	84
Mobile Telescopic Crane . (4.41)	50	101	99	96	98	94	91	82	77
Tracked Mobile Crane . (4.50)	50	101	92	83	83	88	84	78	71
Diesel Generator . (4.77)	100	98	90	90	85	81	80	76	69
Diesel Generator . (4.87)	100	105	100	92	88	87	85	82	70
Lorry. (2.34) (dB/m of line source) [80 mpd]	80 mpd*	69	74	74	74	70	69	64	62
Night-time Concrete Pour									
Concrete Mixer Truck (Discharging) & Concrete Pump (Pumping) . (4.28)	100	107	108	101	100	97	96	87	81
Poker Vibrator . (4.34)	80	90	98	98	92	90	89	87	84
Diesel Generator . (4.77)	100	98	90	90	85	81	80	76	69
Diesel Generator . (4.87)	100	105	100	92	88	87	85	82	70

*mpd = maximum average 2-way movements per day

Table 2: Prediction of L_{Amax} Levels

Source		Sound Power Level, L_W (dB) per Octave Band							
		63Hz	*125Hz*	*250Hz*	*500Hz*	*1kHz*	*2kHz*	*4kHz*	*8kHz*
Hydraulic Hammer Rig . (3.1)		119	119	119	126	120	115	112	107

Brigade Alarms: *http://www.reverseinsafety.co.uk/catalogue/index.php*

Fixed medium duty alarm of : 97 dB(A) @ 1 m

and, on the basis of hemispherical geometric spreading: 85 dB L_{Amax} at 16 m

80 dB L_{Amax} at 50 m