

planning
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Appendix 7.3 - WKN Proposed Development Construction Noise and Vibration Assessment

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

September 2019 -Submission Version

PINS ref: EN010083



Appendix 7.3: WKN Proposed Development Construction Noise and Vibration Assessment

NVSR Receptors excluding Ecology

Daytime

Receptor	Usage	Baseline Ambient Noise Level, L _{Aeq, 12-hours} (dB)	Noise Level from Construction Site, L _{Aeq, 12-hours} (dB)				Ambient Noise Change (dB)				Significant?			
			Ground Excavations	Piling	Building Construction	Concrete pour	Ground Excavations	Piling	Building Construction	Concrete pour	Ground Excavations	Piling	Building Construction	Concrete pour
Kemsley Primary School	Edu	47	26.3	27.6	19.9	17.9	0.0	0.0	0.0	0.0	No	No	No	No
Kemsley Primary School	Edu	47	27.8	29.5	22.1	20.0	0.1	0.1	0.0	0.0	No	No	No	No
Marsh Rise	Res	47	29.9	31.1	24.2	22.2	0.1	0.1	0.0	0.0	No	No	No	No
Milton Creek	Rec/Eco	47	35.7	26.4	26.7	15.3	0.3	0.0	0.0	0.0	No	No	No	No
Milton Creek	Rec/Eco	47	20.6	20.6	17.2	12.8	0.0	0.0	0.0	0.0	No	No	No	No
Milton Creek (north)	Rec/Eco	47	40.4	40.6	30.3	20.4	0.9	0.9	0.1	0.0	No	No	No	No
Milton Creek (south)	Rec/Eco	47	23.3	22.4	19.5	14.0	0.0	0.0	0.0	0.0	No	No	No	No
North of Reedbed	Eco	47	44.3	44.2	36.6	35.1	1.9	1.8	0.4	0.3	No	No	No	No
Off Reams Way	Res	47	29.2	29.8	22.9	21.2	0.1	0.1	0.0	0.0	No	No	No	No
Reams Way	Res	47	31.3	32.2	25.0	23.0	0.1	0.1	0.0	0.0	No	No	No	No
Reams Way N	Res	47	30.8	32.3	24.7	22.7	0.1	0.1	0.0	0.0	No	No	No	No
Reams Way S	Res	47	30.7	32.4	24.8	22.6	0.1	0.1	0.0	0.0	No	No	No	No
Recreation Way N	Res	47	30.0	31.3	24.4	22.3	0.1	0.1	0.0	0.0	No	No	No	No
Recreation Way S	Res	47	25.6	28.1	20.3	19.2	0.0	0.1	0.0	0.0	No	No	No	No
Reedbed (E)	Eco	47	60.1	53.8	48.8	42.5	13.3	7.6	4.0	1.3	Yes	Yes	No	No
Reedbed (W)	Eco	47	56.4	54.8	46.7	43.5	9.9	8.5	2.9	1.6	Yes	Yes	No	No
The Swale	Rec/Eco	47	43.9	43.9	36.8	34.3	1.7	1.7	0.4	0.2	No	No	No	No
Walsby Drive N	Res	47	27.4	29.4	22.3	20.6	0.0	0.1	0.0	0.0	No	No	No	No
Walsby Drive S	Res	47	27.4	29.2	22.0	20.4	0.0	0.1	0.0	0.0	No	No	No	No

Night-time

Receptor	Usage	Baseline Ambient Noise Level, L _{Aeq, 8-hours} (dB)	Noise Level from Construction Site, L _{Aeq, 8-hours} (dB)	Ambient Noise Change (dB)	Significant?
			Concrete Pour	Concrete Pour	Concrete Pour
Kemsley Primary School	Edu	45	17.9	0.0	No
Kemsley Primary School	Edu	45	20.0	0.0	No
Marsh Rise	Res	45	22.2	0.0	No
Milton Creek	Rec	45	15.3	0.0	No
Milton Creek	Rec	45	12.8	0.0	No
Milton Creek (north)	Rec	45	20.4	0.0	No
Milton Creek (south)	Rec	45	14.0	0.0	No
North of Reedbed	Eco	45	35.1	0.4	No
Off Reams Way	Res	45	21.2	0.0	No
Reams Way	Res	45	23.0	0.0	No
Reams Way N	Res	45	22.7	0.0	No
Reams Way S	Res	45	22.6	0.0	No
Recreation Way N	Res	45	22.3	0.0	No
Recreation Way S	Res	45	19.2	0.0	No
Reedbed (E)	Eco	45	42.5	1.9	No
Reedbed (W)	Eco	45	43.5	2.3	No
The Swale	Res	45	34.3	0.4	No
Walsby Drive N	Res	45	20.6	0.0	No
Walsby Drive S	Res	45	20.4	0.0	No

Appendix 7.3: WKN Proposed Development Construction Noise and Vibration Assessment

Ecological / Recreational Receptors

Receptor	Usage	Ambient Noise Level, L _{Aeq,12-hours}	Noise Level from Construction Site, L _{Aeq,12-hours} (dB)				Ambient Noise Change (dB)			
			Ground Excavations	Piling	Building Construction	Concrete pour	Ground Excavations	Piling	Building Construction	Concrete pour
Kemsley Primary School	Edu	47	26.3	27.6	19.9	17.9	0.0	0.0	0.0	0.0
Kemsley Primary School	Edu	47	27.8	29.5	22.1	20.0	0.1	0.1	0.0	0.0
Marsh Rise	Res	47	29.9	31.1	24.2	22.2	0.1	0.1	0.0	0.0
Milton Creek	Rec/Eco	47	35.7	26.4	26.7	15.3	0.3	0.0	0.0	0.0
Milton Creek	Rec/Eco	47	20.6	20.6	17.2	12.8	0.0	0.0	0.0	0.0
Milton Creek (north)	Rec/Eco	47	40.4	40.6	30.3	20.4	0.9	0.9	0.1	0.0
Milton Creek (south)	Rec/Eco	47	23.3	22.4	19.5	14.0	0.0	0.0	0.0	0.0
North of Reedbed	Eco	47	44.3	44.2	36.6	35.1	1.9	1.8	0.4	0.3
Off Reams Way	Res	47	29.2	29.8	22.9	21.2	0.1	0.1	0.0	0.0
Reams Way	Res	47	31.3	32.2	25.0	23.0	0.1	0.1	0.0	0.0
Reams Way N	Res	47	30.8	32.3	24.7	22.7	0.1	0.1	0.0	0.0
Reams Way S	Res	47	30.7	32.4	24.8	22.6	0.1	0.1	0.0	0.0
Recreation Way N	Res	47	30.0	31.3	24.4	22.3	0.1	0.1	0.0	0.0
Recreation Way S	Res	47	25.6	28.1	20.3	19.2	0.0	0.1	0.0	0.0
Reedbed (E)	Eco	47	60.1	53.8	48.8	42.5	13.3	7.6	4.0	1.3
Reedbed (W)	Eco	47	56.4	54.8	46.7	43.5	9.9	8.5	2.9	1.6
The Swale	Rec/Eco	47	43.9	43.9	36.8	34.3	1.7	1.7	0.4	0.2
Walsby Drive N	Res	47	27.4	29.4	22.3	20.6	0.0	0.1	0.0	0.0
Walsby Drive S	Res	47	27.4	29.2	22.0	20.4	0.0	0.1	0.0	0.0

Vibration

k _p	5	piles driven to refusal
W	50000	nominal hammer energy (J)
r	60	slope distance to pile toe (m)
V _{res}	5	resultant peak particle velocity (mm/s), freefield