LAeq Summary

Average Measured LAeq (wind speed <= 5m/s)

	Weekday 08:00 - 18:30	Saturday 08:00 - 18:00	Sunday 08:00 - 13:00	Weekday Night-time 23:00 - 07:00
Hall Farm (A)	45.1	44.0	40.7	33.7
Ormesby (B)	49.0	48.5	51.4	44.9
Dowe Hill Farm(C)	50.4	49.9	52.7	44.9
Carr Farm (D)	45.6	45.0	43.1	44.9
Decoy Farm (E)	53.2	53.0	53.4	45.2
Common Farm (F)	46.6	46.1	42.3	40.1

Construction Phase

Measured LAeq,10 min Average 08:00 - 18:30 Weekday (<5 m/s)	Activity Noise Level @ 10m dB	Overall Hall Farm		Overall Ormesby		Overall Dowe Hill		Overall Carr Farm		Overall Decoy Farm		Overall Common Farm	
			Noise Level Difference		Noise Level Difference		Noise Level Difference		Noise Level Difference		Noise Level Difference		Noise Level Difference
On-Site Access Tracks & Crane Hardstanding		460m		330m		225m		520m		700m		1000m	
Excavate topsoil and subsoil	79	49	4	52	3	55	4	48	3	54	0	47	1
Prepare surface to receive geotextile	84	52	7	55	6	58	7	51	5	54	1	49	2
Place and compact stone (supplied off site)	86	54	9	57	8	60	10	53	7	55	2	50	3
Excavate drainage ditches along side of tracks (if required)	72	46	1	50	1	51	1	46	1	53	0	47	0
Haul Road		***46***	1	***50***	1	***51***	1	46	1	***53***	0	***47***	0
Wind Turbine Foundations													
Excavate topsoil and subsoil to required depth	72	46	1	49	0	51	0	46	1	53	0	47	0
Compact base of excavation	71	46	0	49	0	51	0	46	1	53	0	47	0
Lay binding layer of concrete over base of excavation	82	49	4	51	2	52	2	50	4	54	1	48	1
Form and install reinforcing steel	81	48	3	51	2	52	2	49	4	54	1	48	1
Install embedment section	81	48	3	51	2	52	2	49	4	54	1	48	1
Erect shuttering	81	48	3	51	2	52	2	49	4	54	1	48	1
Pour Concrete	82	49	4	51	2	53	2	50	4	54	1	48	1
Backfill with topsoil as necessary	71	46	0	49	0	51	0	46	1	53	0	47	0
Haul Road		***47***	2	***50***	1	***52***	1	47	2	***53***	0	***47***	1
Wind Turbine Erection	81	48	3	51	2	52	2	49	4	54	1	48	1
Haul Road		***46***	1	***49***	0	***51***	0	46	0	***53***	0	***47***	0

Hard ground distance attenuation
Kh = 20log R/10
R - distance from source to receiver (m)

Haul Road Calculation

LAeq = Lwa - 33 + 10 log Q - 10 Log V - 10 log d

LWA - Sound power level of the plant (dB)
Q - Number of vehicles per hour
V - Average vehicle speed (km/h)
d - Distance of the receiving position from the centre of haul road. (m)

Construction Phase

	Activity Noise Level @ 10m dB
On-Site Access Tracks & Crane Hardstanding	
Excavate topsoil and subsoil	79
Prepare surface to receive geotextile	84
Place and compact stone (supplied off site)	86
Excavate drainage ditches along side of tracks (if required)	72
Wind Turbine Foundations	
Excavate topsoil and subsoil to required depth	72
Compact base of excavation	71
Lay binding layer of concrete over base of excavation	82
Form and install reinforcing steel	81
Install embedment section	81
Erect shuttering	81
Pour Concrete	82
Backfill with topsoil as necessary	71
Wind Turbine Erection	81

Hemsby Construction Phase

Construction Phase	Equipment	Noise Source BS5228	LAeq @ 10m	Distance to Nearest Receiver (m)	Kh	(t/T)*100	Partial Exposure	Barrier Attenuation	Noise Level @ NSR LAeq,1h (dB)	Overall LAeq,1h (dB)
On-Site Access Tracks & Crane Hardstanding										
Excavate topsoil and subsoil	Tracked Excavator (22t)	Table D.3 ref 35	78	10	0.0	1	0.0	0	78.0	**79**
	Wheeled Loader	Table D.3 ref 3	74	10	0.0	1	0.0	0	74.0	
Prepare surface to receive geotextile	Dozer	Table D.3 ref 65	81	10	0.0	1	0.0	0	81.0	**84**
	Tracked Excavator	Table D.3 ref 96	81	10	0.0	1	0.0	0	81.0	
Place and compact stone (supplied off site)	Dump Truck (Tipping Fill)	Table D.3 ref 60	82	10	0.0	0.5	-3.0	0	79.0	**86**
	Dump Truck	Table D.9 ref 36	87	10	0.0	0.5	-3.0	0	84.0	
	Lorry	Table D.3 ref 57	80	10	0.0	0.5	-3.0	0	77.0	
	Dozer	Table D.3 ref 65	81	10	0.0	0.5	-3.0	0	78.0	
Excavate drainage ditches along side of tracks (if required)	Tracked Excavator	Table D.3 ref 108	69	10	0.0	0.75	-1.2	0	67.8	**72**
	Tracked Excavator	Table D.3 ref 108	69	10	0.0	0.75	-1.2	0	67.8	
	Water Pump	Table D.3 ref 86	62	10	0.0	1	0.0	0	62.0	
	Water Pump	Table D.3 ref 86	62	10	0.0	1	0.0	0	62.0	
Wind Turbine Foundations										
Excavate topsoil and subsoil to required depth	Tracked Excavator	Table D.8 ref 33	74	10	0.0	0.5	-3.0	0	71.0	**72**
	Water Pump	Table D.3 ref 86	62	10	0.0	1	0.0	0	62.0	
	Water Pump	Table D.3 ref 86	62	10	0.0	1	0.0	0	62.0	
Compact base of excavation	Vibratory Roller	Table D.3 ref 115	74	10	0.0	0.5	-3.0	0	71.0	**71**
Lay binding layer of concrete over base of excavation	Large Lorry Concrete Mixer	Table D.6 ref 21	74	10	0.0	0.5	-3.0	0	71.0	**82**
	Large Lorry Concrete Mixer	Table D.6 ref 21	74	10	0.0	0.5	-3.0	0	71.0	
	Lorry Mounted Concrete Pump	Table D.6 ref 34	79	10	0.0	0.5	-3.0	0	76.0	
	Lorry Mounted Concrete Pump	Table D.6 ref 34	79	10	0.0	0.5	-3.0	0	76.0	
	Poker Vibrator	Table D.6 ref 43	77	10	0.0	0.5	-3.0	0	74.0	
	Poker Vibrator	Table D.6 ref 43	77	10	0.0	0.5	-3.0	0	74.0	
Form and install reinforcing steel	Wheeled mobile telescopic crane	Table D.7 ref 103	82	10	0.0	0.6	-2.2	0	79.8	**81**
	Wheeled mobile telescopic crane	Table D.7 ref 102	75	10	0.0	1	0.0	0	75.0	
Install embedment section	Wheeled mobile telescopic crane	Table D.7 ref 103	82	10	0.0	0.6	-2.2	0	79.8	**81**
	Wheeled mobile telescopic crane	Table D.7 ref 102	75	10	0.0	1	0.0	0	75.0	
Erect shuttering	Wheeled mobile telescopic crane	Table D.7 ref 103	82	10	0.0	0.6	-2.2	0	79.8	**81**
	Wheeled mobile telescopic crane	Table D.7 ref 102	75	10	0.0	1	0.0	0	75.0	
Pour Concrete	Large Lorry Concrete Mixer	Table D.6 ref 34	79	10	0.0	1	0.0	0	79.0	**82**
	Large Lorry Concrete Mixer	Table D.6 ref 34	79	10	0.0	1	0.0	0	79.0	
Backfill with topsoil as necessary	Tracked Excavator x2	Table D.3 ref 108	72	10	0.0	0.75	-1.2	0	70.8	**71**
Wind Turbine Erection										
	Wheeled mobile telescopic crane	Table D.7 ref 102	75	10	0.0	1	0.0	0	75.0	**81**
	Wheeled mobile telescopic crane	Table D.7 ref 103	82	10	0.0	0.6	-2.2	0	79.8	

Haul Road Calcs

	Lorries Total	Days	Per Day	Per Hour
Access Tracks	26	8	3	**3**
	20	8	3	3
	6	2	3	3
Wind Turbine Foundation				**8**
Removal of excess soil	100	16	6	3
Concrete	240	4	60	8
Wind Turbine Erection				**2**
Delivery	34	8	4	

Vehicles	Lw
Soil & Concrete (Lorry)	105.5
Wind Turbine Erection (Low Loader)	105.5

LAeq = Lwa - 33 + 10 log Q - 10 Log V - 10 log d

LWA - Sound power level of the plant (dB)
Q - Number of vehicles per hour
V - Average vehicle speed (km/h)
d - Distance of the receiving position from the centre of haul road. (m)

V 16.09 10 mph

d

Hall Farm

Access Tracks
Wind Turbine Foundation
Wind Turbine Erection