

Appendix G South East site records

Audio record analysis for the South East site

Table 38 Wind speed and direction corresponding to diary return records, South East site

No.	Resident	Neighbours	Date	Start time	End time	Wind			
						Local		Wind turbine generator	
						Speed, m/s	Direction, deg	Speed, m/s	Direction, deg
1	Yes	No	12/04/2013	13:30	15:00	1.4–2.7	35.7–110.0	2.9–3.6	53.6–115.2
2	Yes	Yes	13/04/2013	1:00	6:00	1.2–2.4	335.9–352.7	12.3–15.4	309.3–327.6
3	Yes	Yes	13/04/2013	8:00	N/A	2.5	332.7	12.5	307.9
4	Yes	No	13/04/2013	17:00	N/A	2.3	288.6	9.1	284.5
5	Yes	No	14/04/2013	11:00	N/A	2.2	241.3	9.6	245.9
6	No	Yes	14/04/2013	12:00	18:00	1.5–3.4	187.3–258.5	6.2–11.0	202.5–251.8
7	Yes	No	21/04/2013	4:00	N/A	2.1	353.2	8.5	332.4
8	Yes	No	21/04/2013	6:00	N/A	1.5	39.5	11.1	312.8
9	Yes	No	21/04/2013	11:00	N/A	4.6	314.9	17.4	309.3
10	Yes	No	21/04/2013	18:00	N/A	2.7	228.0	17.5	241.6
11	Yes	No	21/04/2013	21:00	N/A	1.9	195.9	9.4	13.5
12	Yes	No	22/04/2013	3:30	N/A	1.5	220.8	8.3	239.0
13	Yes	No	22/04/2013	5:30	N/A	1.6	259.1	10.0	262.7
14	Yes	Yes	22/04/2013	9:00	N/A	2.3	260.1	10.7	261.7
15	Yes	No	22/04/2013	12:00	N/A	3.5	264.2	12.0	265.9
16	Yes	No	22/04/2013	18:00	N/A	2.1	276.8	10.8	273.1
17	Yes	No	22/04/2013	21:00	N/A	2.4	228.3	13.6	255.9
18	Yes	No	22/04/2013	21.40	23:00	2.1–5.2	174.9–209.0	9.7–12.0	216.3–246.2
19	Yes	No	24/04/2013	13:00	N/A	2.1	240.1	7.9	261.7

No.	Resident	Neighbours	Date	Start time	End time	Wind			
						Local		Wind turbine generator	
						Speed, m/s	Direction, deg	Speed, m/s	Direction, deg
20	Yes	No	24/04/2013	18:30	N/A	1.8	190.6	7.9	230.1
21	Yes	No	24/04/2013	21:00	N/A	1.5	183.1	6.1	226.2
22	Yes	No	24/04/2013	23:30	N/A	1.0	88.1	6.6	240.0
23	Yes	No	25/04/2013	8:00	N/A	2.5	267.3	11	272.8
24	Yes	No	25/04/2013	12:00	N/A	2.6	226.5	10.2	251.7
25	Yes	No	25/04/2013	20:30	N/A	0.8	54.2	7.6	231.0
26	Yes	Yes	27/04/2013	6:00	N/A	1.8	357.9	16.7	313.3
27	Yes	Yes	27/04/2013	8:30	N/A	2.8	321.1	14.7	315.3
28	Yes	Yes	27/04/2013	12:30	N/A	3.7	304.3	15.4	296.2
29	Yes	Yes	27/04/2013	17:00	N/A	1.8	311.8	13.2	298.6
30	Yes	Yes	27/04/2013	19:00	23:30	2.0–3.3	317.1–337.7	15.1–19.6	302.9–313.4
31	Yes	No	28/04/2013	8:00	N/A	1.5	223.3	4.8	236.1
32	Yes	No	28/04/2013	14:00	N/A	1.6	245.0	8.0	251.3
33	Yes	No	29/04/2013	8:00	N/A	2.4	63.1	4.1	107.1
34	Yes	No	29/04/2013	17:00	N/A	4.5	78.7	6.1	80.1
35	Yes	No	30/04/2013	13:00	17:00	0.8–2.2	189.6–8.3	2.1–5.8	225.9–21.2
36	No	Yes	02/05/2013	12:00	N/A	3.1	10.9	12.2	36.0
37	No	Yes	03/05/2013	7:00	N/A	3.2	343.2	18.9	310.7
38	Yes	No	03/05/2013	8:00	N/A	4.9	94.3	4.6	156.6
39	Yes	No	03/05/2013	18:00	N/A	1.8	126.8	7.7	125.6
40	Yes	No	03/05/2013	21:00	N/A	4.0	115.5	11.7	114.7
41	No	Yes	04/05/2013	11:30	N/A	6.8	78.5	9.6	87
42	No	Yes	06/05/2013	7:30	N/A	3.1	5.6	13.5	26.4
43	Yes	No	07/05/2013	6:00	N/A	1.5	2.3	11.5	318.6
44	Yes	No	08/05/2013	20:00	N/A	1.8	17.6	9.5	36.1

No.	Resident	Neighbours	Date	Start time	End time	Wind			
						Local		Wind turbine generator	
						Speed, m/s	Direction, deg	Speed, m/s	Direction, deg
45	No	Yes	11/05/2013	7:00	N/A	2.0	346.1	11.4	338.6
46	Yes	No	12/05/2013	16:00	N/A	1.9	266.4	10.5	267.5
47	No	Yes	19/05/2013	7:30	10:00	1.7–2.3	297.0–305.7	7.7–14.8	292.3–306.6
48	No	Yes	20/05/2013	7:00	N/A	1.4	317.7	15.8	306.1
49	No	Yes	22/05/2013	6:00	N/A	1.7	47.5	8.2	51.4
50	No	Yes	29/05/2013	5:00	N/A	2.2	5.4	15.3	329.7
51	No	Yes	31/05/2013	7:00	N/A	1.5	294.8	11.3	289.9
52	No	Yes	31/05/2013	10:30	N/A	1.3	29.7	5.6	346.7
53	No	Yes	01/06/2013	N/A	10:00	1.9	304.1	12.3	286.3
54	No	Yes	05/06/2013	7:00	N/A	1.6	350.3	6.4	18.8
55	No	Yes	05/06/2013	9:00	N/A	1.1	345.8	8.3	309.8
56	No	Yes	06/06/2013	9:00	N/A	2.8	299.5	11.7	292.2
57	No	Yes	10/06/2013	6:00	10:00	0.8–1.9	8.3–336.5	9.9–13.1	292.3–297.9

Table 39 Summary of acoustic descriptors and audio record analysis for complaint entries, South East site

No.	Inside				Outside						Spectrum shape	Audio records (inside/outside where available)
	L _{Aeq} dB(A)	L _{Ceq} dB(C)	L _{pA,LF} dB(A)	DEFRA	L _{Aeq} dB(A)	L _{Ceq} dB(C)	L _{Ceq} - L _{Aeq}	L _{AF,90}	L _{pA,LF} dB(A)	DEFRA		
1	33.5–51.0	45.5–54.3	18.3–23.2	57%	32.7–42.6	45.0–58.3	7.0–23.8	27.6–31.3	15.8–34.3	29%	Negative	Inside – household noise Outside –wildlife noise
2	27.6–55.5	55.0–59.8	25.1–29.3	0%	33.5–39.5	59.4–63.6	20.9–26.5	32.1–36.2	30.6–35.3	0%	50Hz peak inside	Inside – household noise Outside – possibly wind turbine noise
3	52.8	60.0	31.1	0%	41.0	63.3	22.3	38.8	35.1	0%	50Hz peak inside	Inside – household noise Outside – wildlife noise
4	54.0	61.0	29.8	0%	41.9	59.1	17.3	33.6	30.6	0%	Negative	Inside – household noise Outside – wildlife noise
5	49.6	61.8	34.3	0%	44.3	61.4	17.1	36.6	32.6	0%	Negative	Inside – household noise Outside – strong wind noise
6	32.8–63.0	50.9–65.6	20.1–38.5	0%	34.3–44.2	52.0–69.5	14.1–25.9	29.1–39.2	25.4–38.4	0%	Negative	Inside – household noise Outside – wind noise
7	29.1	53.5	21.6	0%	38.0	63.6	25.7	34.9	34.9	0%	50Hz peak inside	Inside – rumbling can be heard at high amplification. Possible wind turbine generator noise. Outside – wind noise

No.	Inside				Outside						Spectrum shape	Audio records (inside/outside where available)
	L _{Aeq} dB(A)	L _{Ceq} dB(C)	L _{pA,LF} dB(A)	DEFRA	L _{Aeq} dB(A)	L _{Ceq} dB(C)	L _{Ceq} – L _{Aeq}	L _{AF,90}	L _{pA,LF} dB(A)	DEFRA		
8	32.2	56.2	26.8	0%	41.8	60.9	19.1	37.2	33.6	0%	50Hz peak inside	Inside – rumbling can be heard at high amplification. Possible wind turbine generator noise. Outside – rain noise
9	69.2	71.5	44.5	0%	56.1	76.9	20.8	52.9	50.8	0%	Negative	Inside – household noise Outside – strong wind noise
10	58.6	65.1	38.1	0%	49.6	69.6	20.1	46.0	43.2	0%	Negative	Inside – household noise Outside – strong wind noise
11	39.7	51.4	22.3	0%	35.5	57.8	22.4	33.3	32.0	0%	Negative	Inside – household noise Outside – rain noise
12	25.3	48.2	19.3	0%	35.0	56.5	30.9	33.1	30.9	0%	50Hz peak inside	Inside – rumbling can be heard at high amplification. Possible wind turbine generator noise. Outside – wind noise
13	32.8	53.8	24.5	0%	36.8	59.8	23.0	34.8	33.9	0%	Negative	Inside – household noise Outside – wind noise

No.	Inside				Outside						Spectrum shape	Audio records (inside/outside where available)
	L _{Aeq} dB(A)	L _{Ceq} dB(C)	L _{pA,LF} dB(A)	DEFRA	L _{Aeq} dB(A)	L _{Ceq} dB(C)	L _{Ceq} - L _{Aeq}	L _{AF,90}	L _{pA,LF} dB(A)	DEFRA		
14	54.7	59.9	31.4	0%	50.8	64.9	14.1	39.1	40.6	0%	50Hz peak inside	Inside – household noise Outside – wind and wildlife noise
15	53.1	64.4	36.0	0%	50.2	72.3	22.1	42.2	44.8	0%	Negative	Inside – household noise Outside – wind noise
16	60.9	63.4	33.1	0%	39.3	63.6	24.3	35.1	35.7	0%	Negative	Inside – household noise Outside – wind noise
17	54.2	61.0	31.4	0%	44.5	67.5	22.9	38.6	43.0	0%	50Hz peak inside	Inside – household noise Outside – wind noise
18	30.2–53.7	53.3–60.9	24.5–31.1	0%	36.0–42.8	59.9–66.9	20.8–24.1	34.2–36.1	33.5–37.9	0%	50Hz peak inside	Inside – household noise Outside – wind noise
19	32.2	49.7	20.7	0%	43.5	59.5	16.0	35.3	31.0	0%	Negative	Inside – household noise Outside – wildlife noise
20	53.2	55.8	28.2	0%	31.7	52.5	20.7	30.4	26.4	0%	Negative	Inside – household noise Outside – car, tractor noise
21	58.7	61.5	31.7	0%	28.3	48.5	20.2	27.0	25.1	0%	Negative	Inside – household noise Outside – no audio recordings
22	23.1	41.9	12.8	100%	28.2	48.5	20.3	27.0	23.7	0%	Negative	Inside – household noise Outside – wildlife noise

No.	Inside				Outside						Spectrum shape	Audio records (inside/outside where available)
	L _{Aeq} dB(A)	L _{Ceq} dB(C)	L _{pA,LF} dB(A)	DEFRA	L _{Aeq} dB(A)	L _{Ceq} dB(C)	L _{Ceq} – L _{Aeq}	L _{AF,90}	L _{pA,LF} dB(A)	DEFRA		
23	48.0	55.7	26.8	0%	49.7	63.5	13.8	38.4	35.8	0%	Negative	Inside – household noise Outside – wildlife noise
24	54.5	60.9	31.2	0%	46.1	65.3	19.2	40.2	34.9	0%	Negative	Inside – household noise Outside – wildlife, wind, vehicle noise
25	52.8	55.4	25.4	0%	29.4	50.9	21.5	28.4	24.3	0%	Negative	Inside – household noise Outside – no audio recordings
26	30.9	58.0	29.0	0%	40.8	62.8	22.0	35.4	34.6	0%	50Hz peak inside and Outside	Inside and outside – rumbling can be heard at high amplification. Possible wind turbine generator noise.
27	59.2	68.3	41.0	0%	55.2	68.6	13.4	49.2	38.8	0%	Negative	Inside – household noise Outside – wind noise
28	41.4	59.0	29.8	0%	54.5	78.3	23.8	49.4	49.5	0%	Negative	Inside – no audio recordings Outside – wind noise

No.	Inside				Outside						Spectrum shape	Audio records (inside/outside where available)
	L _{Aeq} dB(A)	L _{Ceq} dB(C)	L _{pA,LF} dB(A)	DEFRA	L _{Aeq} dB(A)	L _{Ceq} dB(C)	L _{Ceq} - L _{Aeq}	L _{AF,90}	L _{pA,LF} dB(A)	DEFRA		
29	32.5	58.3	29.2	0%	44.2	67.5	23.3	40.8	37.9	0%	Negative	Inside – household noise Outside – wildlife noise
30	32.7–65.9	60.3–70.0	31.0–42.3	0%	40.8–48.4	64.6–69.9	21.3–23.8	39.2–45.6	35.7–39.6	0%	Negative	Inside – rumbling can be heard when no other noise sources present. Possible wind turbine generator noise. Outside – wind noise
31	55.8	58.7	30.9	0%	48.7	52.0	3.4	30.8	24.7	0%	Negative	Inside – household noise Outside – wildlife noise. Wind farm could be heard at high amplifications
32	56.5	58.3	26.6	0%	40.6	56.7	16.1	32.2	30.3	0%	Negative	Inside – household noise Outside – truck noise
33	45.7	54.4	24.8	0%	45.0	53.3	8.3	32.0	29.7	0%	Negative	Inside – household noise Outside – truck noise
34	60.3	62.5	33.3	0%	41.4	62.9	21.5	34.1	35.3	0%	Negative	Inside – household noise Outside – truck noise, wildlife noise
35	26.6–55.5	47.7–58.6	13.8–26.9	72%	31.1–53.1	47.1–54.8	1.7–19.7	25.6–31.2	23.1–30.2	0%	Negative	Inside – household noise Outside – wildlife noise
36	39.0	51.5	23.5	0%	47.3	67.6	20.3	41.7	38.8	0%	Negative	Inside – no audio recordings Outside – high wind noise

No.	Inside				Outside						Spectrum shape	Audio records (inside/outside where available)
	L _{Aeq} dB(A)	L _{Ceq} dB(C)	L _{pA,LF} dB(A)	DEFRA	L _{Aeq} dB(A)	L _{Ceq} dB(C)	L _{Ceq} - L _{Aeq}	L _{AF,90}	L _{pA,LF} dB(A)	DEFRA		
37	53.8	63.6	34.8	0%	51.9	69.5	17.6	43.0	41.0	0%	50Hz peak inside	Inside – rumbling can be heard at high amplification when no other noise sources present. Possible wind turbine generator noise Outside – wind noise
38	53.8	59.5	29.3	0%	51.2	56.5	5.3	33.4	30.9	0%	Negative	Inside – no audio recordings Outside – wind noise
39	54.9	62.3	35.0	0%	36.7	49.5	12.9	26.6	27.3	0%	Negative	Inside – household noise Outside – truck noise
40	50.4	57.5	28.6	0%	42.8	67.8	25.1	39.3	35.1	0%	Negative	Inside – household noise Outside – no audio recordings
41	31.5	49.8	19.8	0%	51.1	76.2	25.1	44.8	47.8	0%	Negative	Inside – no audio recordings Outside – high wind noise
42	54.7	59.8	30.4	0%	47.4	69.2	21.8	41.8	39.5	0%	Negative	Inside – household noise Outside – wind and wildlife noise

No.	Inside				Outside						Spectrum shape	Audio records (inside/outside where available)
	L _{Aeq} dB(A)	L _{Ceq} dB(C)	L _{pA,LF} dB(A)	DEFRA	L _{Aeq} dB(A)	L _{Ceq} dB(C)	L _{Ceq} - L _{Aeq}	L _{AF,90}	L _{pA,LF} dB(A)	DEFRA		
43	33.4	57.5	28.9	0%	42.6	62.0	19.4	36.2	34.5	0%	50Hz peak inside and Outside	Inside – rumbling can be heard at high amplification with no other noise sources. Possible wind turbine generator noise. Outside – possibly wind turbine noise
44	53.8	59.0	28.8	0%	33.6	54.0	20.5	28.0	27.5	0%	Negative	Inside – household noise Outside – no audio recordings
45	31.3	55.1	23.2	0%	41.9	60.7	18.8	35.0	32.6	0%	Negative	Inside – no audio recordings Outside – wind and wildlife noise
46	57.4	59.7	28.6	0%	42.8	62.2	19.4	36.0	34.2	0%	50Hz peak inside	Inside – household noise Outside – wind and wildlife noise
47	44.4–66.8	56.6–69.5	25.8–42.7	0%	44.6–58.2	63.8–70.0	6.9–23.3	37.3–41.7	34.9–40.6	0%	50Hz peak inside	Inside – household noise Outside – wind and wildlife noise
48	45.6	61.4	31.6	0%	45.3	63.8	18.5	38.8	35.2	0%	Negative	Inside – household noise Outside – wind and wildlife noise
49	26.6	40.9	12.9	100%	38.7	57.6	18.9	34.2	32.2	0%	Negative	Inside – no noise Outside – wind noise

No.	Inside				Outside						Spectrum shape	Audio records (inside/outside where available)
	L _{Aeq} dB(A)	L _{Ceq} dB(C)	L _{pA,LF} dB(A)	DEFRA	L _{Aeq} dB(A)	L _{Ceq} dB(C)	L _{Ceq} - L _{Aeq}	L _{AF,90}	L _{pA,LF} dB(A)	DEFRA		
50	28.6	57.1	26.7	0%	39.6	64.4	24.8	38.1	36.1	0%	50Hz peak inside	Inside – rumbling can be heard at high amplification. Possible wind turbine generator noise Outside – low frequency noise can be heard at high amplification. Possibly wind turbines.
51	49.6	58.4	29.2	0%	44.8	62.0	17.2	36.0	33.3	0%	50Hz peak inside	Inside – rumbling can be heard at high amplification with no other noise sources. Possible wind turbine generator noise. Outside – truck/ machinery noise
52	46.3	50.6	16.9	100%	38.9	52.7	13.8	30.0	25.7	0%	Negative	Inside – household noise Outside – wildlife noise
53	64.9	65.7	31.3	0%	46.7	68.8	22.1	41.2	43.3	0%	50Hz peak inside	Inside – household noise Outside – high wind noise
54	60.2	64.4	33.3	0%	47.7	57.1	9.3	28.6	29.8	0%	Negative	Inside – household noise Outside – wildlife noise, possible machinery noise
55	56.7	58.8	30.8	0%	48.3	65.5	17.2	35.1	45.9	0%	100Hz peak Outside	Inside – household noise Outside – possible machinery noise

No.	Inside				Outside						Spectrum shape	Audio records (inside/outside where available)
	L _{Aeq} dB(A)	L _{Ceq} dB(C)	L _{pA,LF} , dB(A)	DEFRA	L _{Aeq} dB(A)	L _{Ceq} dB(C)	L _{Ceq} - L _{Aeq}	L _{AF,90}	L _{pA,LF} , dB(A)	DEFRA		
56	41.9	57.9	28.7	0%	56.1	72.8	16.7	42.8	43.5	0%	Negative	Inside – no audio recordings Outside – wind noise
57	28.0–44.0	53.5–58.7	24.3–29.0	0%	33.0–54.4	58.7–65.5	11.3–25.7	23.6–39.0	30.2–36.6	0%	50Hz peak inside	Inside and outside – rumbling can be heard at high amplification and no other noise sources. Possible wind turbine generator noise.