# Cottam Solar Project

### Environmental Statement

## Appendix 15.1: Noise Survey Information

Prepared by Tetra Tech Limited

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APFP Regulation 5(2)(a)

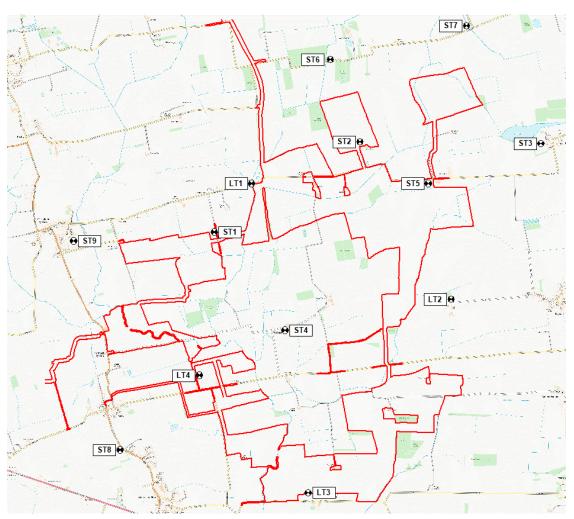




#### 1.1 Cottam 1 Noise Survey

1.1.1 The baseline noise environment has been established following a noise survey undertaken from Thursday 9th September 2021 to Thursday 16th September 2021. Attended 15-minute short-term measures were undertaken at nine locations during the day, evening and night-time periods with four additional locations being measured unattended over a 161-hour period.

Figure A.15.1 Noise Monitoring Locations



Not to scale. OS Licence No. AL553611

1.1.2 The existing ambient noise climate was mainly dominated by road traffic noise and occasional farming related noise. The main sources of this noise included: Kexby Road, Willingham Road, Stow Road, the A1500 and the B1241. A summary of the baseline noise monitoring survey is shown in Table A.15.1 below.

**Table A.15.1** Results of Baseline Noise Monitoring Survey (Average Levels)



Period	Duration (T)	Monitoring Date and Times	Location	L <sub>Aeq,T</sub> (dB)	L <sub>Amax,T</sub> (dB)	L <sub>Amin,T</sub> (dB)	L <sub>A10,T</sub> (dB)	L <sub>A90,T</sub> (dB)
Weekday		09/09/2021 -						
Daytime	72 Hours	16/09/2021		54.5	1041	15.6	42.3	32.0
-	72 HOUIS			54.5	104.1	15.6	42.5	32.0
07:00 - 23:00		07:00 - 23:00						
Weekday		09/09/2021 -		44.0	00.0	4.4.0	28.2	40.0
Night-time	41 Hours	16/09/2021		44.9	89.3	14.8		19.0
23:00 - 07:00		23:00 - 07:00	LT1					
Weekend		09/09/2021 -	211					
Daytime	32 Hours	16/09/2021		49.7	86.7	16.7	42.8	28.0
07:00 - 23:00		07:00 - 23:00						
Weekend		09/09/2021 -						
Night-time	16 hours	16/09/2021		37.4	70.8	15.5	26.3	18.0
23:00 - 07:00		23:00 - 07:00						
Weekday		09/09/2021 -						
-	72 112			F1 2	06.3	10.5	42.2	240
Daytime	72 Hours	16/09/2021		51.3	86.3	18.5	42.2	34.0
07:00 - 23:00		07:00 - 23:00						
Weekday		09/09/2021 –						
Night-time	41 Hours	16/09/2021		37.2	75.9	17.6	32.1	20.0
23:00 - 07:00	<u> </u>	23:00 - 07:00	LT2	<u> </u>				<u> </u>
Weekend		09/09/2021 -	LIZ					
Daytime	32 Hours	16/09/2021		49.0	92.2	18.9	41.0	28.0
07:00 - 23:00		07:00 - 23:00			32.2			
Weekend		09/09/2021 -					29.4	
	16 hours			34.7	70.5	10.2		22.0
Night-time	16 nours	16/09/2021				18.2		22.0
23:00 - 07:00		23:00 - 07:00						
Weekday		09/09/2021 –		45.0	91.2	18.3	39.4	
Daytime	72 Hours	16/09/2021						32.0
07:00 - 23:00		07:00 - 23:00						
Weekday		09/09/2021 -		31.8	65.4	14.9	30.5	
Night-time	41 Hours	16/09/2021	LT3					23.0
23:00 - 07:00		23:00 - 07:00						
Weekend		09/09/2021 -						
Daytime	32 Hours	16/09/2021		45.7	89.2	20.0	39.8	33.0
07:00 - 23:00	32 Hours	07:00 - 23:00		45.7	89.2			33.0
Weekend		09/09/2021 -			61.2	16.3		
Night-time	16 hours	16/09/2021		31.8			31.7	26.0
23:00 – 07:00		23:00 - 07:00						
Weekday		09/09/2021 -						
Daytime	72 Hours	16/09/2021		40.3	77.2	16.1	39.9	32.0
07:00 - 23:00		07:00 - 23:00						
Weekday		09/09/2021 -	1					
Night-time	41 Hours	16/09/2021	LT4	31.7	77.1	14.9	28.4	17.0
23:00 - 07:00	11110013	23:00 - 07:00		3117	77.1	14.5	20.4	17.0
		09/09/2021 -	1					
Weekend	22.11			40.3	667	477	20.0	240
Daytime	32 Hours	16/09/2021		40.3	66.7	17.7	39.8	24.0
07:00 - 23:00	ļ	07:00 - 23:00	4					
Weekend		09/09/2021 -						
Night-time	16 hours	16/09/2021		31.4	62.3	15.6	28.4	18.0
23:00 - 07:00	10110013	23:00 - 07:00		51.4	02.3	13.0	20.4	10.0
		23.00 - 07.00						
Daytime	45.41	09/09/2021	CT4	47.0	60.0	22.4	F0 =	20.0
07:00 - 19:00	15 Mins	15:51	ST1	47.0	60.9	33.1	50.7	38.0
		09/09/2021	ST2					
	15 Mins	15 Mins 09/09/2021 16:42		40.2	51.1	29.9	43.7	34.8
	15 Mins	09/09/2021	ST3	58.2	81.9	31.9	59.5	36.1
		16:13						
	15 Mins	09/09/2021	ST4	53.3	79.4	33.6	47.2	36.9



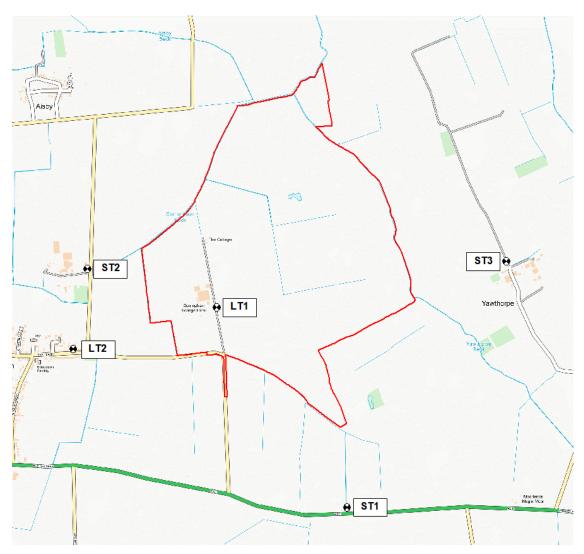
Period	Duration (T)	Monitoring Date and Times	Location	L <sub>Aeq,T</sub> (dB)	L <sub>Amax,T</sub> (dB)	L <sub>Amin,T</sub> (dB)	L <sub>A10,T</sub> (dB)	L <sub>A90,T</sub> (dB)
		15:53						
	15 Mins	10/09/2021 09:32	ST5	52.4	79.6	32.9	44.8	35.2
	15 Mins	09/09/2021	ST6	52.3	77.1	28.2	43.8	32.7
	15 Mins	09/09/2021 15:44	ST7	48.4	68.7	29.6	48.6	35.4
	15 Mins	09/09/2021 15:27	ST8	63.1	82.5	36.0	68.2	43.7
	15 Mins	09/09/2021 15:29	ST9	46.2	69.8	31.3	47.0	35.4
Evening 19:00 - 23:00	15 Mins	09/09/2021 21:37	ST1	37.7	64.9	19.7	35.2	23.8
	15 Mins	09/09/2021 22:04	ST2	34.3	64.4	19.5	29.8	22.3
	15 Mins	09/09/2021 20:44	ST3	27.3	43.7	20.1	29.8	22.0
	15 Mins	09/09/2021 20:42	ST4	36.2	61.1	29.8	36.6	32.3
	15 Mins	09/09/2021 22:30	ST5	32.8	63.5	19.1	31.3	21.3
	15 Mins	09/09/2021 21:27	ST6	42.4	67.4	26.7	46.3	30.2
	15 Mins	09/09/2021 20:20	ST7	30.6	43.1	23.1	33.7	26.0
	15 Mins	09/09/2021 20:12	ST8	57.6	77.6	29.7	58.3	35.1
	15 Mins	09/09/2021 21:11	ST9	36.1	65.2	23.5	37.0	27.3
Night-time 23:00 - 07:00	15 Mins	10/09/2021 00:16	ST1	39.2	66.6	19.6	33.9	23.8
	15 Mins	09/09/2021 23:53	ST2	40.8	66.3	30.9	42.9	35.1
	15 Mins	09/09/2021 23:49	ST3	25.5	48.2	19.0	27.9	20.6
	15 Mins	10/09/2021 00:42	ST4	25.6	55.0	13.6	18.5	14.4
	15 Mins	09/09/2021 23:12	ST5	34.5	63.0	19.8	31.8	23.0
	15 Mins	09/09/2021 23:04	ST6	28.5	48.3	24.0	29.1	25.7
	15 Mins	10/09/2021 00:12	ST7	24.6	45.7	20.0	26.0	21.8
	15 Mins	10/09/2021	ST8	25.0	57.9	13.6	21.6	14.5
	15 Mins	10/09/2021 00:42	ST9	38.3	70.7	28.5	33.4	30.4



#### 1.2 Cottam 2 Noise Survey

1.2.1 The baseline noise environment has been established following a noise survey undertaken from Thursday 9<sup>th</sup> September 2021 to Thursday 16<sup>th</sup> September 2021. Attended 15-minute short-term measures were undertaken at three locations during the day, evening and night-time periods with two additional locations being measured unattended over a 161-hour period.

Figure A.15.2 Noise Monitoring Locations



Not to scale. OS Licence No. AL553611

1.2.2 The existing ambient noise climate was dominated by road traffic noise with the main sources being the A631 and Corringbeck Road during the daytime and evening. The road traffic noise is reduced at night-time with the dominant noise source being



background animal noises. A summary of the baseline noise monitoring survey is shown in Table A.15.2 below.

**Table A.15.2** Results of Baseline Noise Monitoring Survey (Average Levels)

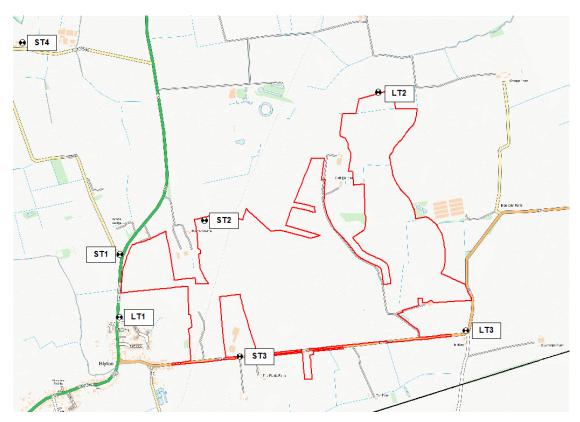
Period	Duration (T)	Monitoring Date and Times	Location	L <sub>Aeq,T</sub> (dB)	L <sub>Amax,T</sub> (dB)	L <sub>Amin,T</sub> (dB)	L <sub>A10,T</sub> (dB)	L <sub>A90,T</sub> (dB)
Weekday Daytime 07:00 - 23:00	72 Hours	09/09/2021 - 16/09/2021 07:00 - 23:00		50.3	102.8	21.7	45.0	36.0
Weekday Night- time 23:00 – 07:00	41 Hours	09/09/2021 - 16/09/2021 23:00 - 07:00	1.74	37.2	75.5	19.9	32.8	22.0
Weekend Daytime 07:00 - 23:00	32 Hours	09/09/2021 - 16/09/2021 07:00 - 23:00	LT1	46.1	71.1	21.2	44.3	31.0
Weekend Night- time 23:00 – 07:00	16 hours	09/09/2021 - 16/09/2021 23:00 - 07:00		34.5	67.5	19.6	31.6	22.0
Weekday Daytime 07:00 - 23:00	72 Hours	09/09/2021 - 16/09/2021 07:00 - 23:00		50.6	89.0	19.6	44.5	34.0
Weekday Night- time 23:00 – 07:00	41 Hours 32 Hours	09/09/2021 - 16/09/2021 23:00 - 07:00	LT2	44.7	94.5	18.3	33.7	22.0
Weekend Daytime 07:00 - 23:00		09/09/2021 - 16/09/2021 07:00 - 23:00		48.9	98.6	19.9	42.9	36.0
Weekend Night- time 23:00 – 07:00	16 hours	09/09/2021 - 16/09/2021 23:00 - 07:00		38.7	74.4	18.1	32.9	22.0
Daytime 07:00 - 19:00	15 Mins	09/09/2021 13:51	ST1	73.5	91.6	34.0	78.6	38.6
	15 Mins	09/09/2021 14:17	ST2	50.0	74.6	32.1	46.4	37.1
	15 Mins	09/09/2021 13:26	ST3	44.4	67.7	29.7	46.0	36.3
Evening 19:00 - 23:00	15 Mins	09/09/2021 19:30	ST1	70.5	92.8	31.2	71.0	38.5
	15 Mins	09/09/2021 19:51	ST2	36.0	50.9	27.2	39.0	30.5
	15 Mins	09/09/2021 21:56	ST3	36.1	49.8	21.6	39.4	27.1
Night-time 23:00 - 07:00	15 Mins	10/09/2021 01:18	ST1	61.2	88.3	17.4	40.3	18.7
	15 Mins	10/09/2021 01:38	ST2	24.8	46.9	17.9	24.5	18.8
	15 Mins	10/09/2021 00:58	ST3	29.2	63.8	17.1	29.5	19.6



#### 1.3 Cottam 3a Noise Survey

1.3.1 The baseline noise environment has been established following a noise survey undertaken from Thursday 9th September 2021 to Thursday 16th September 2021. Attended 15-minute short-term measures were undertaken at four locations during the day, evening and night-time periods with two additional locations being measured unattended over a 169-hour period.

Figure A.15.3 Noise Monitoring Locations



Not to scale. OS Licence No. AL553611

1.3.2 The dominant noise sources found in the area include road traffic noise from Laughton Road, Kirkton Road and Church Road. A summary of the baseline noise monitoring survey is shown in Table A.15.3 below.



**Table A.15.3** Results of Baseline Noise Monitoring Survey (Average Levels)

	Duration	Monitoring Date		L <sub>Aeq,T</sub>	L <sub>Amax,T</sub>	L <sub>Amin,T</sub>	L <sub>A10,T</sub>	L <sub>A90,T</sub>
Period	(T)	and Times	Location	(dB)	(dB)	(dB)	(dB)	(dB)
Weekday		09/09/2021 -						
Daytime	81 Hours	16/09/2021		63.4	96.9	20.2	65.9	44.0
07:00 - 23:00		07:00 - 23:00 09/09/2021 -						
Weekday Night- time	40 Hours	16/09/2021		55.6	87.8	17.8	44.2	19.0
23:00 – 07:00	40 110013	23:00 - 07:00		33.0	07.0	17.0	77.2	19.0
Weekend		11/09/2021 -	LT1					
Daytime	32 Hours	12/09/2021		61.5	99.1	18.4	63.7	44.0
07:00 - 23:00		07:00 - 23:00						
Weekend		11/09/2021 –						
Night-time	16 hours	12/09/2021		52.7	81.4	18.4	43.2	22.0
23:00 - 07:00		23:00 - 07:00						
Weekday	04.11	09/09/2021 -		47.0	00.0	47.6	44.4	22.0
Daytime	81 Hours	16/09/2021		47.8	89.3	17.6	41.1	32.0
07:00 - 23:00 Weekday Night-		07:00 - 23:00 09/09/2021 -						
time	40 Hours	16/09/2021		30.3	69.0	15.4	28.8	20.0
23:00 - 07:00	10 110015	23:00 - 07:00		30.3		13.1	20.0	20.0
Weekend		11/09/2021 -	LT2				48.5	34.0
Daytime	32 Hours	12/09/2021		59.9	90.6	16.5		
07:00 - 23:00		07:00 - 23:00						
Weekend		11/09/2021 –		29.4	53.4	15.9	29.4	
Night-time	16 hours	12/09/2021						19.0
23:00 - 07:00		23:00 - 07:00						
Weekday	04.11	09/09/2021 -			400.4	40.0	56.4	40.0
Daytime	81 Hours	16/09/2021		55.7	100.1	18.8	56.4	40.0
07:00 - 23:00 Weekday Night-		07:00 - 23:00 09/09/2021 -						
time	40 Hours	16/09/2021		47.9	91.6	17.5	36.9	24.0
23:00 – 07:00	10 110015	23:00 - 07:00		17.5				2 1.0
Weekend		11/09/2021 -	LT3			18.9 17.1	56.8 36.7	44.0
Daytime	32 Hours	12/09/2021		57.9	95.2 73.8			
07:00 - 23:00		07:00 - 23:00						
Weekend		11/09/2021 –		44.7				
Night-time	16 hours	12/09/2021						26.0
23:00 - 07:00		23:00 - 07:00						
Daytime 07:00 - 19:00	15 Mins	09/09/2021 10:52	ST1	57.8	74.2	36.9	61.6	44.9
	15 Mins	09/09/2021 11:02	ST2	40.8	63.4	28.1	43.5	32.7
	15 Mins	09/09/2021 11:16	ST3	66.6	86.1	25.2	63.8	29.9
	15 Mins	09/09/2021 11:29	ST4	48.9	74.0	28.0	42.8	31.9
Evening 19:00 - 23:00	15 Mins	09/09/2021 19:28	ST1	55.8	73.0	32.6	60.6	40.9
19.00 - 23.00	15 Mins	09/09/2021 20:37	ST2	48.6	66.9	22.1	51.3	26.4
	15 Mins	09/09/2021 20:16	ST3	55.8	76.2	25.9	56.1	29.5
	15 Mins	09/09/2021 19:50	ST4	41.0	60.3	23.5	45.2	27.3
Night-time 23:00 - 07:00	15 Mins	10/09/2021 00:06	ST1	46.5	72.7	21.7	44.48	23.6
23.00 - 07.00	15 Mins	09/09/2021 23:48	ST2	44.5	67.2	18.5	42.6	21.5
	15 Mins	10/09/2021 00:27	ST3	26.7	58.0	18.2	25.5	20.7
	15 Mins	09/09/2021 23:29	ST4	31.4	67.4	20.5	28.0	21.8



#### 1.4 Cottam 3B Noise Survey

1.4.1 The baseline noise environment has been established following a noise survey undertaken from Thursday 9<sup>th</sup> September 2021 to Thursday 16<sup>th</sup> September 2021. Attended 15-minute short-term measures were undertaken at four locations during the day, evening and night-time periods with two additional locations being measured unattended over a 164-hour period.

Figure A.15.4 Noise Monitoring Locations



Not to scale. OS Licence No. AL553611

1.4.2 The dominant noise source found in the area is road traffic noise from Station Road and Pilham Lane. A summary of the baseline noise monitoring survey is shown in Table A.15.4 below.



**Table A.15.4** Results of Baseline Noise Monitoring Survey (Average Levels)

Period	Duration (T)	Monitoring Date and Times	Location	L <sub>Aeq,T</sub> (dB)	L <sub>Amax,T</sub> (dB)	L <sub>Amin,T</sub> (dB)	L <sub>A10,T</sub> (dB)	L <sub>A90,T</sub> (dB)
Weekday Daytime 07:00 - 23:00	78 Hours	09/09/2021 - 16/09/2021 13:58 - 12:03		58.2	109.9	17.1	41.9	36
Weekday Night- time 23:00 – 07:00	40 hours	09/09/2021 - 16/09/2021 23:00 - 07:00	LT1	35.3	85.6	16.0	30.2	20
Weekend Daytime 07:00 - 23:00	32 Hours	11/09/2021 – 12/09/2021 07:00 - 23:00	211	54.7	87.2	17.0	45.0	34
Weekend Night- time 23:00 – 07:00	16 hours	11/09/2021 – 12/09/2021 23:00 - 07:00		34.5	85.8	16.4	31.2	20
Weekday Daytime 07:00 - 23:00	77 Hours	09/09/2021 – 16/09/2021 12:54 – 08:54		59.5	102.2	17.6	40.7	32
Weekday Night- time 23:00 – 07:00	40 hours	09/09/2021 – 16/09/2021 23:00 - 07:00	LT2	32.9	73.8	15.9	29.5	18
Weekend Daytime 07:00 - 23:00	32 Hours	11/09/2021 – 12/09/2021 07:00 - 23:00	212	56.5	90.7	16.9	44.5	36
Weekend Night- time 23:00 – 07:00	16 hours	11/09/2021 – 12/09/2021 23:00 - 07:00		34.5	74.7	16.2	30.6	20
Daytime 07:00 - 19:00	15 Mins	09/09/2021 12:29	ST1	65.9	85.5	30.0	66.0	34.3
	15 Mins	09/09/2021 12:49	ST2	41.3	56.3	30.9	44.7	34.5
	15 Mins	09/09/2021 12:28	ST3	43.4	71.3	25.4	40.2	28.8
	15 Mins	09/09/2021 12:54	ST4	46.8	69.1	32.2	47.1	35.9
Evening 19:00 - 23:00	15 Mins	09/09/2021 21:24	ST1	55.1	77.2	24.3	52.1	28.2
	15 Mins	09/09/2021 21:43	ST2	56.9	81.4	22.8	48.9	25.7
	15 Mins	09/09/2021 21:00	ST3	43.4	79.3	17.5	36.7	22.4
	15 Mins	09/09/2021 19:06	ST4	39.3	64.9	25.2	38.5	28.0
Night-time 23:00 - 07:00	15 Mins	10/09/2021 01:03	ST1	34.8	67.4	20.4	33.8	23.3
_	15 Mins	10/09/2021 01:20	ST2	26.0	50.6	17.6	27.8	19.4
	15 Mins	10/09/2021 00:45	ST3	28.9	60.6	17.3	24.4	18.8
	15 Mins	10/09/2021 01:57	ST4	31.2	43.2	25.0	33.0	27.7