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A30 Chiverton to Carland Cross
Environmental Statement

Volume 6 Document Ref 6.4 ES Appendix 11.2 Baseline noise survey

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Planning Act 2008
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended)
APFP Regulation 5(2)(a)

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11.2 Baseline Noise Survey

Baseline Noise Survey Methodology

11.2.1 This appendix details the baseline noise survey which has been undertaken in support of the proposed improvement scheme along the length of the A30, between Chiverton to Carland Cross. This baseline noise survey has been carried out at sufficient locations to represent a range of noise sensitive areas alongside the scheme. The attended noise surveys were performed in accordance with the 'Shortened measurement procedure', described in paragraph 43 of CRTN[1].

11.2.2 Eighteen attended noise surveys were carried out. Longer-term measurements were also taken at six unattended logger positions over one week to capture ambient noise levels over an extended period. The attended surveys were undertaken by Arup between (10:00) 15 January 2018 to the (17:00) 19 January 2018 during the daytime. The unattended logger survey was undertaken between (17:00) 20 January 2018 to the (16:00) 28 January 2018.

Noise survey locations

11.2.3 The measurement locations are shown in Volume 6 Document Ref 6.3 ES Figure 11.1. Attended locations are shown in green, whilst unattended locations are shown in blue. Locations are summarized in Table 11-1, Figure 11-1 and Figure 11-2 below provide more detail of two locations where multiple measurements were taken.

Table 11-1 Noise Survey Locations

Location (Fig 11-1)	Attended / Unattended	Address / Location Description	Position
S1	Attended	Burra-Burra Farm off un-named road accessed from A390	50°16'36.5"N 5°09'51"W
S2	Attended	A30 Chiverton roundabout	50°16'43"N 5°09'47"W
S3	Attended	Small layby off B3277	50°16'50"N 5°10'21"W
S4	Unattended	Holly Tree Cottage	50°17'13"N 5°09'48"W
S5	Attended	South side of the A30 next to un-named road	50°17'05"N 5°09'23"W
S6	Attended	Entrance to Truro Sawmills seasoning store off B3284	50°17'53"N 5°08'33"W
S7	Attended	Next to Callestick Vean cottage of B3284	50°17'49"N 5°07'44 "W
S8	Attended	NCF	50°18'42.5"N 5°05'25"W
S9	Unattended	Hillview Farm	50°17'49"N 5°6'46"W

[1] DEPARTMENT OF TRANSPORT WELSH OFFICE (1988), *Calculation of Road Traffic Noise,* HMSO

Location (Fig 11-1)	Attended / Unattended	Address / Location Description	Position
S11	Attended	Public footpath from the B3284	50°18'20"N 5°06'30"W
S12	Attended	A30 lay-by parking area overlooking Marazanvose Farm	50°18'41"N 5°05'36"W
S13	Unattended	NCF	50°18'41.5"N 5°05'23"W
S15	Attended	Farm gateway off Henver Lane, opposite to Tolgroggan Farm	50°19'15"N 5°04'52"W
S16	Attended	Un-named lane off Henver Lane	50°19'34"N 5°04'31"W
S17	Attended	North east side of the A30, next to Henver Lane	50°19'47"N 5°04'18"W
S18	Attended	Lay-by parking area along the A30	50°20'01"N 5°04'02"W
S19	Unattended	Pennycomequick, in the front garden	50°20'13"N 5°03'34"W
S20	Unattended	Pennycomequick, Rear tennis courts	50°20'11"N 5°03'32"W
S21	Attended	Lay-by parking area next to an un-named lane	50°20'06"N 5°03'23"W
S22	Unattended	Treworrian Manor	50°20'28"N 5°02'39"W
S23	Attended	Farm gateway next to an un-named lane	50°20'27"N 5°02'01"W
S24	Attended	East side of the A30 Carland Cross roundabout	50°20'46"N 5°01'35"W

Figure 11-1 Detailed Plan of Two Measurement Locations at NCF

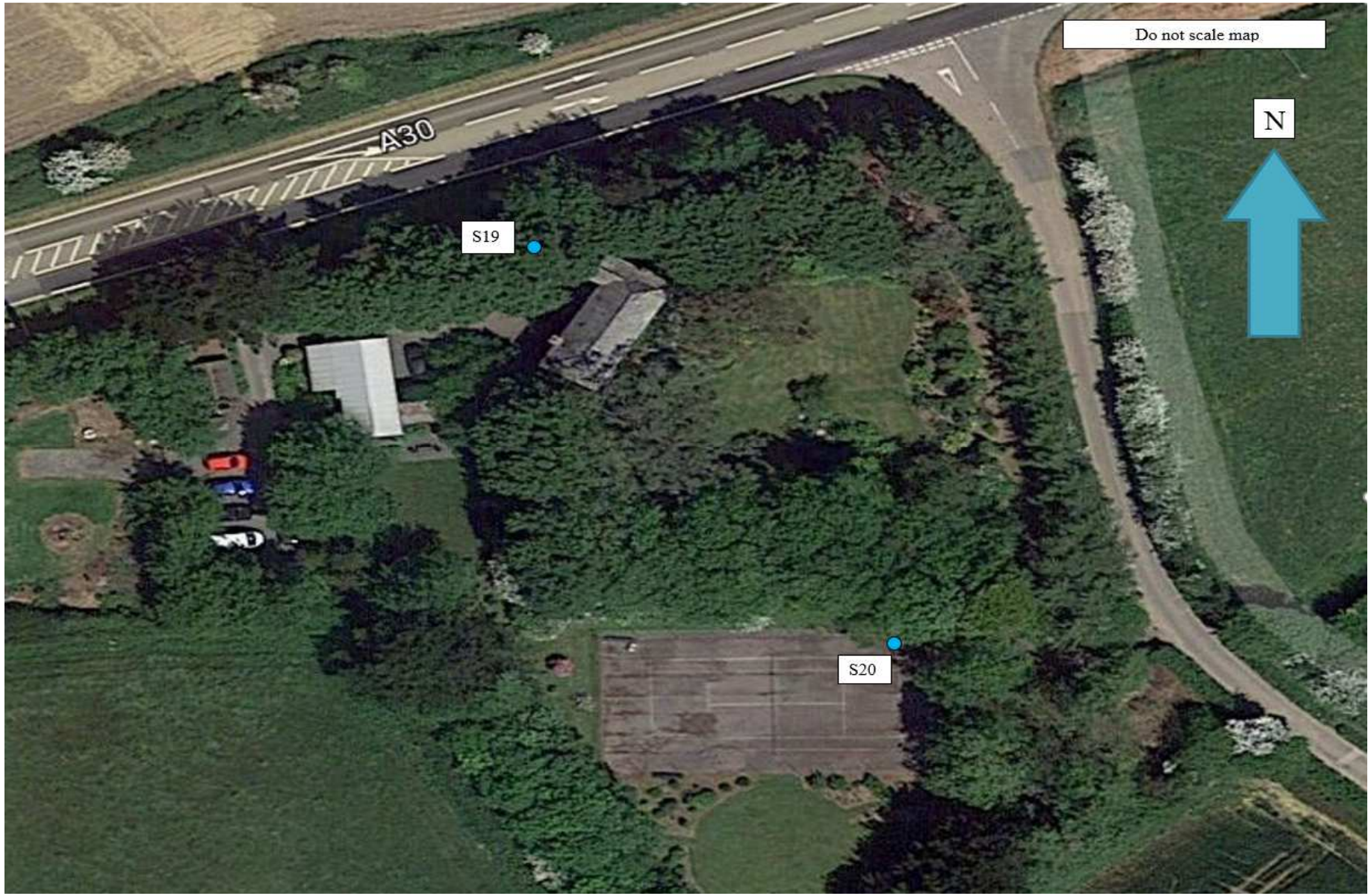

Figure 11-2 Detailed Plan of Two Measurement Locations at Pennycomequick

Survey methodology

11.2.4 The measurements were made with an Integrating Sound Level Meter (SLM). The SLM was mounted onto a tripod, with the measurement microphone being approximately 1.2m to 1.5m above ground level and situated within an acoustically free field condition (i.e. at least 3.5m from any acoustically reflecting surface other than the ground). A windshield was fitted to the microphone in order to minimise the effects of wind-induced noise.

11.2.5 The measurement locations were considered to be representative of ambient noise levels at the nearest noise sensitive receptors. Receptors as shown in Volume 6 Document Ref 6.3 ES Figure 11-1.

Attended survey methodology

11.2.6 For the attended noise survey, the SLM was set up to measure noise for a number of 15-minute periods during the day-time between the hours of 10:00 and 17:00hrs (in compliance with the shortened CRTN method). During each measurement, the noise indices, wind speed, direction, and air temperature were all logged and noted, along with the surveyor's notes about the prevailing noise character. The SLM was set to automatically store the L_{Aeq}, L_{Amin}, L_{Amax}, L_{A10} and L_{A90} indices. Measurements were made with a fast (0.125s) time constant. Measurements at each location were undertaken over three consecutive hours to comply with the 'shortened method' described in the Calculation of Road Traffic Noise (CRTN 88) guidance.

11.2.7 The weather conditions during the attended surveys were mainly fine but with low to medium altitude cloud cover. No precipitation was noted during each of the survey periods. For the majority of the attended CRTN surveys the average wind speeds recorded were low, typically well below 5m/s, although on a few occasions gusts reached just under 5m/s. The wind direction was generally from the north west.

Unattended survey methodology

11.2.8 For the unattended noise survey, six loggers were placed at positions S4, S9, S13, S19, S20 and S22, as shown in Volume 6 Document Ref 6.3 ES Figure 11-1.

11.2.9 The loggers were set to record noise levels over 15-minute intervals contiguously for one week. The logger was set to automatically store the L_{Aeq}, L_{A10}, L_{A90} and $L_{Amax,F}$ indices from 10:45 on 20 January 2018 until 15:52 on 28 January 2018. Measurements were made with a fast (0.125s) time constant.

11.2.10 The weather conditions during the unattended survey was mainly fine, but with mainly low to medium altitude cloud cover. Some precipitation was noted during the one-week survey period. For the majority of the survey period the average wind speeds[2] recorded were low, typically well below 5m/s, although on a few occasions gusts reached as high as 4.6m/s. The wind direction was generally from the south west as shown in Figure 11-3.

[2] For environmental noise measurements, guidance documents describe windshields as generally effective up to windspeeds of 5 m/s (e.g. BS 4142 Methods for rating and assessing industrial and commercial sound).

Figure 11-3 Wind measurement results at Location S13

Measurement equipment

11.2.11 Measurements were carried out using instrumentation as detailed in Table 1. The SLMs and microphones used are all Class 1, conforming to BS EN 61672-1: 2003. The calibration of the SLMs was checked at the beginning and end of each series of measurements, to confirm that there was no significant drift in meter calibration. This verification indicated that there was less than 0.2dB variation between checks.

11.2.12 All Arup's SLMs and associated SPL (Sound Pressure Level) calibrators are checked annually at accredited UK calibration laboratories, providing traceable calibrations, to national and international standards, and at an accredited UKAS-registered laboratory bi-annually.

Table 11-2 Measurement Instrumentation

Measurement Equipment	Manufacturer	Type Number	Serial Number
Precision grade noise logging, integrating sound level meter - Class 1 (kit-A attended)	Norsonic	NOR 140	1403425
½" diameter pre-polarised condenser microphone - Class 1	Norsonic	NOR 1225	98510
Pre-amplifier - Class 1	Norsonic	NOR 1209	12578
Sound pressure level calibrator - Class 1	Norsonic	NOR 1251	33849
Precision grade noise logging, integrating sound level meter - Class 1 (kit-D attended)	Norsonic	NOR 140	1405203
½" diameter pre-polarised condenser microphone - Class 1	Norsonic	NOR 1225	151246
Pre-amplifier - Class 1	Norsonic	NOR 1209	15390
Sound pressure level calibrator - Class 1	Norsonic	NOR 1251	33555
Precision grade noise logging, integrating sound level meter - Class 1 (kit-A) Location S13	Rion	NL-52	00120480
½" diameter pre-polarised condenser microphone - Class 1	Rion	UC-59	03152
Pre-amplifier - Class 1	Rion	NH-21	10479
Sound pressure level calibrator - Class 1	Rion	NC-74	35015346
Precision grade noise logging, integrating sound level meter - Class 1 (kit-B) Location S4	Rion	NL-32	00661738
½" diameter pre-polarised condenser microphone - Class 1	Rion	UC-53A	312914
Pre-amplifier - Class 1	Rion	NH-21	26688
Sound pressure level calibrator - Class 1	Rion	NC-74	34662222

Measurement Equipment	Manufacturer	Type Number	Serial Number
Precision grade noise logging, integrating sound level meter - Class 1 (kit-C) Location S19	Rion	NL-32	00282489
½" diameter pre-polarised condenser microphone - Class 1	Rion	UC-53A	309514
Pre-amplifier - Class 1	Rion	NH-21	19740
Sound pressure level calibrator - Class 1	Rion	NC-74	35173549
Precision grade noise logging, integrating sound level meter - Class 1 (kit-D) Location S9	Rion	NL-32	00282490
½" diameter pre-polarised condenser microphone	Rion	UC-53A	313776
Pre-amplifier - Class 1	Rion	NH-21	26689
Sound pressure level calibrator - Class 1	Rion	NC-74	35173547
Precision grade noise logging, integrating sound level meter - Class 1 (kit-F) Location S22	Rion	NL-32	00493038
½" diameter pre-polarised condenser microphone - Class 1	Rion	UC-53A	315944
Pre-amplifier - Class 1	Rion	NH-21	29980
Sound pressure level calibrator - Class 1	Rion	NC-74	35173566
Precision grade noise logging, integrating sound level meter - Class 1 (kit-G) Location S20	Rion	NL-32	01182976
½" diameter pre-polarised condenser microphone - Class 1	Rion	UC-53A	318798
Pre-amplifier - Class 1	Rion	NH-21	28589
Sound pressure level calibrator - Class 1	Rion	NC-74	35173565

Summary of Baseline Noise Survey Results

11.2.13 Results of the L_{Aeq} and L_{A10} measurements for daytime periods are summarized in Table 11-3. For the attended measurements, the exact measurement periods are detailed in section 11.4.

Table 11-3 Summary of Measured Daytime Noise Levels

Location (Fig 11-1)	Survey type	Sound level, dB	
		$L_{A10,18hr}$*	Range of measured $L_{Aeq,15min}$
S1	Attended	74	71-72
S2	Attended	70	68-69
S3	Attended	64	59-63
S4	Unattended	40	41-65
S5	Attended	76	73-74
S6	Attended	70	69
S7	Attended	64	62-63

Location (Fig 11-1)	Survey type	Sound level, dB	
		$L_{A10,18hr}$*	Range of measured $L_{Aeq,15min}$
S8	Attended	63	60-61
S9	Unattended	59	53-70
S11	Attended	52	50-51
S12	Attended	Wet roads, data not used	Wet roads, data not used
S13	Unattended	56	53-77
S15	Attended	60	59-60
S16	Attended	54	53-58
S17	Attended	78	74-75
S18	Attended	80	76-77
S19	Unattended	70	66-71
S20	Unattended	59	55-62
S21	Attended	56	55-56
S22	Unattended	64	60-68
S23	Attended	56	56-58
S24	Attended	64	63

*$L_{A10,18h}$ results determined from consecutive short-term measurement results using the CRTN shortened measurement procedure (as described in paragraph 43 of CRTN)

Unattended Locations

11.2.14 Location S4 (unattended) - Surveyor's observations - situated 500m to the south of the A30, in the front garden next to the main residence of Holly Tree Cottage. The A30 is the dominating noise source.

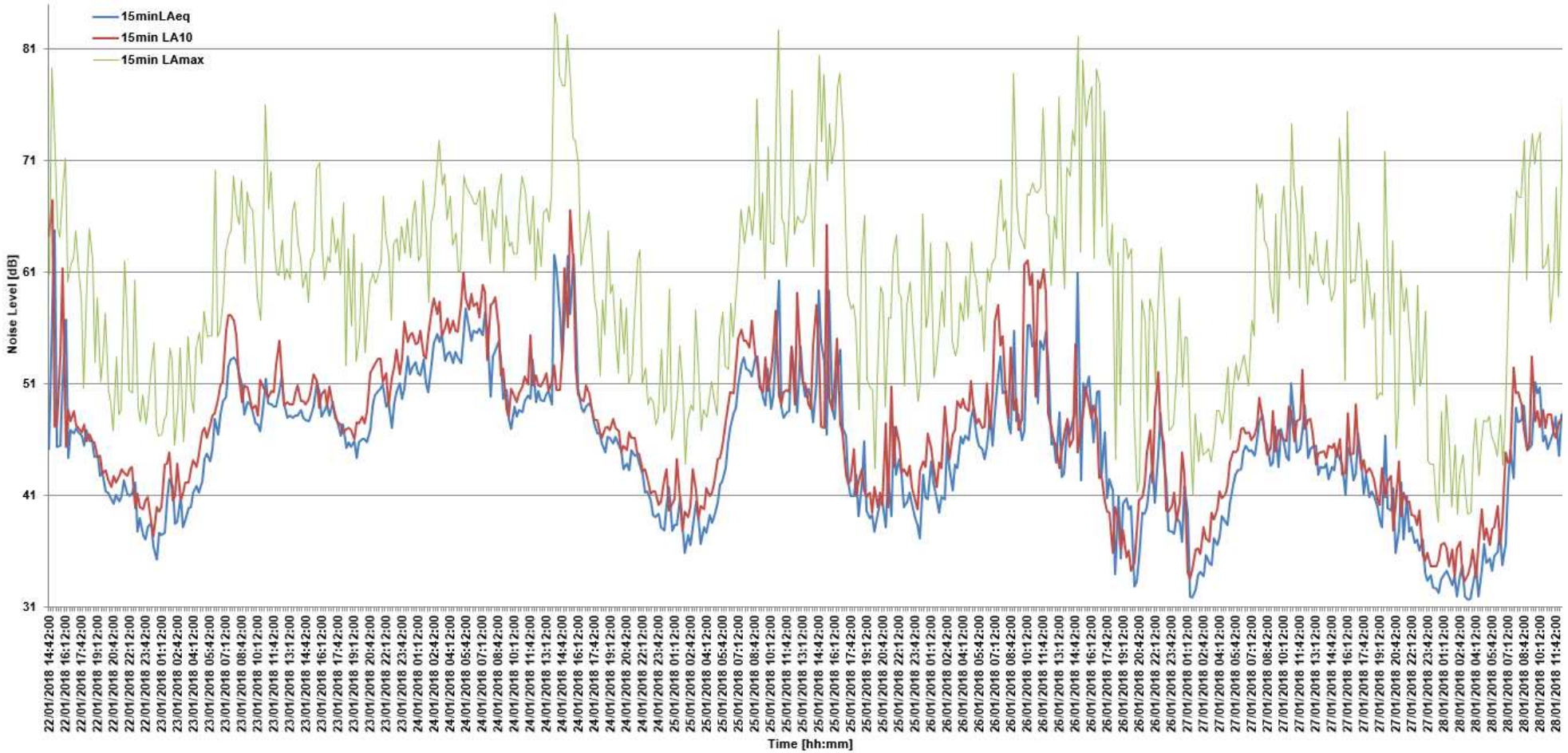

Figure 11-4 Unattended measurement results location S4, Holly Tree Cottage. (15min intervals LAeq, LA10 and LAmax)

11.2.15 Surveyor's observations of location S9 (unattended) - is on the south side of the A30, in the rear garden next to the main residence of Hillview farm, 350m from the A30 road edge. The A30 is the dominating noise source (for location see Volume 6 Document Ref 6.3 ES Figure 11-1).

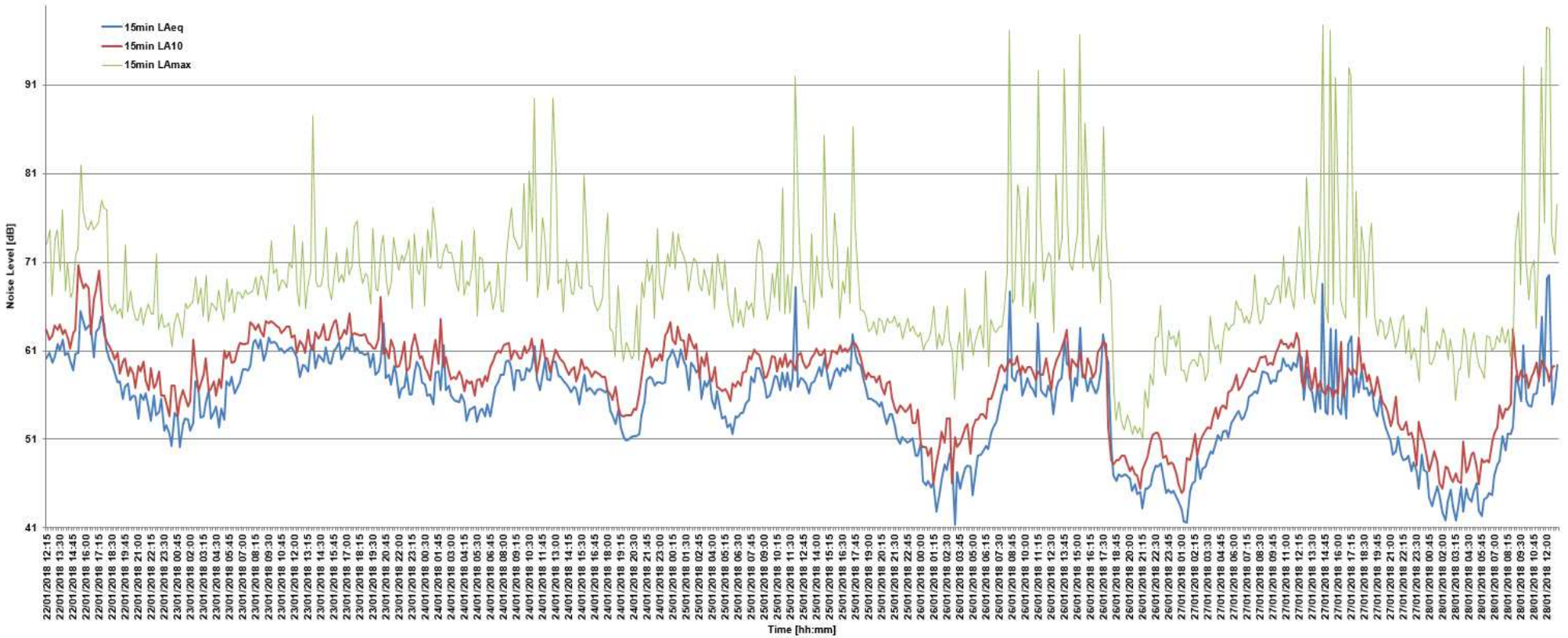

Figure 11-5 Unattended measurement results location S9, Hillview Farm. (15min intervals L_{Aeq}, L_{A10} and L_{Amax})

11.2.16 Surveyor's observations of location S13 (unattended) –is on the south east side of the A30. Next to the main residence at NCF. The A30 is the dominating noise source (for location see Volume 6 Document Ref 6.3 ES Figure 11-1).

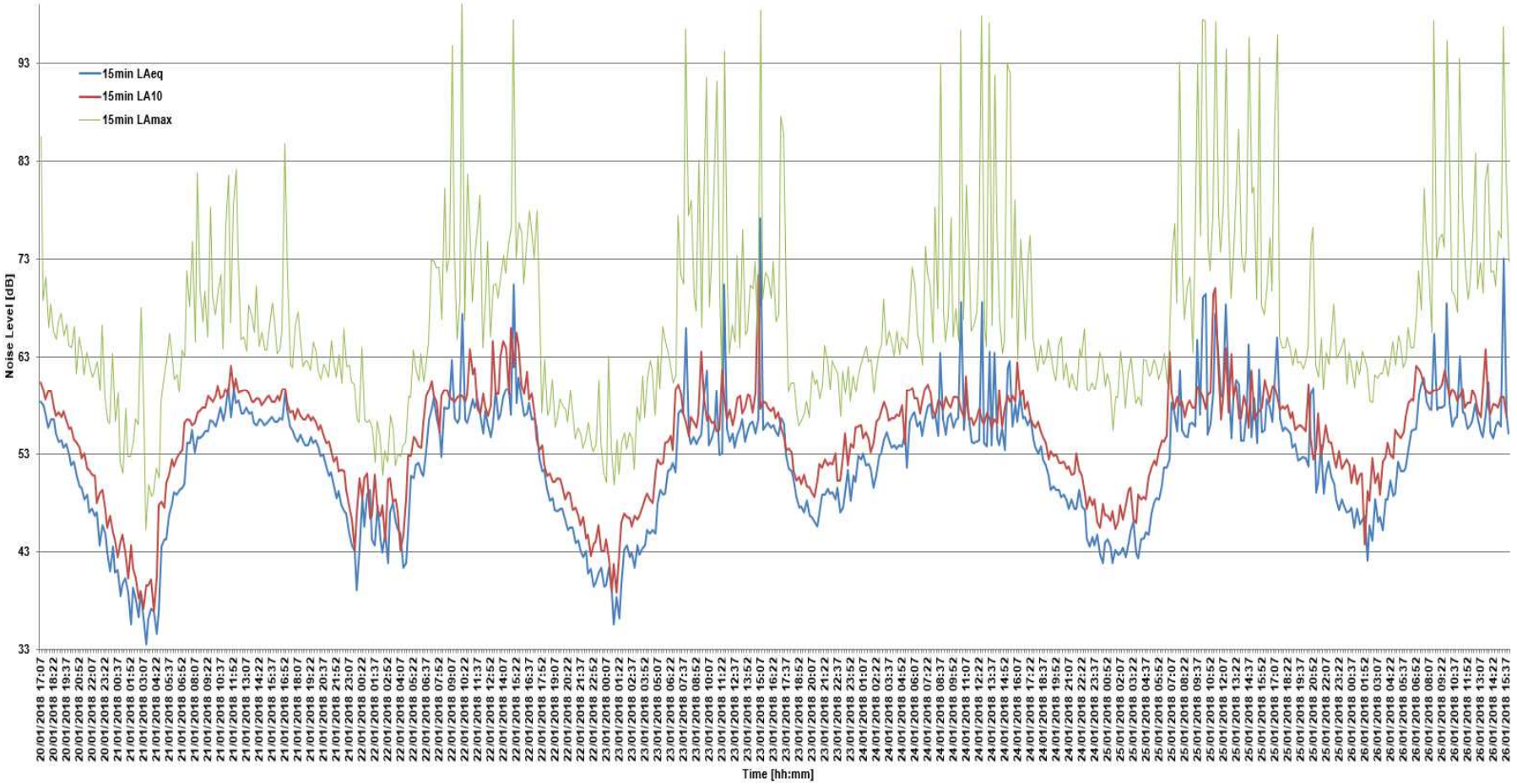

Figure 11-6 Unattended measurement results location S13, NCF. (15min intervals L_{Aeq}, L_{A10} and L_{Amax})

11.2.17 Surveyor's observations of location S19 (unattended) - is on the south east side of the A30, in the front garden next to the main residence of Pennycomequick, 10m from the A30 road edge. The A30 is the dominating noise source (for location see Volume 6 Document Ref 6.3 ES Figure 11-1).

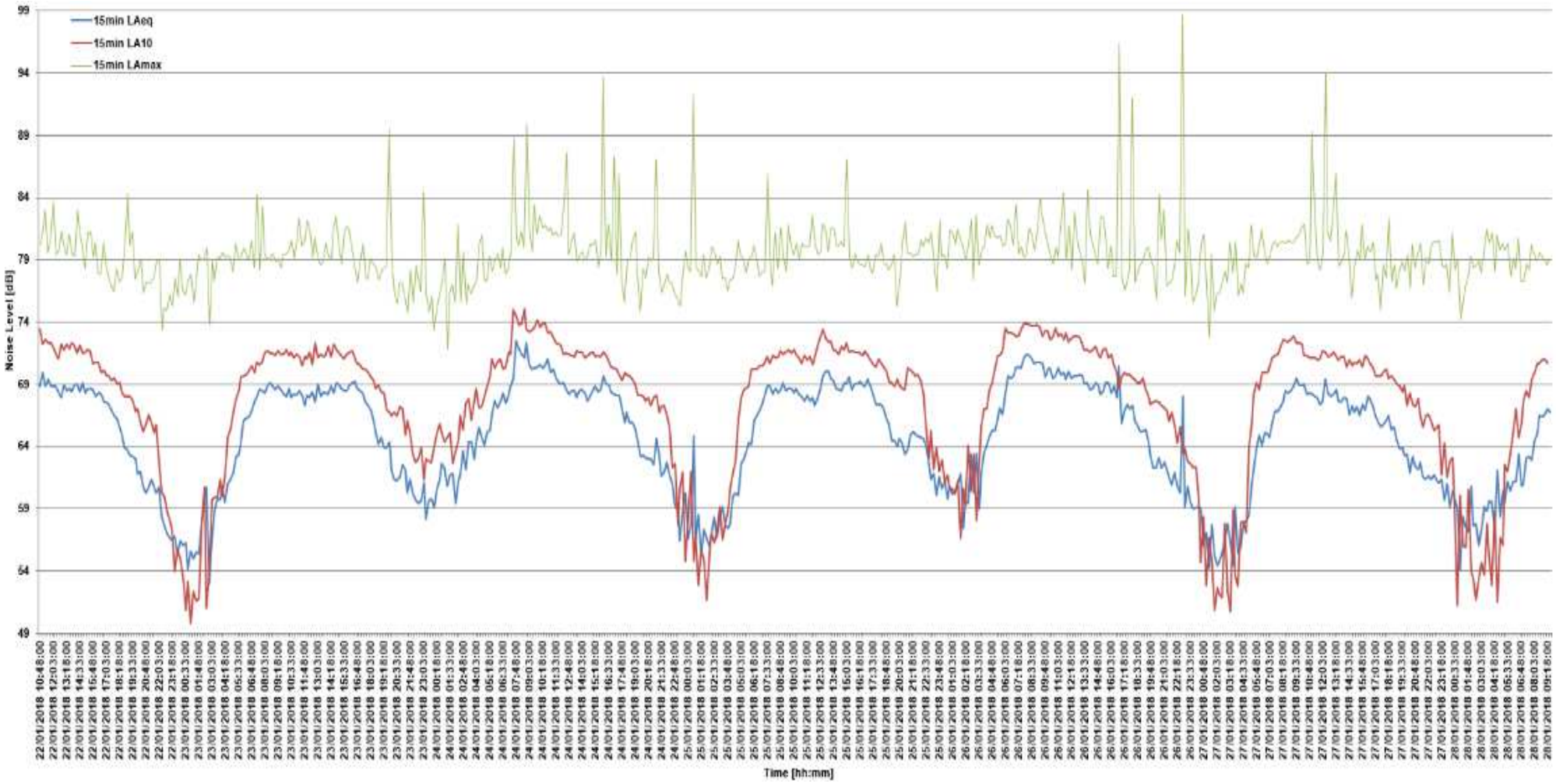

Figure 11-7 Unattended measurement results location S19, Pennycomequick , in the front garden. (15min intervals L_{Aeq}, L_{A10} and L_{Amax})

11.2.18 Surveyor's observations of location S20 (unattended) - is on the south east side of the A30, in the rear garden next to Pennycomequick tennis court, 70m from the A30 road edge. The A30 is the dominating noise source (for location see Volume 6 Document Ref 6.3 ES Figure 11-1).

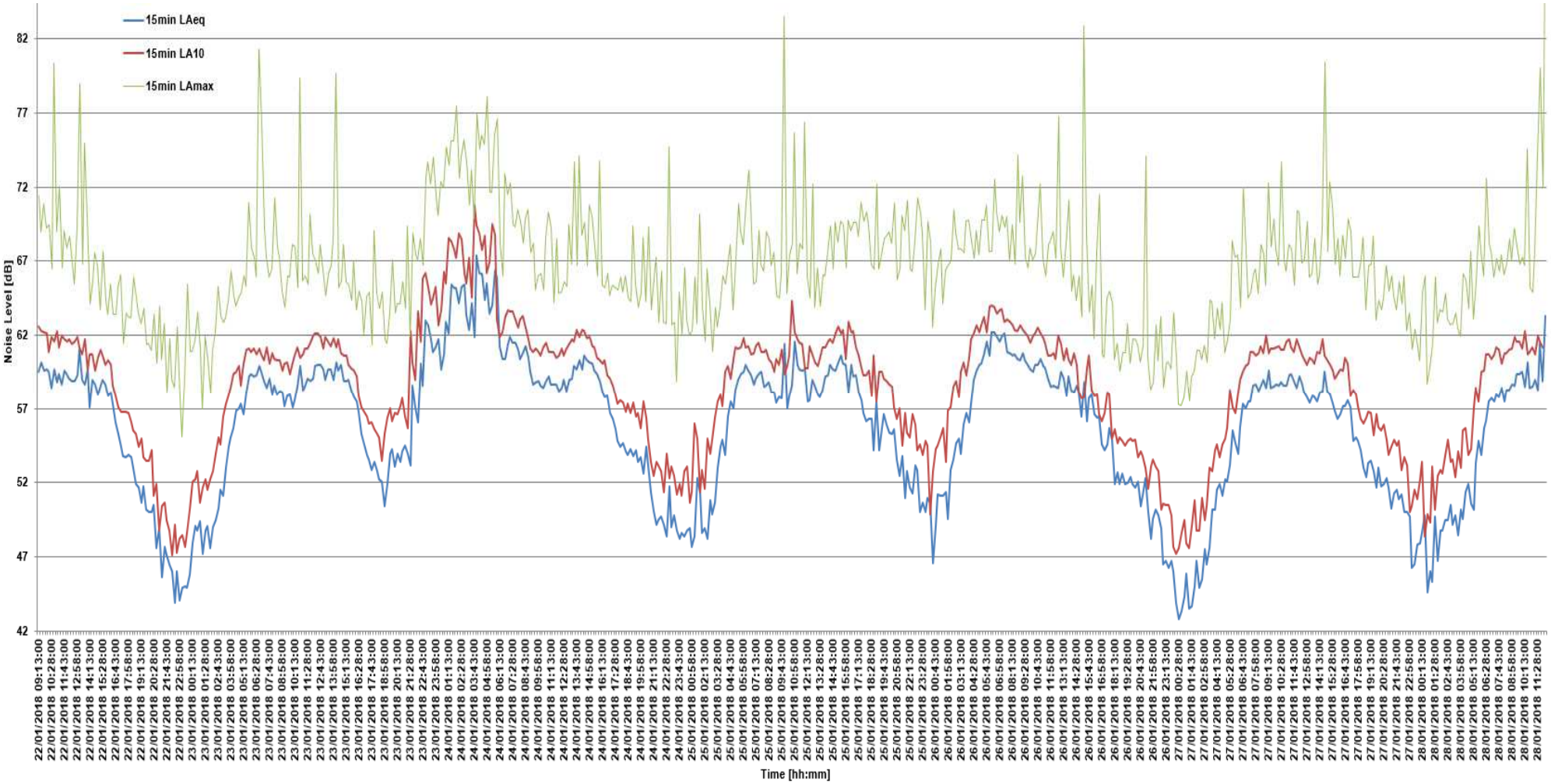

Figure 11-8 Unattended measurement results location S20, Pennycomequick , rear tennis courts. (15min intervals L_{Aeq}, L_{A10} and L_{Amax})

11.2.19 Surveyor's observations of location S22 (unattended) - is on the north side of the A30, in the front garden next to the main residence of Treworrian Manor, 35m from the A30 road edge. The A30 is the dominating noise source (for location see Volume 6 Document Ref 6.3 ES Figure 11-1).

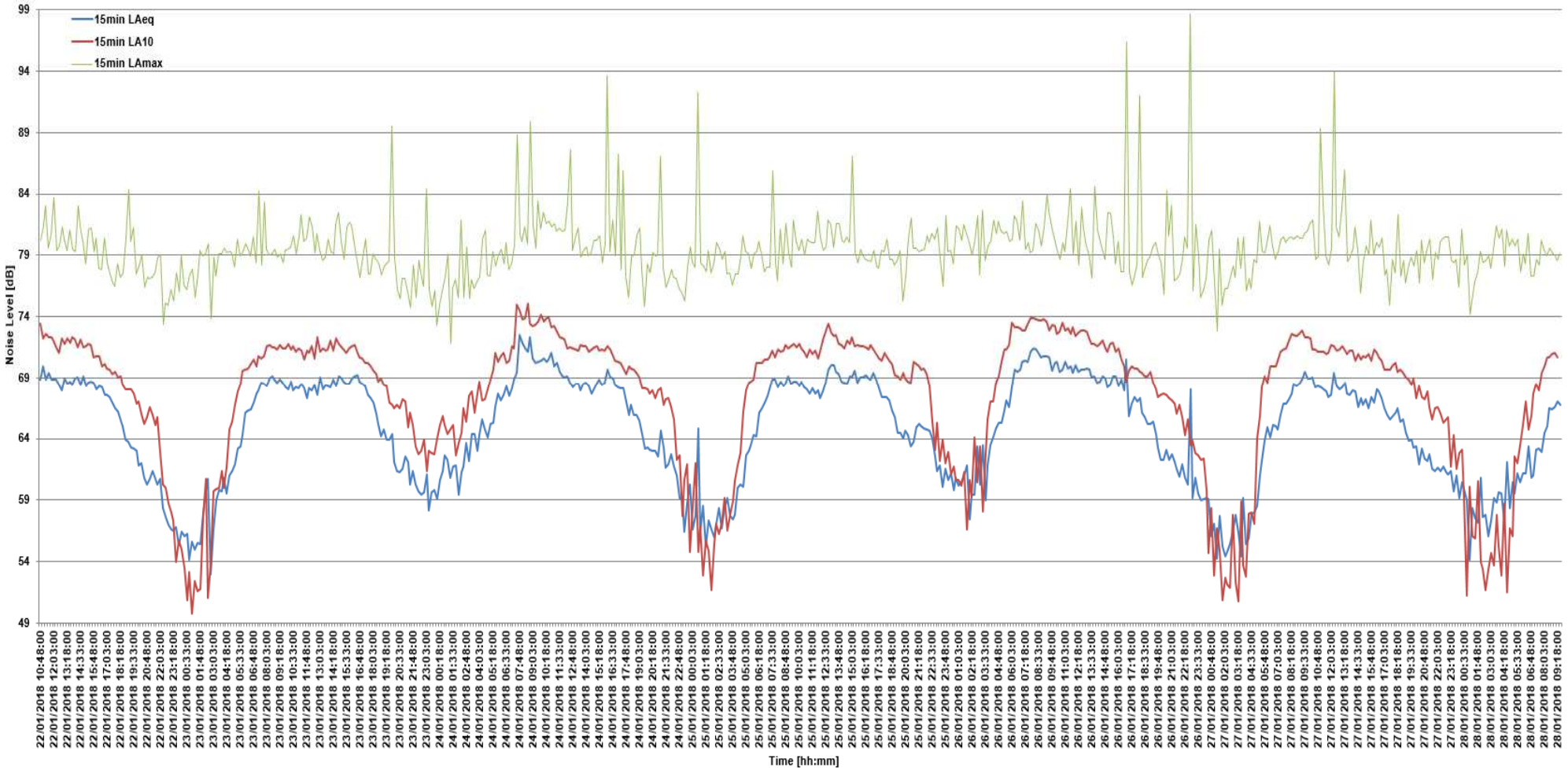

Figure 11-9 Unattended measurement results location S22, Treworrian Manor. (15min intervals L_{Aeq}, L_{A10} and L_{Amax})

Attended Locations

11.2.20 Surveyor's observations of location S1 (attended) - is on the east side of the A30, next to Burra-Burra Farm on the corner of an un-named road accessed from A390, on the verge 7m from the A30 road edge. The A30 is the dominating noise source, but it was noted that the A390 to the north east is contributing to overall noise levels (for location see Volume 6 Document Ref 6.3 ES Figure 11-1).

Table 11-4 Attended measurement results at location S1, Burra-Burra Farm off un-named road accessed from A390

Date	Time		Temperature		Wind		Noise Level, dB (A)					Comments
	Start	Finish	Start	Finish	Speed (m/s)	Direction	L_{eq}	L_{max}	L_{min}	L_{A10}	L_{A90}	
15.1.18	15.30	15.45	11^0C	9^0C	3.6	NW	68.2	77.9	59.9	70.4	64.6	During the measurement, location was dominated by traffic travelling on the Blackwater bypass, it was a mix of cars and HGVs for this survey period. no, other noise sources were audible.
15.1.18	16.36	16.51	9^0C	8^0C	4.9	NW	69.5	89.2	60.5	70.8	65.9	HGVs and cars are still the dominating noise source as they travel on Blackwater bypass.
19.1.18	10:57	11:12	6^0C	6^0C	1.2	E	72.4	82.0	56.5	75.8	64.6	HGVs and cars are still the dominating noise source as they travel north east and south west on Blackwater bypass.
19.1.18	12:18	12:33	6^0C	6^0C	1.3	E	71.5	80.2	56.6	75.0	63.9	HGVs and cars are still the dominating noise source as they travel on Blackwater bypass. for this survey period no, other noise sources were audible
19.1.18	13:26	13:41	5^0C	5^0C	1.1	E	70.8	79.8	55.9	74.1	63.7	HGVs and cars are still the dominating noise source as they travel on Blackwater bypass. During

11.2.21 Surveyor's observations of location S2 (attended) - is on the east side of the A30, on the corner of an un-named road accessed from A390, on the verge 18m from the A30 road edge. The A30 and Chiverton roundabout is the dominating noise source, but it was noted that the A390 to the east is contributing to overall noise levels (for location see Volume 6 Document Ref 6.3 ES Figure 11-1).

Table 11-5 Attended measurement results at location S2, A30 Chiverton roundabout.

Date	Time		Temperature		Wind		Noise Level, dB (A)					Comments
	Start	Finish	Start	Finish	Speed (m/s)	Direction	L_{eq}	L_{max}	L_{min}	L_{A10}	L_{A90}	
19.1.18	11:21	11:36	5^0C	5^0C	1.2	W	68.8	75.1	57.5	71.6	63.9	During the measurement, location was dominated by traffic travelling on Chiverton roundabout, it was a mix of cars and HGVs for this survey period. No other noise sources were audible.
19.1.18	12:36	12:51	5^0C	5^0C	1.9	W	68.3	84.7	59.4	70.7	63.2	HGVs and cars are still the dominating noise source as they travel around Chiverton roundabout.
19.1.18	13:48	14:03	5^0C	5^0C	3.3	W	69.2	77.0	60.2	71.8	64.9	Traffic is still the dominating noise source as they travel around Chiverton roundabout.

11.2.22 Surveyor's observations of location S3 (attended) – is on the north side of the A30, on the corner of an un-named road in a small layby accessed from the B3277, on the verge 30m from the B3277 road edge (for location see Volume 6 Document Ref 6.3 ES Figure 11-1). The A30 and Chiverton roundabout is the dominating noise source, but it was noted that the B3277 to the north is contributing to overall noise levels.

Table 11-6 Attended measurement results at location S3, Small layby off B3277.

Date	Time		Temperature		Wind		Noise Level, dB (A)					Comments
	Start	Finish	Start	Finish	Speed (m/s)	Direction	L_{eq}	L_{max}	L_{min}	L_{A10}	L_{A90}	
15.1.18	15.52	16.07	9^0C	9^0C	4.9	NW	60.5	77.2	50.1	63.4	53.2	During the measurement, this location was dominated by traffic travelling on the B3277, it was a mix of car and HGVs, it was noted that this small "B" class road was carrying a large percentage of HGVs. A30 to the south east is just audible above back ground noise levels.
15.1.18	16.57	17.13	8.5^0C	8.5^0C	2.8	NW	58.7	71.9	49.5	61.8	53.2	HGVs and cars are still the dominating noise source as they travel on B3277.
18.1.18	10.27	10.59	8^0C	8^0C	3.2	W	62.6	79.6	44.7	66.7	50	During this measurement, HGVs and cars are still the dominating noise source as they travel on B3277. During measurement, it was noted that the roads were moist from overnight rain.
18.1.18	11.54	12.14	8^0C	8^0C	2.4	NW	61	72.8	46.8	65.7	51.3	During this measurement, HGVs and cars are still the dominating noise source as they travel on B3277. During measurement it was noted that the road was moist from an earlier rain shower.
18.1.18	13.05	13.20	8^0C	8^0C	4.1	NW	59.3	77.8	47.5	62.5	51.8	HGVs and cars are still the dominating noise source as they travel on B3277. A30 to the south east is just audible above background noise levels.

11.2.23 Surveyor's observations of location S5 (attended) – is on the southeast side of the A30, on a raised grass verge on the corner of an un-named road, 10m from the A30 road edge. The A30 is the dominating noise source (for location see Volume 6 Document Ref 6.3 ES Figure 11-1).

Table 11-7 Attended measurement results at location S5, South side of the A30 next to un-named road.

Date	Time		Temperature		Wind		Noise Level, dB (A)					Comments
	Start	Finish	Start	Finish	Speed (m/s)	Direction	L_{eq}	L_{max}	L_{min}	LA_{10}	LA_{90}	
15.1.18	16.15	16.30	9^0C	9^0C	4.8	NW	74.7	82.3	63.8	77.1	70.8	During this measurement HGVs and cars is the dominating noise source as they travel north east and south west on A30. During measurement, it was noted that traffic was slowed by congestion lead up to the Chiverton roundabout.
18.1.18	11.06	11.21	8^0C	8^0C	2.1	NW	73.9	84.8	59.2	76.9	67.0	During this measurement, HGVs and cars are still the dominating noise source as they travel on A30. During measurement, it was noted that the roads were moist from an earlier rain shower and traffic was slowed by congestion lead up to the Chiverton roundabout.
18.1.18	12.16	12.31	8^0C	8^0C	3.4	NW	73.5	86.0	56.2	76.4	66.3	During this measurement, HGVs and cars are still the dominating noise source as they travel on A30. During measurement, it was noted that the road moist from an earlier rain shower.
18.1.18	13.31	13.46	8^0C	8^0C	3.8	NW	73.4	81.6	55.4	76.5	66.8	During this measurement traffic travelling on A30 is still the dominating noise source, it was a mix of car and HGVs during measurement it was noted that the road was moist from earlier rain shower.

11.2.24 Surveyor's observations of location S6 (attended) – is on the north side of the A30, In the entrance to Truro Sawmills seasoning store overlooking the B3284, 7m from the B3284 road edge. The A30 is the dominating noise source, but it was noted that the B3284 to the north was contributing to overall noise levels (for location see Volume 6 Document Ref 6.3 ES Figure 11-1).

Table 11-8 Attended measurement results at location S6, Entrance to Truro Sawmills seasoning store off B3284.

Date	Time		Temperature		Wind		Noise Level, dB (A)					Comments
	Start	Finish	Start	Finish	Speed (m/s)	Direction	L_{eq}	L_{max}	L_{min}	LA_{10}	LA_{90}	
15.1.18	15.19	15.34	10^0C	10^0C	1.9	NW	68.4	86.6	52.0	71.0	54.3	During this measurement, it was noted that the Truro Sawmills to the north and the A30 to the south east where equally contributing to the overall noise levels. Light traffic on the B3284 next to measurement location.
15.1.18	16.29	16.44	9^0C	9^0C	1.3	N W	68.1	83.9	52.3	71.7	54.5	During this measurement, it was noted that the Truro Sawmills to the north is the dominating noise source. A30 to the south east is clearly audible above background noise levels. Light traffic on the B3284 next to measurement location.
18.1.18	11.30	11.45	8^0C	8^0C	1.9	NW	68.9	86.4	50.7	71.7	52.8	During this measurement, it was noted that the Truro Sawmills to the north and the A30 to the south east where equally contributing to the overall noise levels. Light traffic on the B3284 next to measurement location.
18.1.18	12.40	12.55	8^0C	8^0C	3.1	NW	68.8	84.4	45.5	72.2	48.8	During this measurement, it was noted that the Truro Sawmills to the north is the dominating noise source. A30 to the south east is clearly

Date	Time		Temperature		Wind		Noise Level, dB (A)					Comments
	Start	Finish	Start	Finish	Speed (m/s)	Direction	L_{eq}	L_{max}	L_{min}	LA_{10}	LA_{90}	
												audible above background noise levels. Light traffic on the B3284 next to measurement location.
18.1.18	13.55	14.08	8^0C	8^0C	2.9	NW	69.0	85.7	50.9	70.0	53.5	During this measurement, it was noted that the Truro Sawmills to the north is the dominating noise source. A30 to the south east is clearly audible above background noise levels. Light traffic on the B3284 next to measurement location. During measurement it was noted that the road was moist from earlier rain shower

11.2.25 Surveyor's observations of location S7 (attended) – is on the north side of the A30, on the corner of an un-named road. Next to Callestick Vean cottage on the verge 9m from the B3284 road edge. The A30 is the dominating noise source (for location see Volume 6 Document Ref 6.3 ES Figure 11-1).

Table 11-9 Attended measurement results at location S7, Next to Callestick Vean cottage off B3284.

Date	Time		Temperature		Wind		Noise Level, dB (A)					Comments
	Start	Finish	Start	Finish	Speed (m/s)	Direction	L_{eq}	L_{max}	L_{min}	LA_{10}	LA_{90}	
15.1.18	14.52	15.07	10^0C	10^0C	1.4	NW	62.3	77.6	53.4	64.7	57.1	During this measurement HGVs and cars is the dominating noise source as they travel east and west on A30. Light traffic on the B3284 next to measurement location.
15.1.18	16.09	16.24	9^0C	9^0C	2.1	NW	62.7	78.0	56.0	64.9	58.4	During this measurement HGVs and cars to the south of measurement location is still the dominating noise source as they travel on A30. Light traffic on the B3284 next to measurement location.
15.1.18	17.21	17.36	8^0C	8^0C	1.9	NW	63.4	77.0	52.9	66.6	56.4	During this measurement traffic, travelling on A30 is still the dominating noise source; it was a mix of car and HGVs. Light traffic on the B3284 next to measurement location.

11.2.26 Surveyor's observations of location S8, (attended) – is on the south east side of the A30 - location near to 'The Villa' on the NCF site. The A30 is the dominating noise source (for location see Volume 6 Document Ref 6.3 ES Figure 11-1). Supplementary attended measurements were also taken around the NCF wedding venue, however, these were affected by noise from construction works and were not considered to represent the ambient noise levels. Therefore, these results have not been included below.

Table 11-10 Attended measurement results at location S8, NCF.

Location	Date	Time		Temperature		Wind		Noise Level, dB (A)					Comments
		Start	Finish	Start	Finish	Speed (m/s)	Direction	L_{eq}	L_{max}	L_{min}	LA_{10}	LA_{90}	
S8	28.1.18	14.44	14.59	13^0 C	13^0C	0	None	60.7	69.6	44.3	63.4	55.0	During this measurement HGVs and cars is the dominating noise source as they travel north east and south west on A30.
S8	28.1.18	15.00	15.15	13^0 C	13^0C	0.9	None	61.2	74.5	45.4	64.0	54.7	During the measurement, location was dominated by traffic travelling on the A30. No other noise sources were audible.
S8	28.1.18	15.15	15.30	13^0 C	13^0C	0	None	60.1	75.2	51.5	64.2	56.9	During the measurement, location was dominated by traffic travelling on the A30. No other noise sources were audible.

11.2.27 Surveyor's observations of location S11 (attended) – is on the north west side of the A30, off an un-named road, 7m down a footpath from the B3284 road edge. The A30 is the dominating noise source (for location see Volume 6 Document Ref 6.3 ES Figure 11-1).

Table 11-11 Attended measurement results at location S11, Public footpath from the B3284.

Date	Time		Temperature		Wind		Noise Level, dB (A)					Comments
	Start	Finish	Start	Finish	Speed (m/s)	Direction	L_{eq}	L_{max}	L_{min}	LA_{10}	LA_{90}	
15.1.18	15.46	16.01	9^0C	9^0C	2.8	NW	52.6	72.9	44.5	55.6	47.1	During this measurement HGVs and cars is the dominating noise source as they travel north east and south west on A30. Light traffic on the B3284 next to measurement location.
15.1.18	16.53	17.08	8.5^0 C	8.5^0C	3.2	NW	52.2	75.0	42.3	54.6	45.9	During this measurement HGVs and cars to the south of measurement location is still the dominating noise source as they travel on A30. Light traffic on the B3284 next to measurement location.
18.1.18	11.15	11.30	8^0C	8^0C	1.2	NW	51.4	68.5	40.2	54.7	44.4	During this measurement traffic travelling on A30 is still the dominating noise source, it was a mix of car and HGVs. Light traffic on the B3284 next to measurement location.
18.1.18	12.30	12.45	8^0C	8^0C	2.2	NW	50.0	64.1	41.5	52.8	44.9	During this measurement traffic travelling on A30 is still the dominating noise source, it was a mix of car and HGVs. Light traffic on the B3284 next to measurement location.
18.1.18	13.35	13.50	6.5^0C	6.5^0C	1.5	NW	51.2	75.4	39.8	52.3	45.2	During this measurement HGVs and cars is the dominating noise source as they travel north east and south west on A30. Light traffic on the B3284 next to measurement location.

11.2.28 Surveyor's observations of location S12 (attended) – is on the north side of the A30, in a lay-by parking area overlooking Marazanvose Farm, 7m from the A30 road edge. The A30 is the dominating noise source (for location see Volume 6 Document Ref 6.3 ES Figure 11-1). This data has been omitted from the report due to localised rain showers causing a wet road surface near to location which affected noise levels.

Date	Time		Temperature		Wind		Noise Level, dB (A)					Comments
	Start	Finish	Start	Finish	Speed (m/s)	Direction	L_{eq}	L_{max}	L_{min}	LA_{10}	LA_{90}	
This data has been omitted from the report due to localised rain showers causing a wet road surface near to location which affected noise levels												

11.2.29 Surveyor's observations of location S15 (attended) – is on the north west side of the A30, in a farm gateway 7m from the Henver Lane road edge. The A30 to the south was the dominating noise source (for location see Volume 6 Document Ref 6.3 ES Figure 11-1).

Table 11-12 Attended measurement results at location S15, Farm gateway off Henver Lane, opposite to Tolgroggan Farm.

Date	Time		Temperature		Wind		Noise Level, dB (A)					Comments
	Start	Finish	Start	Finish	Speed (m/s)	Direction	L_{eq}	L_{max}	L_{min}	LA_{10}	LA_{90}	
18.1.18	10.27	10.42	8^0C	8^0C	0	None	59.5	76.5	39.2	60.1	43.3	Traffic on A30 is clearly audible above back ground noise levels
18.1.18	11.44	11.59	7^0C	7^0C	1.0	NW	60.1	75.3	40.1	62.9	44.6	During this measurement traffic travelling on A30 is still the dominating noise source, it was a mix of cars and HGVs.
18.1.18	12.55	13.10	8^0C	8^0C	2.0	NW	59.3	78.6	41.3	60.6	44.1	HGVs and cars travelling north east and south west on A30 are the dominating noise source. Light traffic on Henver Lane next to measurement location was noted.

11.2.30 Surveyor's observations of location S16 (attended) – is on the north west side of the A30, in un-named lane off Henver Lane, 90m from the A30 road edge. The A30 to the south was the dominating noise source (for location see Volume 6 Document Ref 6.3 ES Figure 11-1).

Table 11-13 Attended measurement results at location S16, Un-named lane off Henver Lane.

Date	Time		Temperature		Wind		Noise Level, dB (A)					Comments
	Start	Finish	Start	Finish	Speed (m/s)	Direction	L_{eq}	L_{max}	L_{min}	LA_{10}	LA_{90}	
17.1.18	11.02	11.17	6^0C	6^0C	0.5	None	57.9	77.1	45.5	57.8	50.4	During this measurement, High numbers of HGVs and cars are the dominating noise source as they travel on A30 for this survey period. No other noise sources were audible.
17.1.18	12.46	13.01	5^0C	5^0C	0.2	None	53.4	72.4	45.1	54.3	48.7	During this measurement traffic travelling on A30 is still the dominating noise source, it was a mix of cars and HGVs.
17.1.18	13.50	14.05	4.5^0C	4.5^0C	0.2	None	52.8	75.0	43.3	53.6	48.1	A30 is still the dominating noise source as HGVs and cars travel north east and south west on A30. Light traffic on Henver Lane to the north was just audible.

11.2.31 Surveyor's observations of location S17 (attended) – is on the north side of the A30, next to Henver Lane, 5m from the A30 road edge. The A30 to the east is the dominating noise source (for location see Volume 6 Document Ref 6.3 ES Figure 11-1).

Table 11-14 Attended measurement results at location S17, North east side of the A30, next to Henver Lane.

Date	Time		Temperature		Wind		Noise Level, dB (A)					Comments
	Start	Finish	Start	Finish	Speed (m/s)	Direction	L_{eq}	L_{max}	L_{min}	LA_{10}	LA_{90}	
17.1.18	10.39	10.54	6^0C	6^0C	1.8	NW	74.4	85.1	49.4	78.3	60.8	Traffic travelling on the A30 was the dominating noise source. It consisted of a mix of HGVs and cars for this survey period. No other noise sources were audible.
17.1.18	12.27	12.42	5^0C	5^0C	3.0	NW	74.1	86.3	40.9	78.3	59.9	During this measurement traffic travelling on the A30 next to this location is still the dominating noise source, it was a mix of car and HGVs.
17.1.18	13.30	13.45	4.5^0C	4.5^0C	3.3	NW	74.8	87.7	51.4	78.9	60.1	During this measurement HGVs and cars is the dominating noise source as they travel north east and south west on A30. Light traffic on the Henver Lane next to measurement location.

11.2.32 Surveyor's observations of location S18 (attended) – is on the north west side of the A30, in a lay-by parking area along the A30, 5m from the A30 road edge. The A30 to the east is the dominating noise source (for location see Volume 6 Document Ref 6.3 ES Figure 11-1).

Table 11-15 Attended measurement results at location S18, Lay-by parking area along the A30.

Date	Time		Temperature		Wind		Noise Level, dB (A)					Comments
	Start	Finish	Start	Finish	Speed (m/s)	Direction	L_{eq}	L_{max}	L_{min}	LA_{10}	LA_{90}	
17.1.18	10.16	10.31	6^0C	6^0C	3.1	NW	76.6	88.1	50.9	81.1	57.0	The dominating noise source is HGVs and cars travelling along the A30.
17.1.18	11.42	11.57	6^0C	6^0C	1.1	NW	75.8	90.1	49.8	80.3	56.3	During this measurement traffic, travelling on A30 is still the dominating noise source; it was a mix of cars and HGVs for this survey period. No other noise sources were audible.
17.1.18	13.09	13.21	4^0C	4^0C	2.7	NW	75.8	88.7	52.4	80.4	57.6	During this measurement, HGVs and cars are the dominating noise source as they travel north east and south west on A30.

11.2.33 Surveyor's observations of location S21 (attended) – is on the south side of the A30, in a lay-by parking area next to an un-named lane, 3.5m from the road edge. The A30 to the north is the dominating noise source. (for location see Volume 6 Document Ref 6.3 ES Figure 11-1).

Table 11-16 Attended measurement results at location S21, Lay-by parking area next to an un-named lane.

Date	Time		Temperature		Wind		Noise Level, dB (A)					Comments
	Start	Finish	Start	Finish	Speed (m/s)	Direction	L_{eq}	L_{max}	L_{min}	LA_{10}	LA_{90}	
17.1.18	11.09	11.24	8^0C	8^0C	3.8	NW	56.6	75.1	48.8	57.5	52.4	During this measurement, HGVs and cars are the dominating noise source as they travel on A30.
17.1.18	12.20	12.35	9^0C	9^0C	3.4	N	55.9	73.9	48.7	57.5	52.1	During this measurement traffic, travelling on A30 is still the dominating noise source; it was a mix of cars and HGVs. for this survey period. No other noise sources were audible.
17.1.18	13.49	14.04	7.5^0C	7.5^0C	4.6	NW	54.5	77.1	47.2	55.6	50.2	During this measurement HGVs and cars is the dominating noise source as they travel north east and south west on A30. Light traffic on the un-named lane next to measurement location.

11.2.34 Surveyor's observations of location S23 (attended) – is on the southeast side of the A30, in a farm gateway next to an un-named lane, 3.5m from the road edge. The A30 to the north was the dominating noise source (for location see Volume 6 Document Ref 6.3 ES Figure 11-1).

Table 11-17 Attended measurement results at location S23, Farm gateway next to an un-named lane.

Date	Time		Temperature		Wind		Noise Level, dB (A)					Comments
	Start	Finish	Start	Finish	Speed (m/s)	Direction	L_{eq}	L_{max}	L_{min}	LA_{10}	LA_{90}	
17.1.18	10.40	10.55	8.5^{0}C	8.5^{0}C	2.6	W	56.6	77.2	44.6	58.2	49.6	During this measurement, HGVs and cars are the dominating noise source as they travel on A30 to the north of measurement location.
17.1.18	11.56	12.11	9^{0}C	9^{0}C	4.2	NW	57.6	79.9	45.1	57.6	50.4	During this measurement traffic travelling on A30 is still the dominating noise source, it was a mix of car and HGVs. The A39 the east is contributing to the overall noise levels.
17.1.18	13.26	13.41	8.5^{0}C	8^{0}C	4.5	NW	56.1	78.5	47.2	55.9	50.9	During this measurement, HGVs and cars are the dominating noise source as they travel north east and south west on A30. The A39 the east is clearly audible above background noise levels. Light traffic on the un-named lane next to measurement location.

11.2.35 Surveyor's observations of location S24 (attended) – is on the east side of the Carland Cross roundabout on the A30, on a grass verge about 50m from A30/A39. The A30 to the west was the dominating noise source (for location see Volume 6 Document Ref 6.3 ES Figure 11-1).

Table 11-18 Attended measurement results at location S24, East side of the A30 Carland Cross roundabout.

Date	Time		Temperature		Wind		Noise Level, dB (A)					Comments
	Start	Finish	Start	Finish	Speed (m/s)	Direction	L_{eq}	L_{max}	L_{min}	LA_{10}	LA_{90}	
17.1.18	10.17	10.32	8.5^0 C	8.5^0C	2.1	W	62.7	73.5	53.2	64.8	59.1	During this measurement, HGVs and cars are the dominating noise source as they travel around Carland Cross roundabout on A30 to the north west of measurement location.
17.1.18	11.33	11.48	8^0C	9^0C	3.2	NW	63.1	75.4	56.8	64.9	59.8	During this measurement, HGVs and cars are the dominating noise source as they travel around Carland Cross roundabout on A30 to the north west of measurement location. During this measurement traffic travelling on A30 is still the dominating noise source, it was a mix of car and HGVs. The A39 the south is contributing to the overall noise levels.
17.1.18	12.45	13.00	9^0C	8.5^0C	4.8	NW	62.7	70.1	56.8	64.7	59.8	During this measurement, HGVs and cars are the dominating noise source as they travel north east and south west on A30. The A39 the south west is audible above background noise levels. Traffic is slightly congested leading to the roundabout.

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