

A428 Black Cat to Caxton Gibbet improvements

TR010044

Volume 6

6.3 Environmental Statement

Appendix 11.2: Noise Monitoring

Planning Act 2008

Regulation 5(2)(a)

Infrastructure Planning (Applications: Prescribed Forms and
Procedure) Regulations 2009

26 February 2021

Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning
(Applications: Prescribed Forms and
Procedure) Regulations 2009**

**A428 Black Cat to Caxton Gibbet
improvements
Development Consent Order 202[]**

Appendix 11.2: Noise Monitoring

Regulation Reference:	Regulation 5(2)(a)
Planning Inspectorate Scheme Reference	TR010044
Application Document Reference	TR010044/APP/6.3
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1 Noise monitoring

1.1.1 **Table 1-1** details the start and end time of the noise monitoring at each location, plus details of the equipment. All monitoring positions were free-field (more than 3 metres from any vertical reflective surface) and are shown on **Figure 11-1** of the Environmental Statement [TR010044/APP/6.2]. All Sound Level Meters (SLM) have been calibrated at a UKAS approved laboratory within the previous two years, and all calibrators within the previous one year.

Table 1-1: Noise Monitoring Equipment

Ref	Location	Start Time	End Time	Sound Level Meter ref	Sound Level Meter Serial No.	Calibrator Ref	Calibrator Serial No.
M1	Park Road, Roxton	15/11/2017 15:00	22/11/2017 12:00	SLM41	840884	LON CAL 1	34304647
M2	Bedford Road, Roxton	15/11/2017 13:00	22/11/2017 13:00	SLM17	420763	LON CAL 1	34304647
M3	School Lane, Roxton	15/11/2017 13:00	22/11/2017 12:00	SLMTCR	542906	LON CAL 1	34304647
M4	Roxton Road, Chawston	15/11/2017 17:00	22/11/2017 18:00	SLM18	420764	LON CAL 1	34304647
M5	Riverside Farm, Chawston	22/11/2017 13:00	29/11/2017 11:00	SLMTCR	542906	LON CAL 1	34304647
M6	Rectory Farm, Barford Road, Little Barford	15/11/2017 11:00	05/12/2017 04:00	SLM36	2827270	CAL 17	3006604
M7	Rectory Farm, Potton Road, St Neots	22/11/2017 12:00	24/11/2017 14:00	SLM17	420763	LON CAL 1	34304647
M8	Wintringham Hall, Cambridge Road, St Neots	22/11/2017 14:00	29/11/2017 15:00	SLM41	840884	LON CAL 1	34304647
M9	High Street, Croxton	29/11/2017 15:00	06/12/2017 12:00	SLM41	840884	LON CAL 1	34304647
M10	St Neots Road, Eltisley	29/11/2017 15:00	06/12/2017 12:00	SLMTCR	542906	LON CAL 1	34304647

- 1.1.2 **Table 1-2** summarises the weather conditions and measured $L_{A10,18h}$ noise levels during the first period of monitoring (M1, M2, M3, M4 and M6). **Table 1-3** summarises the weather conditions and measured $L_{A10,18h}$ noise levels during the second period of monitoring (M5, M6, M7 and M8). **Table 1-4** summarises the weather conditions and measured $L_{A10,18h}$ noise levels during the third period of monitoring (M6, M9 and M10). The weather data were collected from a weather station set up at M6 for the three periods of monitoring. Graphs of the wind speed, direction, rainfall and temperature are provided in Plate 1.1 to Plate 1.4.
- 1.1.3 The summary weather data are provided for the 18hr period 06:00-00:00 to correspond with the measured $L_{A10,18h}$ noise levels, which have been compared to the predicted traffic noise $L_{A10,18h}$ levels from the noise model. The purpose of the comparison is to demonstrate the traffic noise model is giving reasonable results.
- 1.1.4 Weekends, start and end days and other days which are incomplete are identified in italics in **Table 1-2**, **Table 1-3** and **Table 1-4**. These days were not used in the comparison against the predicted traffic noise $L_{A10,18h}$ levels from the noise model. This is because the predicted traffic noise $L_{A10,18h}$ levels are based on annual average weekday traffic noise levels, in accordance with the standard UK traffic noise prediction methodology.
- 1.1.5 Locations at which data was incomplete includes M7, at which measurements were only collected between 22 November and 24 November 2017, due to failure of the SLM. A further attempt to collect data was made between 29 November and 6 December 2017; however, further SLM failure resulted in no additional measurements being recorded at this location. Measurements were also not recorded at M6 between 04:00 and 12:33 on 26 November, between 06:00 and 12:39 on 28 November and between 23:00 on 28 November and 12:36 on 29 November 2017. No measurements were recorded at this location after 03:00 on 5 December 2017. These outages were due to either SLM or battery failure.
- 1.1.6 Graphs of the hourly measured noise levels at locations M1-M10, at which monitoring was completed are provided in Plate 1.5 to Plate 1.14. The graphs show the maximum hourly levels (L_{AFmax}), the ‘average’ hourly noise level (L_{Aeq}), the level exceeded 10% of each hour, which is the parameter used to assess road traffic noise (L_{A10}), and the level exceeded 90% of each hour, which is the parameter used to define underlying background levels (L_{A90}).
- 1.1.7 During all periods of monitoring, weather conditions were generally good with low hourly wind speeds (less than 5 m/s) and little or no rainfall (max 1.9mm on 27 November 2017).
- 1.1.8 At most of the measurement sites, road traffic noise was noted as the dominant noise source with other sources providing some contribution, such as light aircraft and birdsong. At M6, corona discharge was also identified as a dominant source alongside road traffic, with the noise from the East Coast Mainline Railway also contributing.
- 1.1.9 Occasional localised events are evident in the graphs of measured noise levels. However, the latter are unlikely to have significantly affected the measured $L_{A10,18h}$.

Table 1-2: Summary of Weather and Measured Daytime Noise Data 15/11/17-22/11/17

Date	Day	Period	Predominant Wind Direction	Average Wind Speed m/s	Average Temperature °C	Rainfall mm	Measured L _{A10,18h} dB				
							M1	M2	M3	M4	M6
15/11/2017	Wed	12:00-00:00	SE	0.5	10.6	0.0	46.7	62.1	44.9	57.2	46.9
16/11/2017	Thu	06:00-00:00	SSW	1.1	8.6	0.0	54.2	64.5	49.2	55.3	48.7
17/11/2017	Fri	06:00-00:00	SSW	0.7	4.2	0.0	51.3	64.4	49.3	57.2	49.4
18/11/2017	Sat	06:00-00:00	W	1.1	7.3	0.0	51.1	62.8	47.1	54.0	46.7
19/11/2017	Sun	06:00-00:00	W	0.6	4.3	0.0	49.9	61.4	46.5	53.8	47.1
20/11/2017	Mon	06:00-00:00	SSW	2.1	11.6	0.0	53.0	64.7	48.0	58.6	49.1
21/11/2017	Tue	06:00-00:00	SSW	2.8	12.8	0.2	52.6	64.2	48.1	58.3	50.1
22/11/2017	Wed	06:00-11:00	S	3.4	14.4	0.0	55.3	63.8	50.9	60.6	57.9

Table 1-3: Summary of Weather and Measured Daytime Noise Data 22/11/17-29/11/17

Date	Day	Period	Predominant Wind Direction	Average Wind Speed m/s	Average Temperature °C	Rainfall mm	Measured L _{A10,18h} dB			
							M5	M6	M7	M8
22/11/2017	Wed	13:00-00:00	S	3.4	14.4	0.0	66.0	57.9	57.8	66.8
23/11/2017	Thu	06:00-00:00	S	2.2	8.1	0.1	61.0	51.4	52.6	67.4
24/11/2017	Fri	06:00-00:00	E	0.5	2.5	0.0	57.9	49.4	52.4	67.2
25/11/2017	Sat	06:00-00:00	SSW	1.4	1.9	0.0	60.5	49.5	-	66.3
26/11/2017	Sun	06:00-00:00	SE	1.8	5.5	0.2	60.0	47.5	-	65.7
27/11/2017	Mon	06:00-00:00	S	1.1	6.3	1.9	62.1	49.7	-	68.6
28/11/2017	Tue	06:00-00:00	E	0.3	3.6	0.0	60.3	48.2	-	68.1
29/11/2017	Wed	06:00-10:00	WNW	2.6	3.9	0.0	61.9	48.6	-	68.6

Table 1-4: Summary of Weather and Measured Daytime Noise Data 29/11/17-06/12/17

Date	Day	Period	Predominant Wind Direction	Average Wind Speed m/s	Average Temperature °C	Rainfall mm	Measured L _{A10,18h} dB		
							M6	M9	M10
29/11/2017	Wed	12:00-00:00	WNW	1.9	3.9	0.0	48.6	73.8	64.9
30/11/2017	Thu	06:00-00:00	WNW	0.6	2.0	0.0	50.3	74.0	66.8
01/12/2017	Fri	06:00-00:00	NW	0.9	3.8	0.4	48.9	76.2	64.6
02/12/2017	Sat	06:00-00:00	S	1.2	4.6	0.0	47.5	74.5	60.5
03/12/2017	Sun	06:00-00:00	WNW	0.8	7.4	0.0	48.0	73.6	60.5
04/12/2017	Mon	06:00-00:00	WSW	1.6	5.8	0.0	49.9	73.9	62.9
05/12/2017	Tue	06:00-00:00	-	-	-	-	-	73.0	62.3
06/12/2017	Wed	06:00-11:00	-	-	-	-	-	73.4	61.6

Plate 1-1: M6 Rectory Farm, Barford Road: Wind Speed data 15/11/17 to 05/12/17

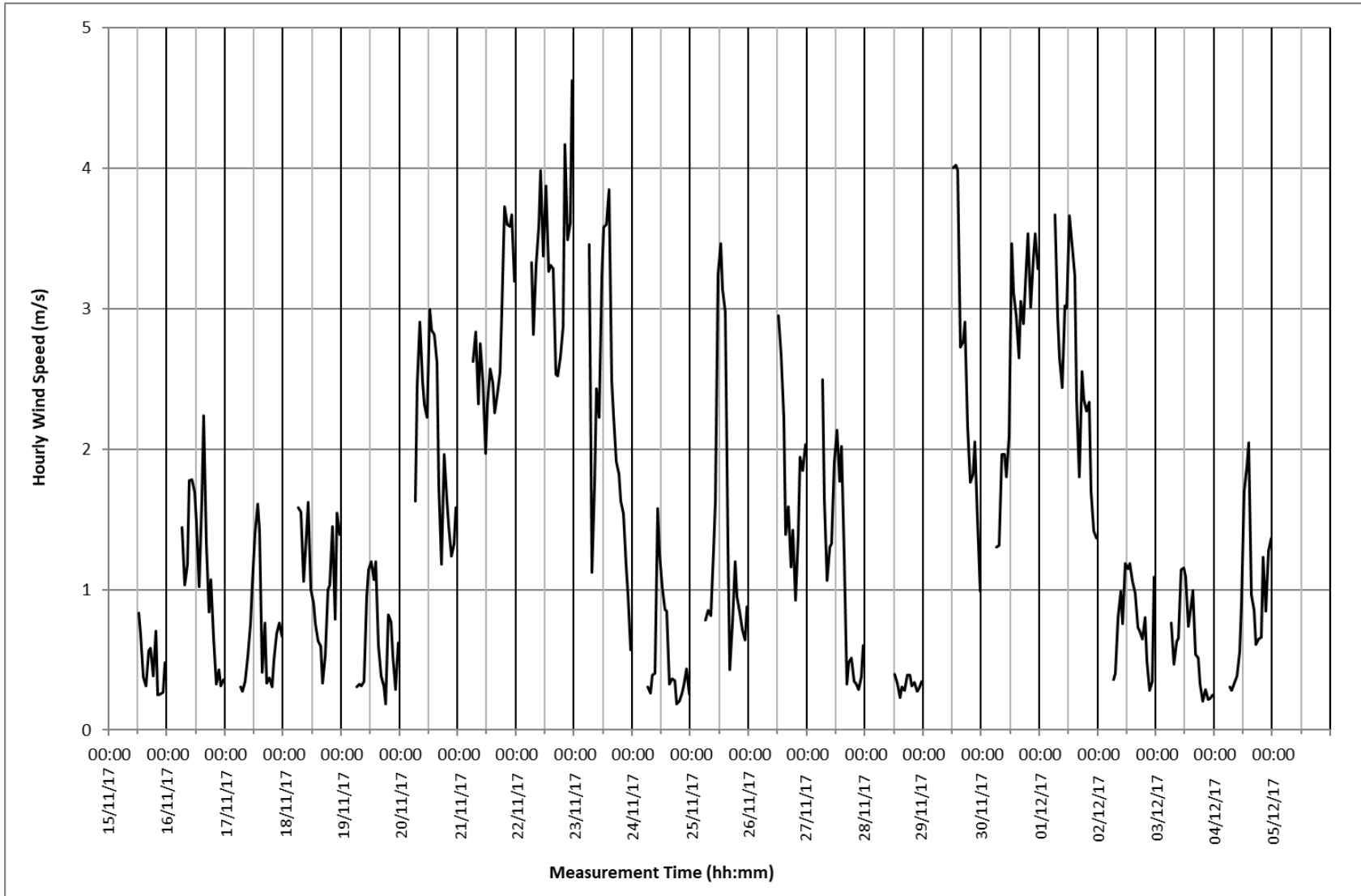


Plate 1-2: M6 Rectory Farm, Barford Road: Wind Direction data 15/11/17 to 05/12/17

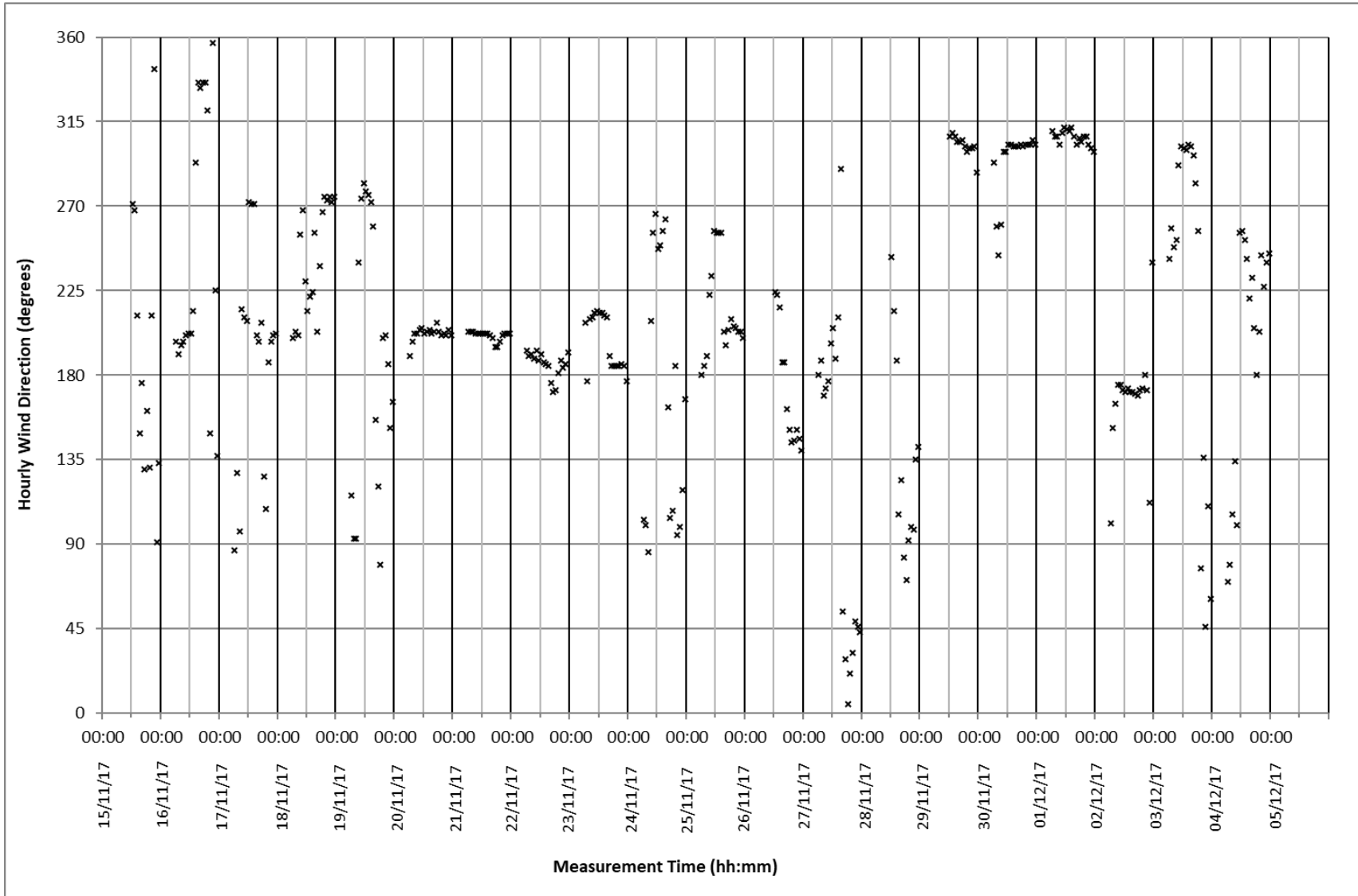


Plate 1-3: M6 Rectory Farm, Barford Road: Rainfall data 15/11/17 to 05/12/17

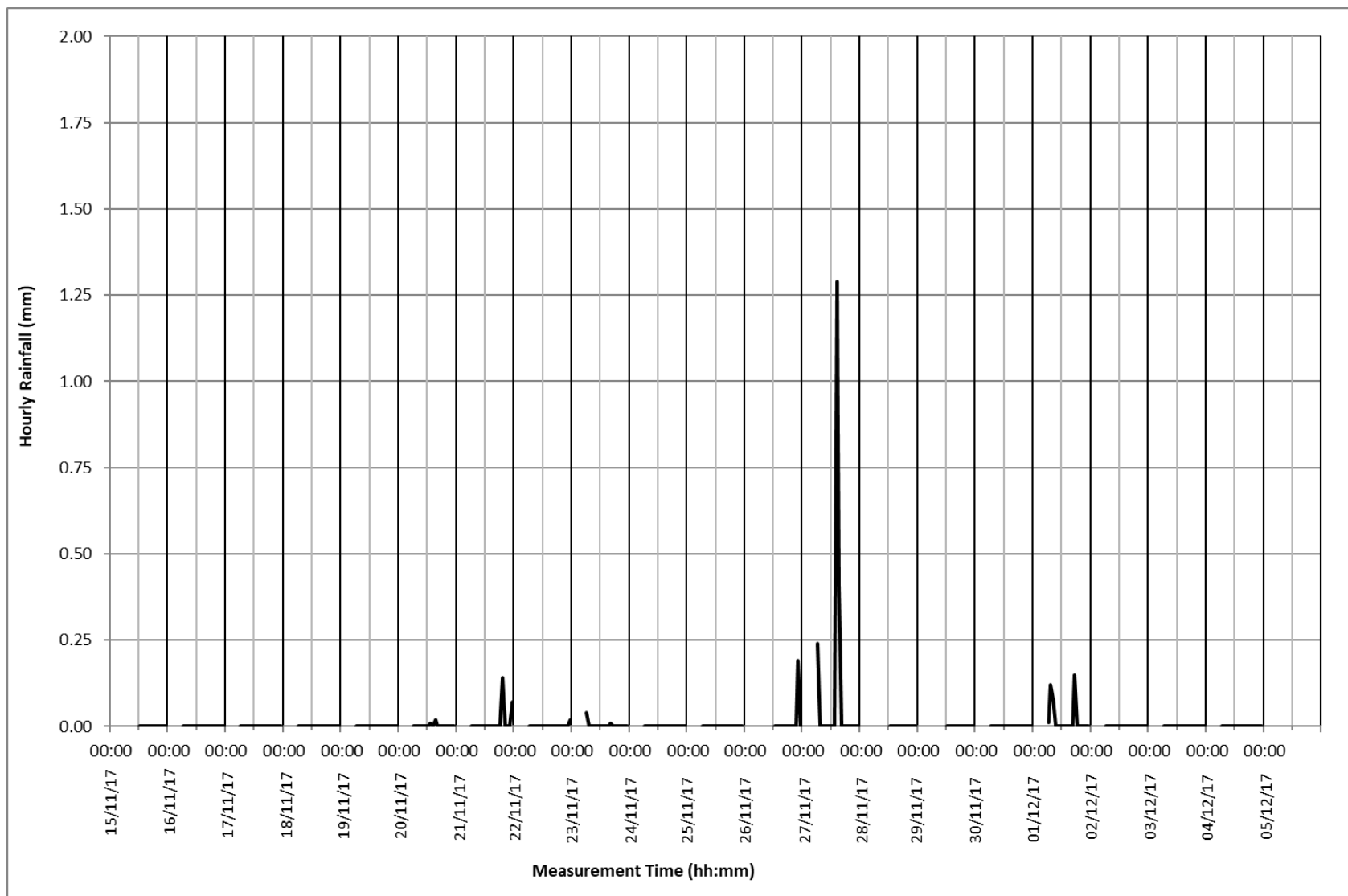


Plate 1-4: M6 Rectory Farm, Barford Road: Temperature data 15/11/17 to 05/12/17

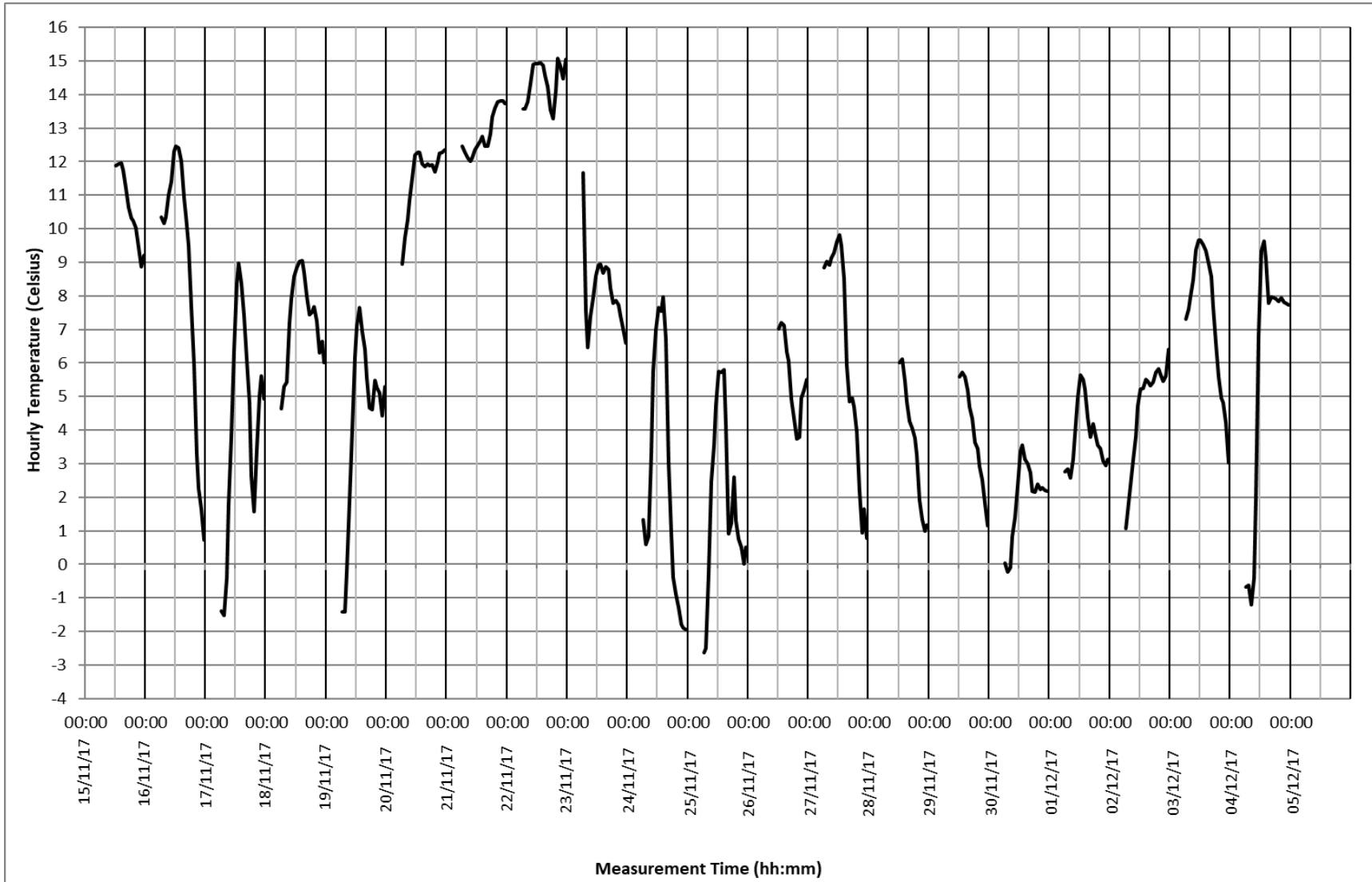


Plate 1-5: M1 Park Road, Roxton: Measured Noise Levels 15/11/17-22/11/17

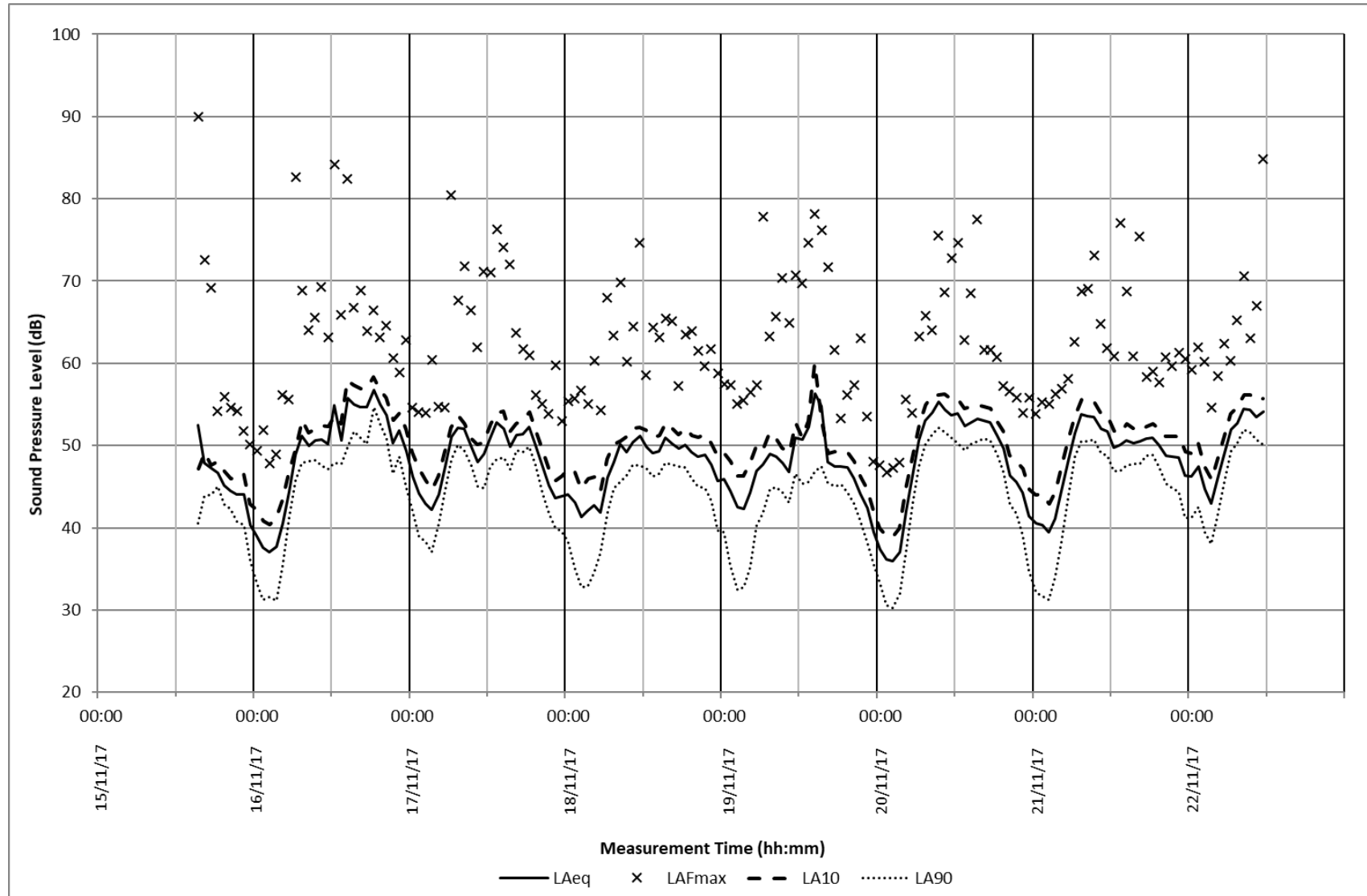


Plate 1-6: M2 Bedford Road, Roxton Measured Noise Levels 15/11/17-22/11/17

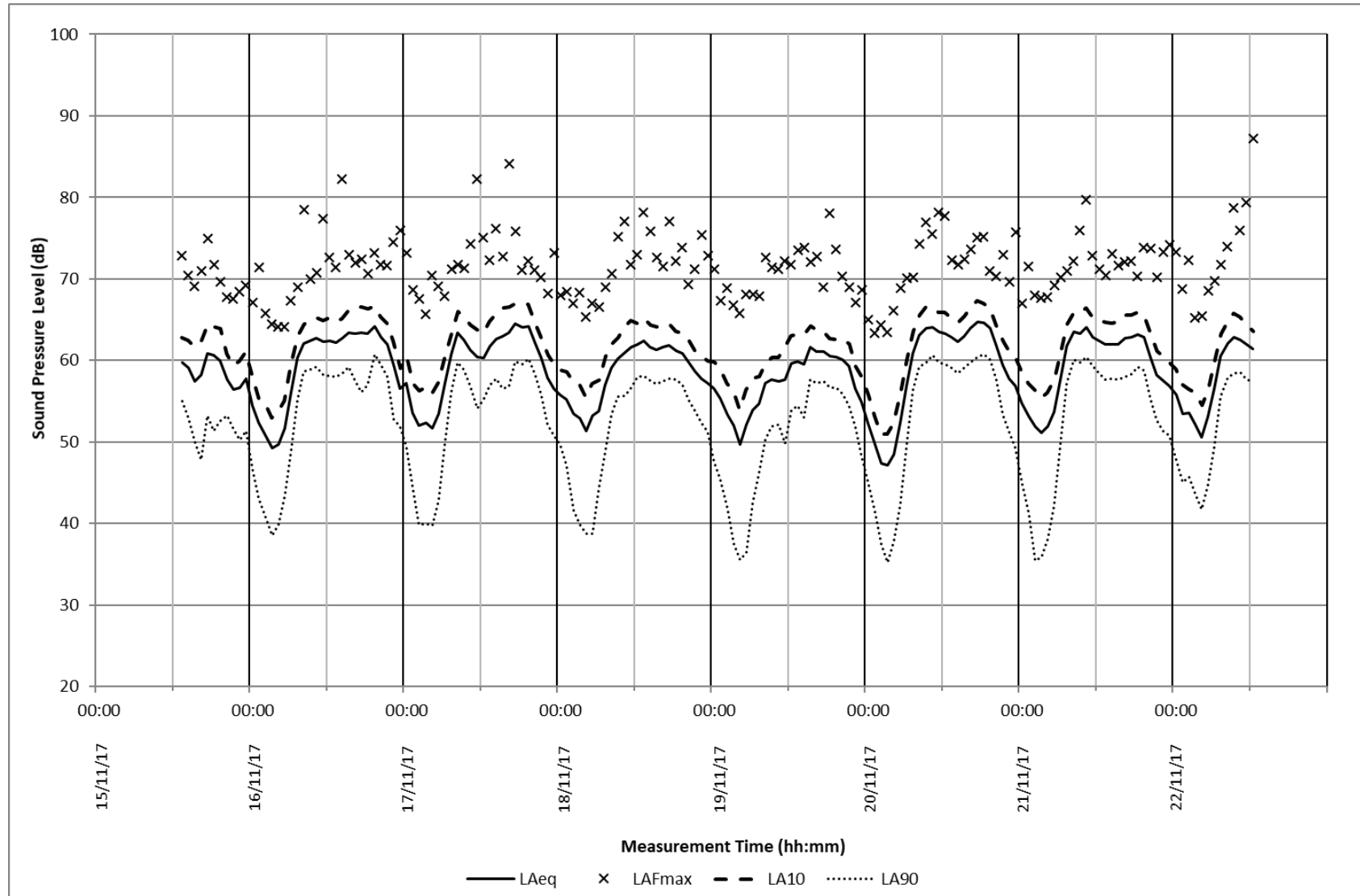


Plate 1-7: M3 School Lane, Roxton: Measured Noise Levels 15/11/17-22/11/17

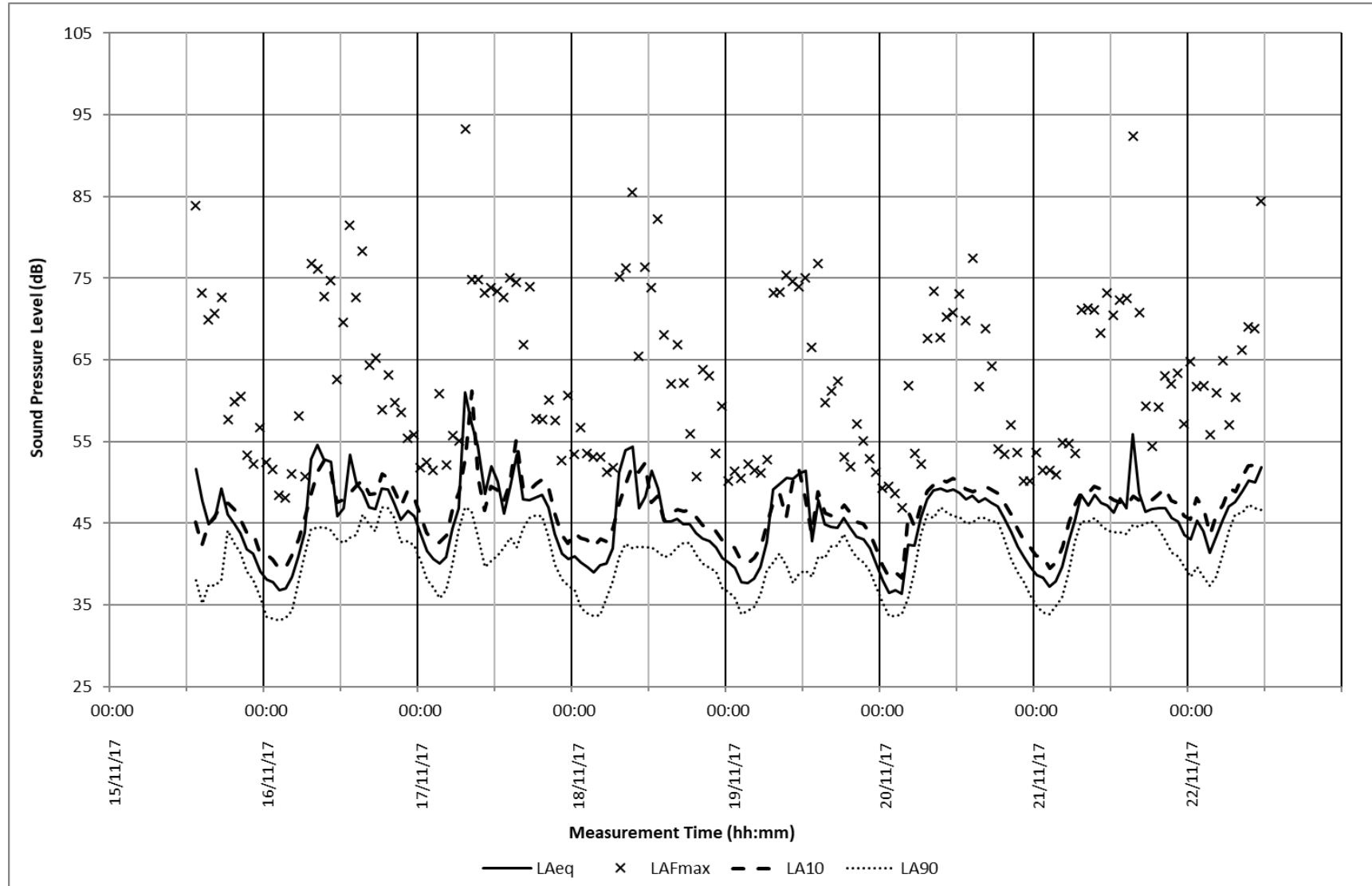


Plate 1-8: M4 Roxton Road, Chawston: Measured Noise Levels 15/11/17-22/11/17

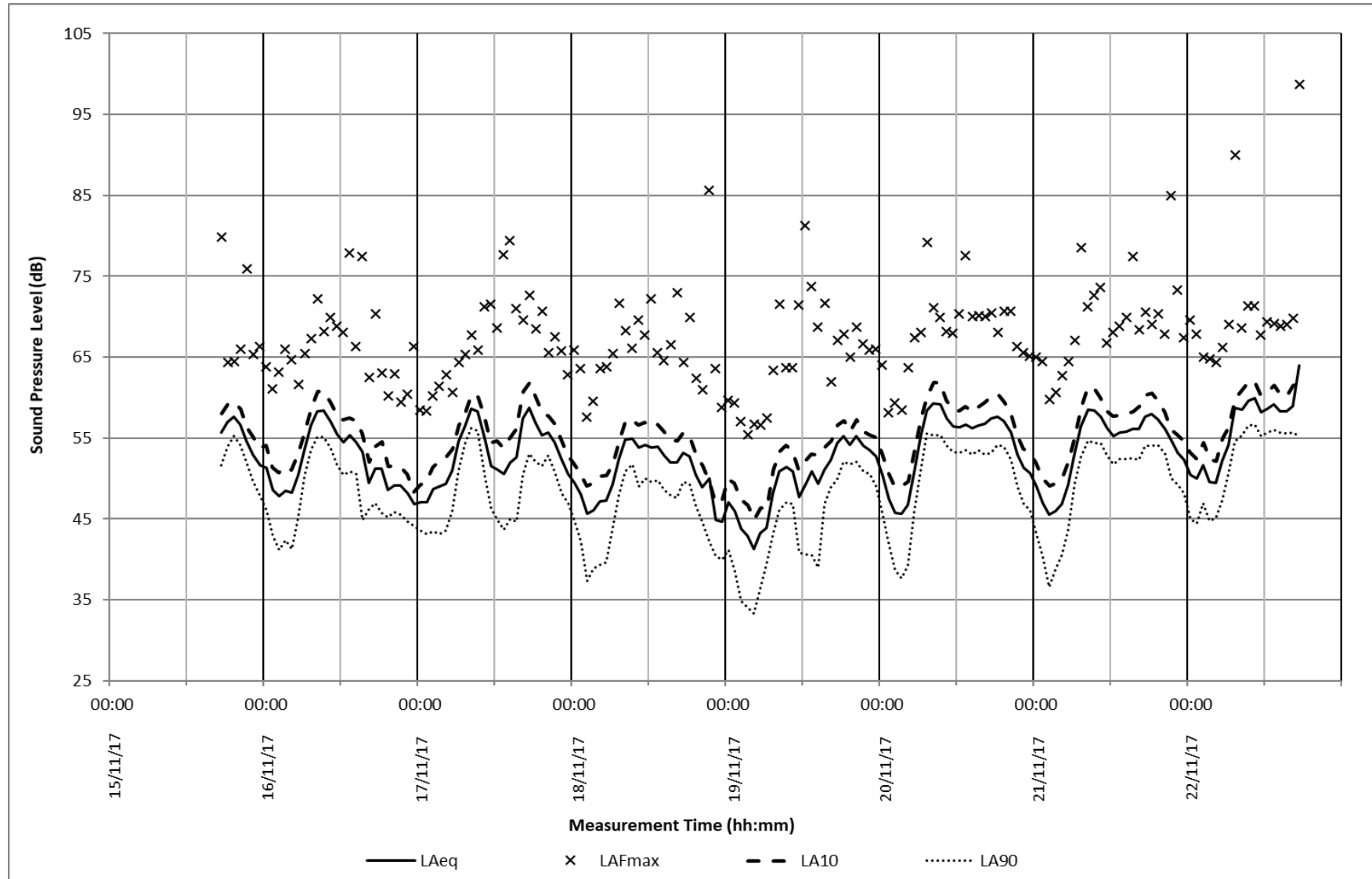


Plate 1-9: M5 Riverside Farm, Chawston: Measured Noise Levels 22/11/17-29/11/17

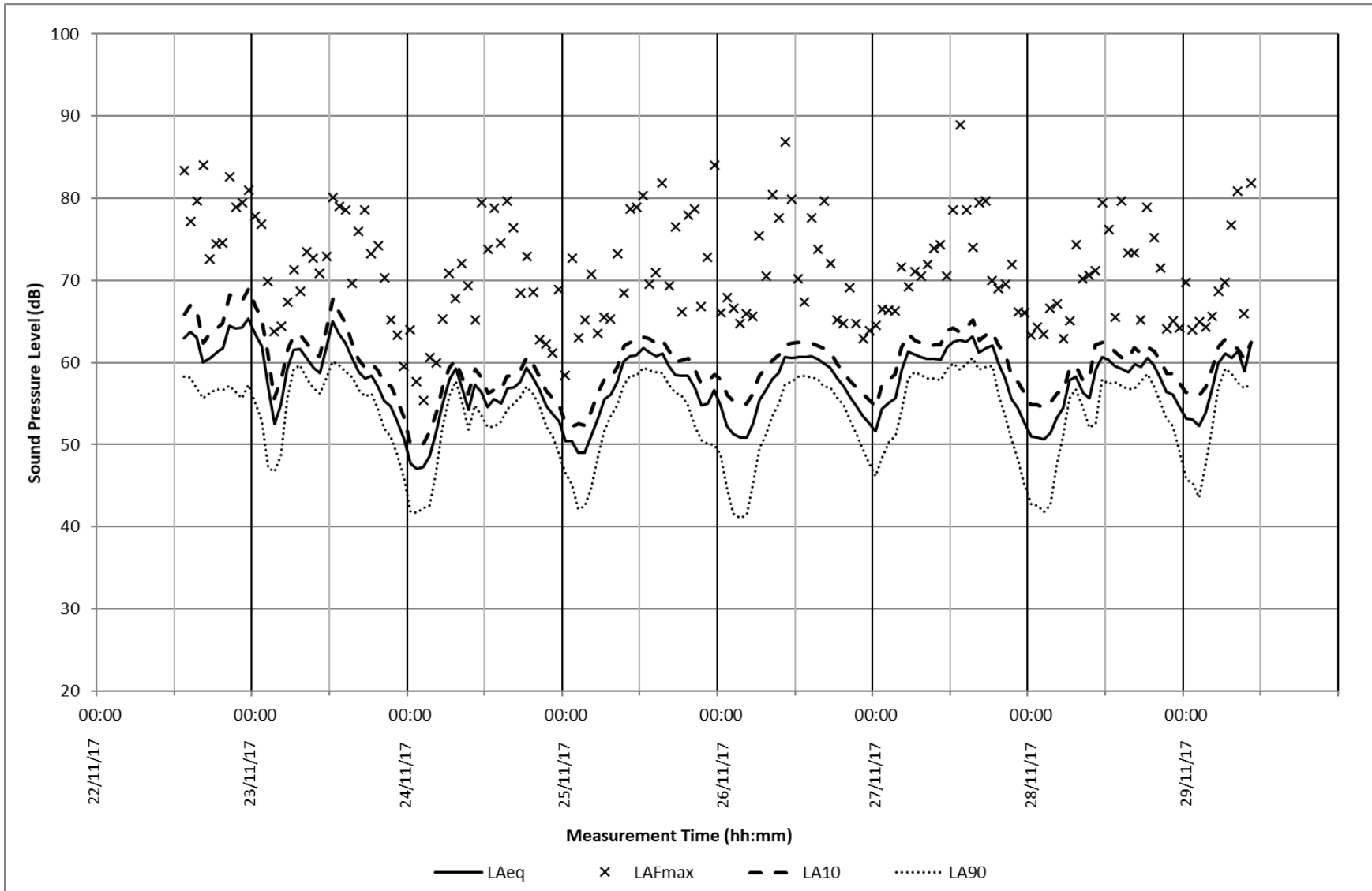


Plate 1-10: M6 Rectory Farm, Barford Road: Measured Noise Levels 15/11/17-05/12/17

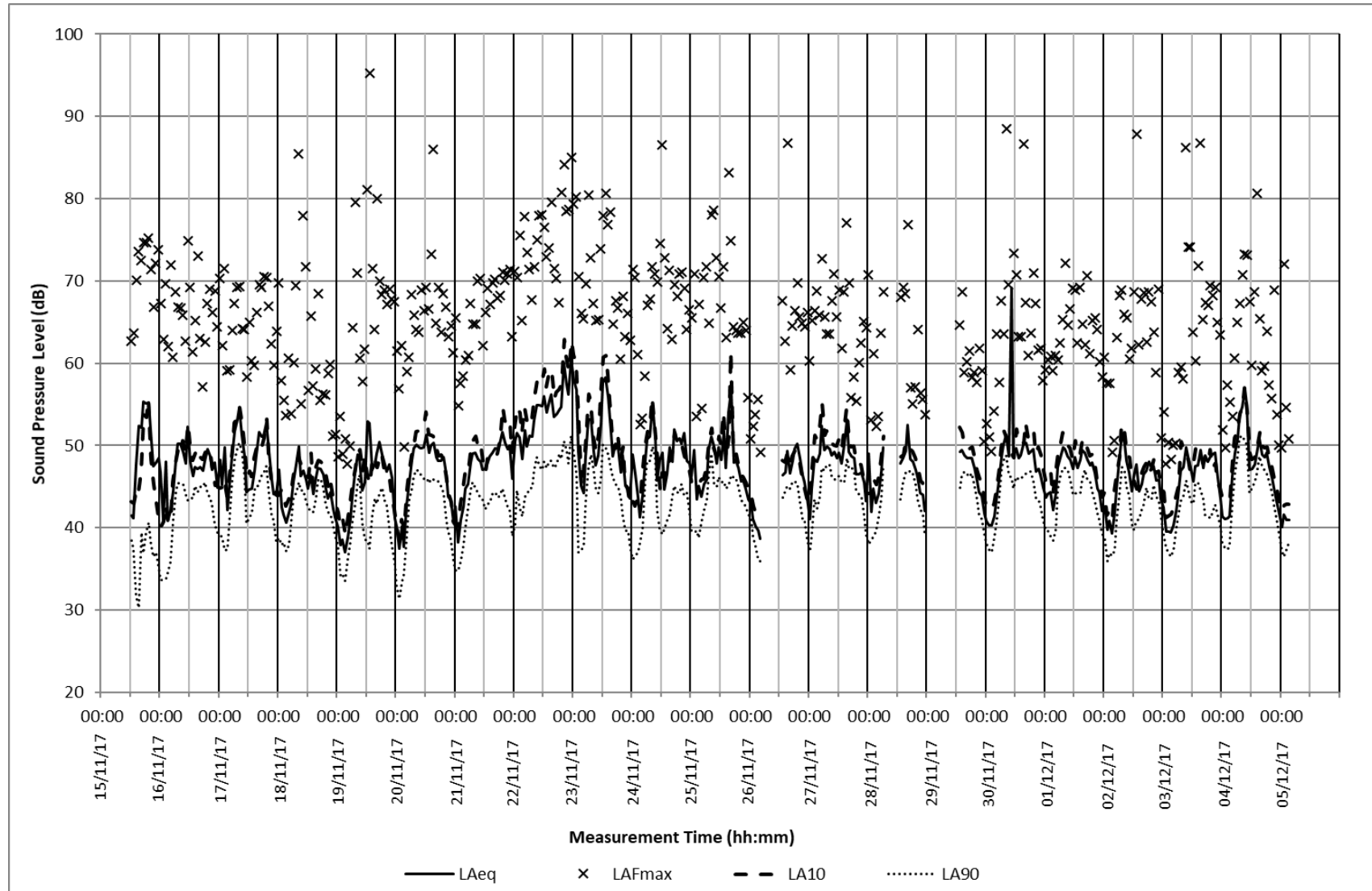


Plate 1-11: M7 Rectory Farm, Potton Road: Measured Noise Levels 22/11/17-24/11/17

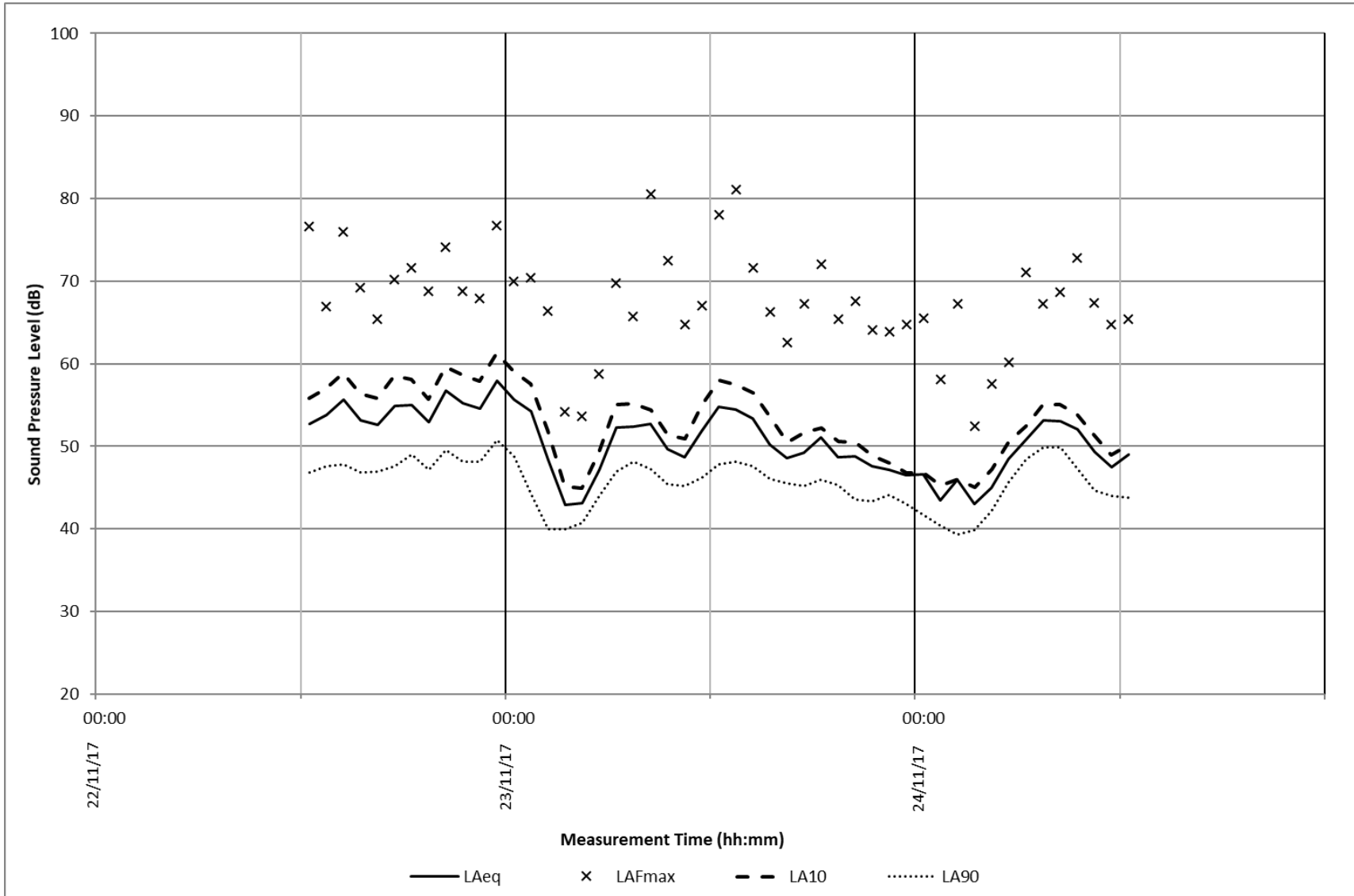


Plate 1-12: M8 Wintringham Hall: Measured Noise Levels 22/11/17-29/11/17

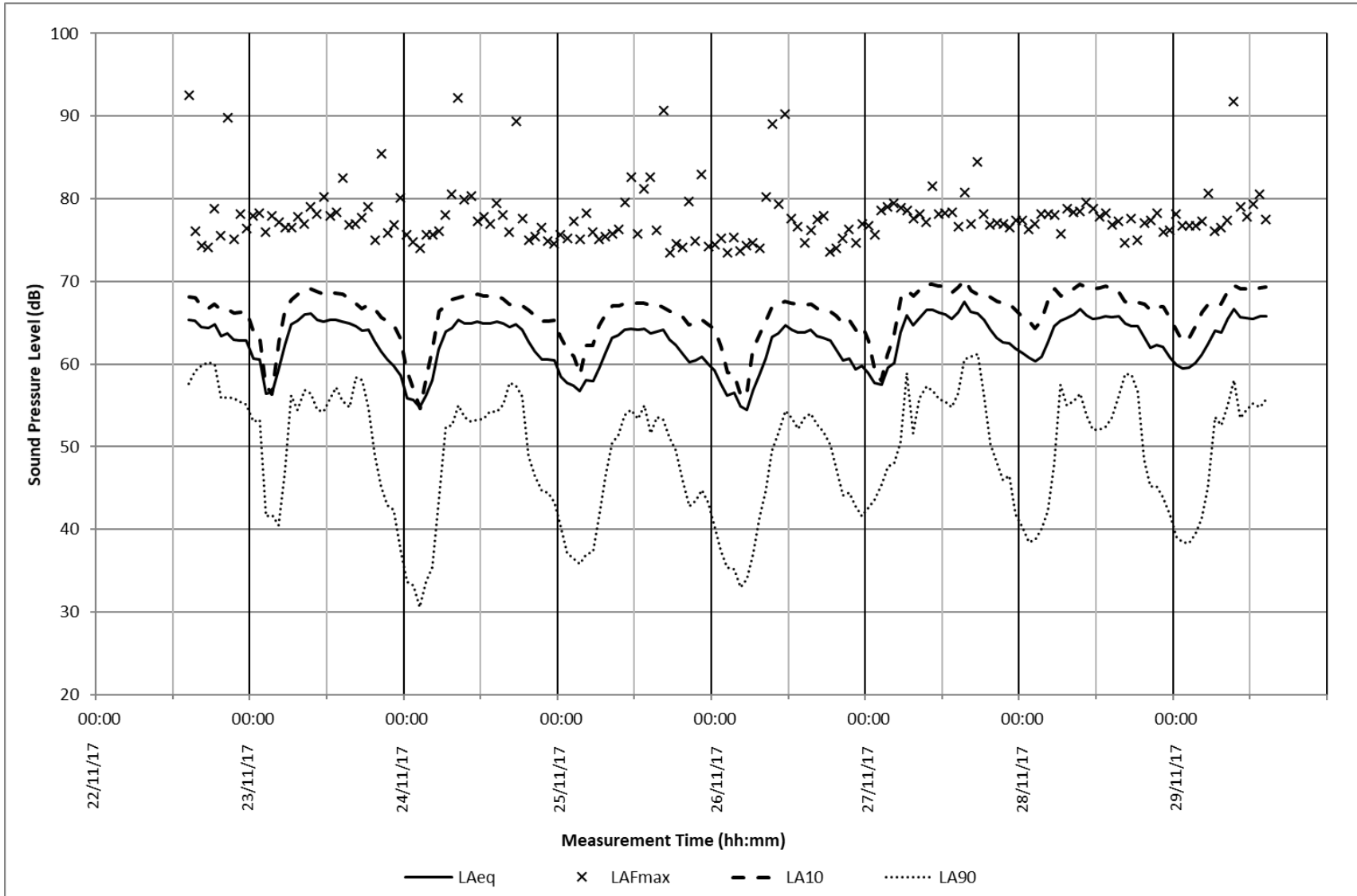


Plate 1-13: M9 High Street, Croxton: Measured Noise Levels 29/11/17-06/12/17

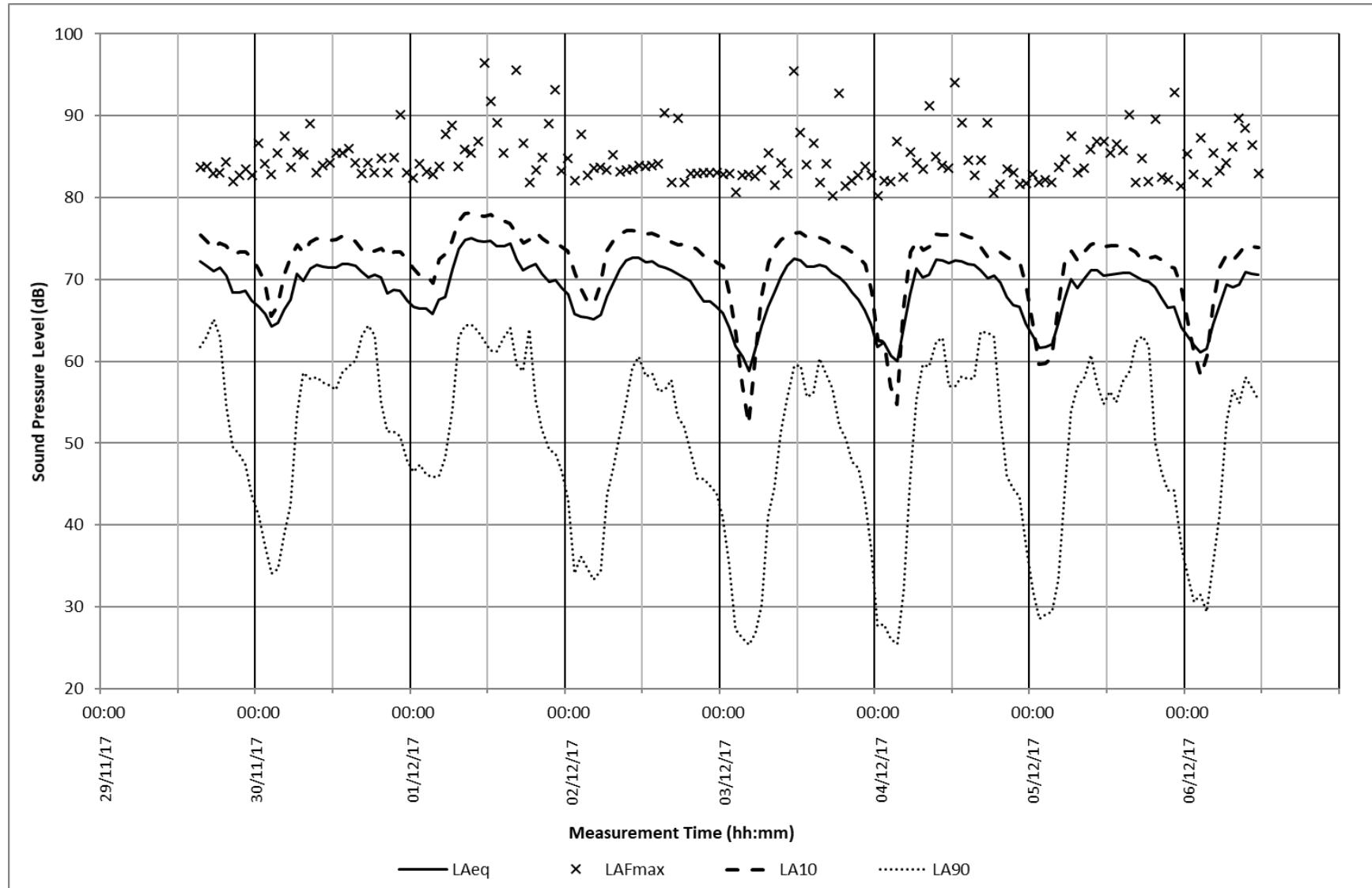


Plate 1-14: M10 St Neots Road, Eltisley: Measured Noise Levels 29/11/17-06/12/17

