

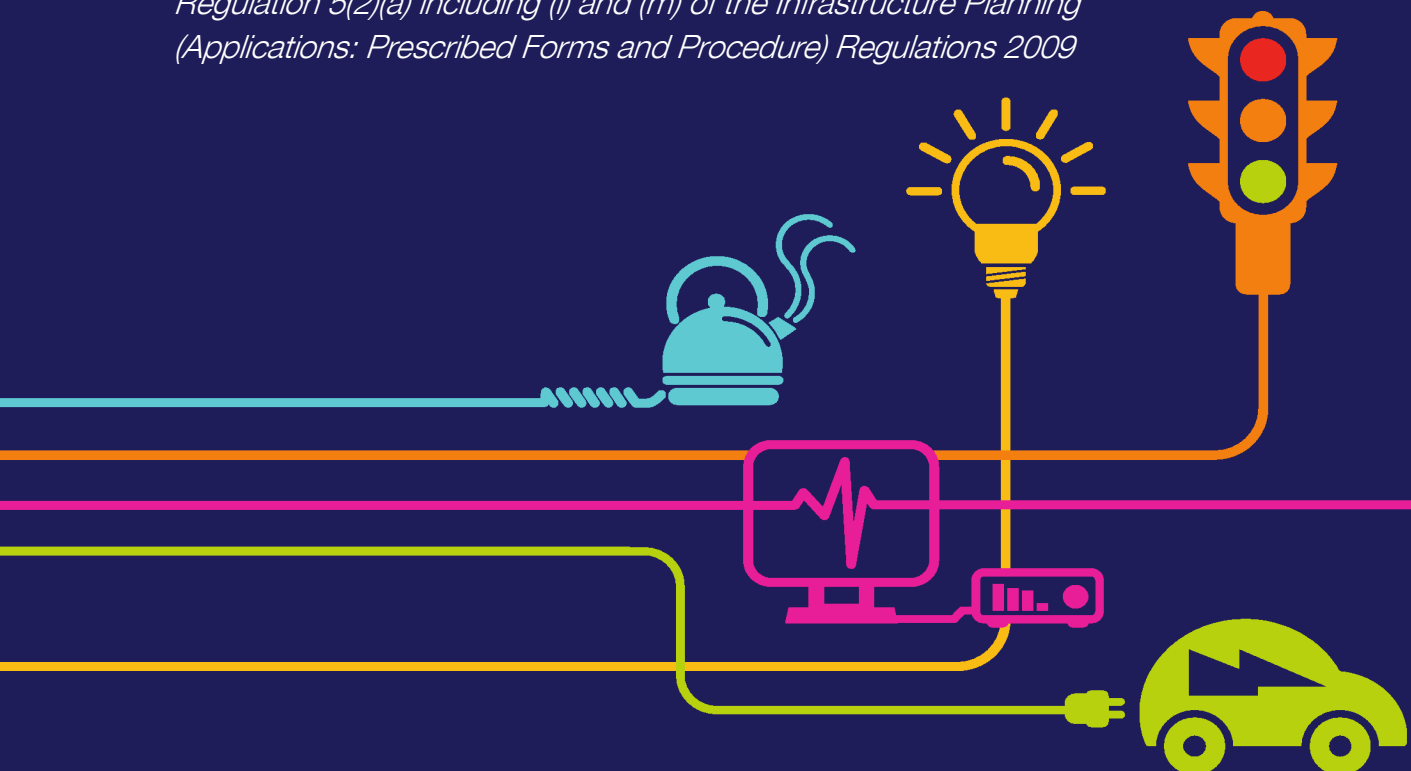
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Baseline Sound Monitoring Report

Chapter 15 – Appendix 2

National Grid (North Wales Connection Project)

*Regulation 5(2)(a) including (l) and (m) of the Infrastructure Planning
(Applications: Prescribed Forms and Procedure) Regulations 2009*





North Wales Connection Project

Volume 5

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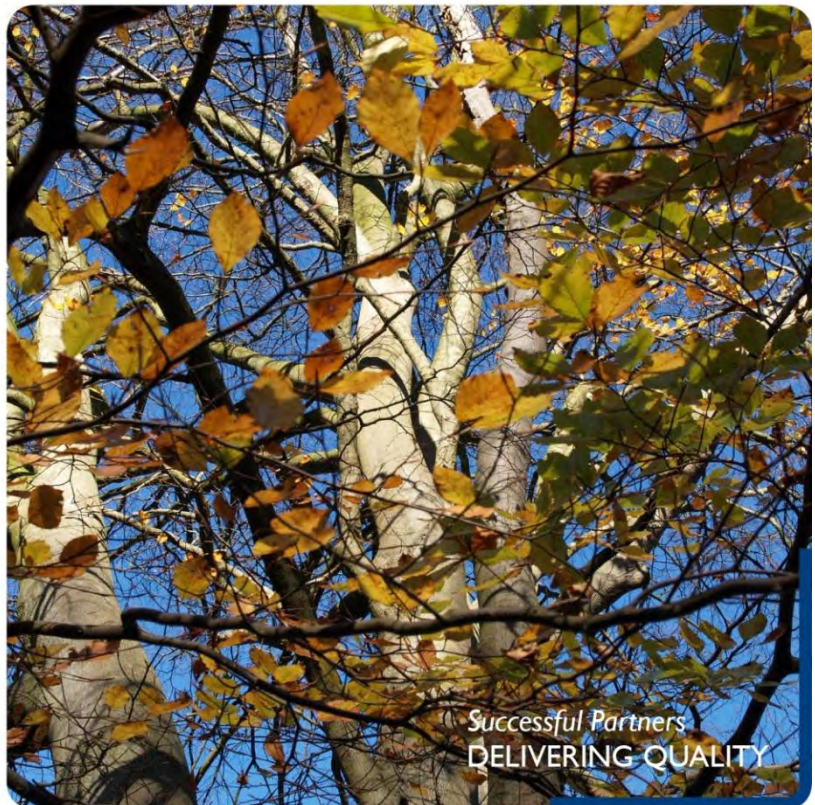
North Wales Connection – Baseline Sound Monitoring Report

Isle of Anglesey / Gwynedd


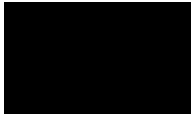

For National Grid

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Quality Management

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1 Introduction

Introduction

- 1.1 This report has been prepared by the Acoustics Team at RPS to provide the results of baseline sound measurements undertaken to characterise the sound environment along the North Wales Connection Project, the 'Proposed Development', as defined in Chapter 3 of the Preliminary Environmental Information Report. These baseline levels will be used in the assessment of effects for the operational and construction noise and vibration assessments to be reported in the Environmental Statement.
- 1.2 Proposed survey locations were provided to the Project team, the Isle of Anglesey Council and Gwynedd Council, and agreed by means of a Baseline Noise Monitoring Plan (BNMP) dated 22nd March 2017 (ref. JAE-9073-8681-MS-01-R1).
- 1.3 Access to survey locations was arranged by the National Grid Lands Access team. Where necessary, minor changes to the agreed survey locations were made, due to land access or local conditions. The surveys were undertaken between Monday 27th March 2017 and Thursday 13th April 2017.
- 1.4 This report provides both a summary of the survey data for each survey location and a set of noise levels considered representative of a wider area. As stated above, these levels will be relied upon within the assessment carried out for the ES. Survey sheets indicating details and locations of noise monitoring equipment are provided in Appendix A for locations on Anglesey and Appendix B for locations on Gwynedd. Detailed survey results are provided in Appendix C and Appendix D for Anglesey and Gwynedd respectively.

2 Baseline Survey Methodology

Background

- 2.1 Long term unattended baseline sound level monitoring was undertaken between Monday 27th March and Thursday 13th April 2017 at 18 locations along the Proposed Development. In addition to each long term survey location, concurrent, short-term, attended surveys were carried out during the day (0700-1900), evening (1900-2300) and night-time (2300-0700) periods. An additional long term survey (LT_G) was undertaken by the Isle of Anglesey County Council Environmental Health Team. The data for this location have been provided to RPS and are included within this report.
- 2.2 Survey locations were selected to be representative of a range of acoustic environments within the Proposed Development study area, and agreed with the relevant LPAs in advance. These locations were representative of residential and commercial receptors and other noise sensitive locations. Tables 2.1 to 2.19 provide a summary of the long term baseline survey locations and associated short-term locations. Survey record sheets for each survey location showing the position of the noise monitor and meteorological conditions at the time of monitoring are presented in Appendix A and Appendix B.

Table 2.1 - Survey Locations – LT_A and Associated Satellite STs

Ref. Number	Long Term / Short-Term	Representative Address	Coordinates		Comments
			Easting	Northing	
LT_A	LT	Llety, Cemaes Bay, LL67 0DA	236100	392868	Noise from Wylfa substation
ST_A1	ST	The Firs, Unnamed Rd, Cemaes Bay, LL67 0DN	235358	392855	Wylfa substation / OHL noise
ST_A2	ST	Douglas Inn, Tregele, Cemaes Bay, LL67 0DN	235618	392697	Wylfa substation / OHL noise
ST_A3	ST	Gwyddelyn Newydd, Ffordd Y Felin, Cemaes Bay, LL67 0DA	236154	393021	Wylfa substation / OHL noise
ST_A4	ST	-	235037	391565	Traffic noise on access route

Table 2.2 - Survey Locations – LT_B and Associated Satellite STs

Ref. Number	Long Term / Short-Term	Representative Address	Coordinates OSGB36		Comments
			x	y	
LT_B	LT	Cae-Adda Fach, Cemaes Bay, LL67 0DS	236510	392211	General Con/Op
ST_B1	ST	Penbodeistedd, Llanfechell, Amlwch, LL68 0RE	236887	391547	General Con/Op

Table 2.3 - Survey Locations – LT_C and Associated Satellite STs

Ref. Number	Long Term / Short-Term	Representative Address	Coordinates OSGB36		Comments
			x	y	
LT_C	LT	Dymchwa, Llanfechell, Amlwch, LL68 0RT	237769	391154	Operational OHL noise / pylon construction
ST_C1	ST	Bodelwyn Uchaf, Amlwch, LL68 0PR	237776	390439	General Con/Op
ST_C2	ST	Pentre Heulyn, Amlwch, LL68 0NU	238745	389907	General Con/Op

Table 2.4 - Survey Locations – LT_D and Associated Satellite STs

Ref. Number	Long Term / Short-Term	Representative Address	Coordinates OSGB36		Comments
			x	y	
LT_D	LT	Trigfa, Rhosgoch, LL66 0AB	240818	389170	Operational OHL noise / pylon construction
ST_D1	ST	T yn Yr Allt, Rhosgoch, LL66 0AE	239803	389348	General Con/Op
ST_D2	ST	Glany Gors, Rhosgoch, LL66 0AA	241118	389824	General Con/Op
ST_D3	ST	Ardro, Rhosgoch, LL66 0AD	240531	389084	General Con/Op

Table 2.5 - Survey Locations – LT_E and Associated Satellite STs

Ref. Number	Long Term / Short-Term	Representative Address	Coordinates OSGB36		Comments
			x	y	
LT_E	LT	Gorslwyd Bach, Rhos-y-bol, Amlwch LL68 9PY	242441	387981	Operational OHL noise / pylon construction
ST_E1	ST	Pen Yr Orsedd, Amlwch, LL68 9UA	241511	388422	General Con/Op
ST_E2	ST	Llety, Rhosybol, Amlwch LL68 9TY	242056	387555	General Con/Op
ST_E3	ST	Pwllcoch Isaf, Amlwch LL68 9RA	242585	387296	General Con/Op

Table 2.6 - Survey Locations – LT_F and Associated Satellite STs

Ref. Number	Long Term / Short-Term	Representative Address	Coordinates OSGB36		Comments
			x	y	
LT_F	LT	Bryn Goleu, Llanerchymedd LL71 8AP	243858	386065	Operational OHL noise / pylon construction

Ref. Number	Long Term / Short-Term	Representative Address	Coordinates OSGB36		Comments
			x	y	
ST_F1	ST	Hafod Y Plas, Llanerchymedd LL71 8AW	243014	386343	General Con/Op
ST_F2	ST	Gaer Farm, Llanerchymedd LL71 8AP	244056	386428	General Con/Op
ST_F3	ST	Pant Y Mel, Llanerchymedd LL71 8AG	244366	385644	General Con/Op
ST_F4	ST	-	242170	385435	Traffic noise on access route

Table 2.7 - Survey Locations – LT_G and Associated Satellite STs

Ref. Number	Long Term / Short-Term	Representative Address	Coordinates OSGB36		Comments
			x	y	
LT_G	LT	Bryn Awel, e, Llanerchymedd LL71 8AF	245540	384127	Operational OHL noise / pylon construction Survey carried out by IACC
ST_G1	ST	Clorach Fawr, Near - Lon Leidr, Llanerchymedd LL71 8AD	244858	384190	General Con/Op

Table 2.8 - Survey Locations – LT_H and Associated Satellite STs

Ref. Number	Long Term / Short-Term	Representative Address	Coordinates OSGB36		Comments
			x	y	
LT_H	LT	Maen Goch, Capel Coch, LL77 7UT	246090	383227	General Con/Op
ST_H1	ST	Maes Gwynedd, Capel Coch, Llangefni LL77 7UR	245943	382297	General Con/Op
ST_H2	ST	Cae Maes Gafarn, Capel Coch, Llangefni LL77 7UR	245732	381725	General Con/Op
ST_H3	ST	Tredafydd, Llanerchymedd LL71 8BD	245789	384108	General Con/Op
ST_H4	ST	-	242653	383533	Traffic noise on access route

Table 2.9 - Survey Locations – LT_I and Associated Satellite STs

Ref. Number	Long Term / Short-Term	Representative Address	Coordinates OSGB36		Comments
			x	y	
LT_I	LT	Maen Eryr, Tregain, LL77 UHR	247026	380241	Operational OHL noise / pylon construction

Ref. Number	Long Term / Short-Term	Representative Address	Coordinates OSGB36		Comments
			x	y	
ST_I1	ST	Fferm Cefniwrch, B5110, Llangefni LL77 7UU	247736	379149	General Con/Op
ST_I2	ST	Glanyrafon, B5110, Llangefni LL77 7UU	247480	378757	General Con/Op
ST_I3	ST	Neuadd Wen Farm, Tregaian, Llangefni LL77 7UD	246878	377293	General Con/Op
ST_I4	ST	-	244837	378619	Traffic noise on access route
ST_I5	ST	-	245679	376747	Traffic noise on access route

Table 2.10 - Survey Locations – LT_J and Associated Satellite STs

Ref. Number	Long Term / Short-Term	Representative Address	Coordinates OSGB36		Comments
			x	y	
LT_J	LT	Madryn, Talwrn, Llangefni LL77 7TE	247944	377171	Operational OHL noise / pylon construction
ST_J1	ST	Ty Newydd, Llangefni LL77 7TH	248105	377532	General Con/Op
ST_J2	ST	Bodlondeb, B5109, Llangefni LL77 7UA	248414	377108	General Con/Op

Table 2.11 - Survey Locations – LT_K and Associated Satellite STs

Ref. Number	Long Term / Short-Term	Representative Address	Coordinates OSGB36		Comments
			x	y	
LT_K	LT	Tyn Y Felin, Lon Cae Cwta, Llangefni LL77 7SD	248126	375194	Construction compound
ST_K1	ST	Bod Gylched, Llangefni LL77 7SD	247619	376046	General Con/Op
ST_K2	ST	-	245092	373995	Traffic noise on access route

Table 2.12 - Survey Locations – LT_L and Associated Satellite STs

Ref. Number	Long Term / Short-Term	Representative Address	Coordinates OSGB36		Comments
			x	y	
LT_L	LT	Near Bryn Gwallen Farm, Llangefni LL77 7SL	248643	375897	Operational OHL noise / pylon construction
ST_L1	ST	Pen Ceint, B5420, Ceint, Llangefni LL77 7SG	248883	374892	General Con/Op

Ref. Number	Long Term / Short-Term	Representative Address	Coordinates OSGB36		Comments
			x	y	
ST_L2	ST	-	250127	374759	Traffic noise on access route

Table 2.13 - Survey Locations – LT_M and Associated Satellite STs

Ref. Number	Long Term / Short-Term	Representative Address	Coordinates OSGB36		Comments
			x	y	
LT_M	LT	Tyn Cae, Gaerwen LL60 6AS	249610	372917	Operational OHL noise / pylon construction
ST_M1	ST	Fron Isa, Gaerwen LL60 6AB	248822	373523	General Con/Op
ST_M2	ST	Keeper Lodge, Gaerwen LL60 6AS	250223	372568	General Con/Op

Table 2.14 - Survey Locations – LT_N and Associated Satellite STs

Ref. Number	Long Term / Short-Term	Representative Address	Coordinates OSGB36		Comments
			x	y	
LT_N	LT	Rhos Bothan, Llanddaniel, Gaerwen LL60 6HE	251042	371368	Operational OHL, Construction compound / tunnelling site / THH
ST_N1	ST	Garnendd Isaf, Gaerwen LL60 6AS	250562	372152	General Con/Op
ST_N2	ST	Gerlan, Holyhead Rd, Gaerwen LL60 6AH	250184	371945	General Con/Op
ST_N3	ST	Dolferig, Gaerwen LL60 6HF	250721	371621	General Con/Op
ST_N4	ST	Rhos Bothan, Gaerwen LL60 6HF	250721	371236	General Con/Op

Table 2.15 - Survey Locations – LT_O and Associated Satellite STs

Ref. Number	Long Term / Short-Term	Representative Address	Coordinates OSGB36		Comments
			x	y	
LT_O	LT	Tyddyn Fadog, Llanfairpwllgwyngyll LL61 6PS	251353	370711	Construction compound / tunnelling site / THH Monitoring established 1/12/2016
ST_O1	ST	Llwyn Ogan, Llanfairpwllgwyngyll LL61 6PT	251938	371203	General Con/Op

Ref. Number	Long Term / Short-Term	Representative Address	Coordinates OSGB36		Comments
			x	y	
ST_O2	ST	1 Victoria Cottages, Llanfairpwllgwyngyll LL61 6PF	252450	370934	General Con/Op
ST_O3	ST	Druid House, Llanfairpwllgwyngyll LL61 6DJ	251808	369877	General Con/Op
ST_O4	ST	-	251993	371471	Traffic

Table 2.16 - Survey Locations – LT_P and Associated Satellite STs

Ref. Number	Long Term / Short-Term	Representative Address	Coordinates OSGB36		Comments
			x	y	
LT_P	LT	Hafodol, Fodolydd Lane, Y Felinheli LL56 4QD	254958	368411	Construction compound / tunnelling site / THH
ST_P1	ST	Fodolydd Lane, NW of proposed THH, Fodolydd Lane, Y Felinheli LL56 4QD	254550	368455	Construction compound / tunnelling site / THH
ST_P2	ST	Hafod Dawel, Hafod Lane, Bangor LL57 4BU	254916	369062	Construction compound / tunnelling site / THH

Table 2.17 - Survey Locations – LT_Q and Associated Satellite STs

Ref. Number	Long Term / Short-Term	Representative Address	Coordinates OSGB36		Comments
			x	y	
LT_Q	LT	Rhos Farm / Garth Farm, Y Felinheli LL56 4QE	255399	368025	Noise from Pentir substation / THH Monitoring established 1/12/2016
ST_Q1	ST	Garth Bach, Lleifor Y Felinheli LL56 4QE	254898	367812	Construction compound / tunnelling site / THH
ST_Q2	ST	Cae Gwydryn, Llanddeiniolen, Caernarfon LL55 3AL	255064	367450	Pentir substation noise
ST_Q3	ST	Rhos Fawr	255618	368151	Pentir substation noise /THH

Table 2.18 - Survey Locations – LT_R and Associated Satellite STs

Ref. Number	Long Term / Short-Term	Representative Address	Coordinates OSGB36		Comments
			x	y	
LT_R	LT	Tyn Llwyn, Pentir, Bangor LL57 4DY	256460	367419	Pentir substation noise
ST_R1	ST	Glanrhyd, A4244, Bangor LL57 4EB	256269	366840	Traffic noise on access route

Table 2.19 - Survey Locations – LT_R and Associated Satellite STs

Ref. Number	Long Term / Short-Term	Representative Address	Coordinates OSGB36		Comments
			x	y	
LT_S	LT	Garth Fawr Farm / Lleiflor, Y Felinheli, LL56 4QF	254789	368010	Construction compound / tunnelling site / THH

Consultation with LPAs

- 2.3 The proposed approach to the baseline surveys was described in the Baseline Noise Monitoring Plan (ref. JAE-9073-8681-MS-01-R1), published in 22nd March 2017. The survey methodology was subject to consultation and agreed with the affected local planning authorities of Isle of Anglesey County Council and Gwynedd Council.
- 2.4 During the consultation process, it was agreed that a number of long term monitoring locations would be relocated from proxy locations to the nearest noise sensitive receptor.

Baseline Survey Procedure

- 2.5 All sound level monitoring was carried out using one of the following 'Class 1' sound level meters (SLM): Rion NL-52, Rion NA-28, Rion NL-32, B&K Type 2250 or B&K Type 2270. Each SLM was checked for calibration prior to and immediately following the survey with no significant deviation found. Continuous survey data were logged of the fast, A-weighted, broadband sound pressure levels in 100 ms periods. Short-term attended survey data were logged of the fast, A-weighted, broadband sound pressure levels in 15 minute periods.
- 2.6 The surveys were established during the day and observations made of sources and other conditions in accordance with the requirements of British Standard (BS) 4142:2014 'Methods for rating and assessing industrial and commercial sound'[1]. As a minimum, the following noise parameters were recorded; L_{Aeq} , L_{Amax} , L_{A10} and L_{A90} . Where considered appropriate, third octave band spectral measurements were made to determine the frequency content of the baseline sound. Measurements of the spectrum between 10 and 160 Hz were taken.

- 2.7 In addition to each long term survey location, concurrent attended surveys were carried out during the day (0700-1900), evening (1900-2300) and night-time (2300-0700) periods. Short-term attended surveys consisted of the following: three 15 minute discontinuous periods over one day between 0700-1900 hrs for daytime; one 15 minute period during the evening between 1900-2300; and one 15 minute period during the night-time between 2300-0700.
- 2.8 Baseline surveys were undertaken following guidance contained in BS 7445-2:1991 'Description and measurement of environmental noise, Part 2: Guide to the acquisition of data pertinent to land use' [2].
- 2.9 Meteorological conditions were monitored during the long-term surveys with unattended weather stations installed at multiple positions along the route. Periods of adverse weather due to high winds (>5 metres per second (m/s)) or heavy precipitation (>1 millimetres per hour (mm/h)) have been removed from the data set for subsequent analysis, as indicated on the charts in Appendix C and Appendix D. Meteorological conditions were also measured during each short-term attended measurement using a hand held anemometer. Table 2.20 below indicates where meteorological monitors were installed and at which monitoring locations these were used within the weather data analysis.

Table 2.20 - Locations of Meteorological Monitors and Associated Long Term Noise Monitoring Locations

Meteorological Monitoring Location	Associated Long Term Noise Monitoring Locations
LT_A	LT_A, LT_B, LT_C
LT_F	LT_D, LT_E, LT_F, LT_G, LT_H, LT_I, LT_J (all data) LT_K, LT_L, LT_M, LT_N (wind data only)
LT_L (rain gauge only)	LT_K, LT_L, LT_M, LT_N
LT_O	LT_O, LT_P, LT_Q, LT_R
LT_Q	LT_P, LT_Q
LT_S	LT_S

- 2.10 The sound level meters complied with the requirements of IEC 61672 (2003) regarding use and performance in AC power frequency and radio frequency fields. These requirements exceed the guideline values within which high voltage overhead lines are required to operate in the UK.

3 Discussion of Results

Determining Representative Baseline Levels

- 3.1 To ascertain the typical sound levels at the measurement locations, time history plots have been produced and presented for each long term monitoring position. These are presented with the summary results tables in Appendix C and Appendix D.
- 3.2 Table 3.1 presents the time periods that have been assumed in the assessment of background sound levels for the long term monitoring locations.

Table 3.1 - Time Periods for Operation and Construction Noise Assessments

Day	Period	Operation hours	Construction hours
Monday to Friday	Day	0700 – 1900	0700 – 1900
	Evening	1900 – 2300	1900 – 2300
	Night	2300 – 0700	2300 – 0700
Saturday	Day	0700 – 1900	0800 – 1300
	Evening	1900 – 2300	1300 – 2300
	Night	2300 – 0700	2300 – 0700
Sunday	Day	0700 – 1900	-
	Evening	1900 – 2300	0700 – 2300
	Night	2300 – 0700	2300 - 0700

- 3.3 Representative baseline sound levels will be determined, where possible, from long term monitoring survey locations. For receptor locations where long term monitoring was not undertaken, the baseline sound levels will be determined from a consideration of attended short-term survey data. Although the quantity of data used in deriving the baseline sound levels at these locations is less than at the unattended monitoring locations, this is made up for by the fact that a surveyor was present during the measurement and therefore able to ensure that no extraneous noise sources unrepresentative of the location were included in the measurements. The data obtained could then be analysed and compared against other datasets in order to obtain a representative baseline sound level.

Operational Noise Assessment

- 3.4 BS 4142 requires that the background sound levels adopted for the assessment be representative for the period being assessed. The Standard recommends that the background sound level should be derived from continuous measurements of normally not less than 15-minute intervals, which can be contiguous or disaggregated. However, the Standard states that there is no 'single' background sound level that can be derived from such measurements. It is

particularly difficult to determine what is ‘representative’ of the night-time period because it can be subject to a wide variation in background sound levels between the shoulder night periods. The accompanying note to paragraph 8.1.4 states that:

“a representative level ought to account for the range of background sounds levels and ought not automatically to be assumed to be either the minimum or modal value”.

- 3.5 One approach which is commonly adopted is to use the 25th percentile (lower quartile) of the night-time background and ambient noise levels. This method has been adopted in order to characterise the baseline noise environment. This level excludes 75% of the noisier levels and, although it is not the lowest sound level encountered, it is lower than that obtained using the average, median or modal values. It therefore represents a level in the lower range of sound levels that would be encountered and consequently represents a precautionary assessment.
- 3.6 This is considered to represent a very stringent method to obtain representative background noise levels and hence underpins the robustness of the operational noise assessment.
- 3.7 In determining representative baseline noise levels for receptors identified within the Environmental Statement, it has been necessary to analyse each location individually to ensure the most representative level is considered. BS 4142:2014 states that:

“In using the background sound level in the method for rating and assessing industrial and commercial sound it is important to ensure that values are reliable and suitably represent both the particular circumstances and periods of interest. For this purpose, the objective is not simply to ascertain a lowest measured background sound level, but rather to quantify what is typical during particular time periods.”

Construction Noise Assessment



- 3.8 In determining the most representative ambient sound levels, the equivalent continuous A-weighted sound pressure level, L_{Aeq} , has been calculated based on the assumed standard construction hours as detailed in Table 3.1 and presented as a logarithmic average of the 15-minute period data over the relevant time periods. As low ambient sound levels were measured at the majority of locations within the Proposed Development area, it is considered likely that the lower threshold values (following the guidance in Annex E of BS 5228-1:2009+A1:2014[3] for short-term works and ‘Minerals Technical Advice Note (MTAN) Wales: 1. Aggregates’[4] for medium term works of six months duration or more will be adopted throughout for the day, evening or night-time periods.

Appendices

Appendix A – Survey Record Sheets - Anglesey

(Unattended Baseline Survey)

Sound Level Survey Record

Location			LT_A											
Purpose of Monitoring			Baseline											
Relevant Guidance / Standard			BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014											
Sound Measurement System														
RPS ID	Manufacturer / Model		Serial Number		Last Lab Verification									
Hire Kit	Rion NL-52		610211		02/08/16									
Microphone Height	Measurement Interval	Dynamic Range	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?								
1.2 m	100 ms	20 - 130 dB	F	A	Freefield	Yes								
START			END											
Personnel			JA		JB									
Date / time			28/03/2017		12/04/2017									
Calibration	RPS ID		15		14									
	Manufacturer / Model		RION NC-74		RION NC-74									
	Serial Number		110090		110118									
	Date last verification		17/11/2017		03/10/2017									
	Reference level		94		94									
	Meter reading		94		94									
Weather			Set-up			Collection								
	Wind speed (m/s)		> 3			2								
	Cloud cover (100%= 8 oktas)		8			2								
	Likely temp. inversion / Precipitation / Fog / Wet ground / Frozen ground / Snow cover? (tick boxes)		TI	P	F	W	Fr	Sn	TI	P	F	W	Fr	Sn
				✓		✓								
	Subjective description / additional details		Very windy and rainy, complete cloud cover			Sunny, dry								
Photographs of Measurement Location														
 														
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))														
Equipment situated within large field approximately 137 m south of the A5025. No nearby reflective surfaces. Surrounded by soft ground.														
Description of sound environment at start of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)														
Distant road traffic, farm animals, birds, wind rustling hedgerows.														
Description of sound environment at end of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)														
Distant road traffic, birds.														

(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_A1					
Purpose of Monitoring		Baseline					
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014					
Sound Measurement System							
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification			
100	RION NA-28	1291243		13/10/16			
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?		
1.2 m	15 min	F	A	Freefield	No		
Personnel							
JB							
Date / time							
10/04/2017 - 11/04/2017							
Calibrator	RPS ID	14					
	Manufacturer / Model	RION NC-74					
	Serial Number	110118					
	Date last verification	03/10/2017					
	Reference level	94					
	Meter reading	94					
Photographs of Measurement Location							
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/soft ground, topography, intervening features, reflecting surfaces))							
Microphone was positioned on a verge at a small crossroads junction on hard ground. The surrounding area was farmland. On the opposite side of the junction were a small number of residential and farm buildings.							
Observations Log							
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather				
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet/Frozen/Snow)
Day	08:42	Local road traffic. Aircraft.	2.5	-	-	-	-
Day	11:53	Local road traffic. Aircraft.	1.8	-	-	-	-
Day	14:25	Local road traffic. Aircraft. Birds.	1.3	-	-	-	-
Eve	20:33	Distant road traffic. Animals. Birds.	0.6	-	-	-	-
Night	23:36	Local road traffic.	0.5	-	-	-	-

(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_A2						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number			Last Lab Verification			
100	RION NA-28	1291243			13/10/16			
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.2 m	15 min	F	A	Freefield	No			
Personnel		JB						
Date / time		10/04/2017 - 11/04/2017						
Calibrator	RPS ID	14						
	Manufacturer / Model	RION NC-74						
	Serial Number	110118						
	Date last verification	03/10/2017						
	Reference level	94						
Meter reading		94						
Photographs of Measurement Location								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a soft grassy verge at a T-junction. The surrounding area was farmland. On the opposite side of the junction was a pub.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	08:59	Local road traffic. Wind noise from conductors.	2	-	-	-	-	-
Day	12:09	Local road traffic. Wind noise from conductors.	3.2	-	-	-	-	-
Day	14:42	Local road traffic. Wind noise from conductors.	2.2	-	-	-	-	-
Eve	20:50	Local road traffic. Wind noise from conductors.	2.7	-	-	-	-	-
Night	23:52	Local road traffic. Wind noise from conductors.	1.5	-	-	-	-	-

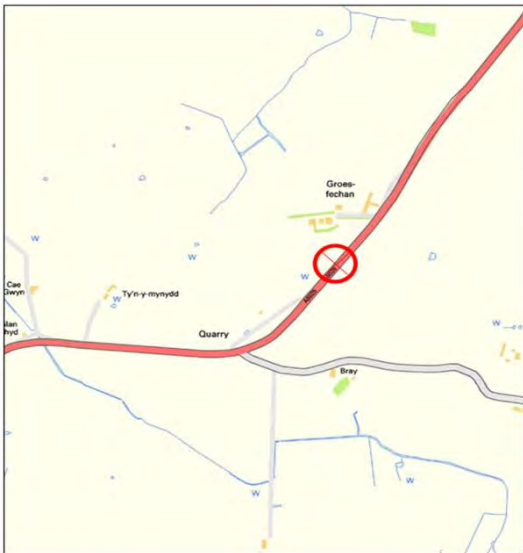
(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_A3						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
100	RION NA-28	1291243		13/10/16				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.2 m	15 min	F	A	Freefield	No			
Personnel		JB						
Date / time		11/04/2017						
Calibrator	RPS ID	14						
	Manufacturer / Model	RION NC-74						
	Serial Number	110118						
	Date last verification	03/10/2017						
	Reference level	94						
Meter reading		94						
Photographs of Measurement Location								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a gravel verge at the entrance of a small residential lane. The surrounding area was mainly farmland, with a small number of residential dwellings.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	09:22	Birds. Local road traffic.	3.5	-	-	-	-	-
Day	12:09	Birds. Local road traffic. Wind noise. Hedgrow and trees rustling.	3	-	-	-	-	-
Day	14:42	Birds. Local road traffic. Wind noise. Hedgrow and trees rustling.	1.6	-	-	-	-	-
Eve	20:50	Local road traffic. Wind noise. Distant sea noise.	2.6	-	-	-	-	-
Night	23:52	Local road traffic. Wind noise. Distant sea noise.	1.8	-	-	-	-	-

(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_A4 (Traffic)						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
100	RION NA-28	1291243		13/10/16				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.2 m	15 min	F	A	Freefield	No			
Personnel		JB						
Date / time		11/04/2017						
Calibrator	RPS ID	14						
	Manufacturer / Model	RION NC-74						
	Serial Number	110118						
	Date last verification	03/10/2017						
	Reference level	94						
	Meter reading	94						
Photographs of Measurement Location								
								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a soft grassy verge next to the A5025. The surrounding area was farmland.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	09:38	Local road traffic. Aircraft. Wind noise. Animals	3	-	-	-	-	-
Day	12:24	Local road traffic. Wind noise. Animals	2.7	-	-	-	-	-
Day	14:57	Local road traffic. Wind noise. Animals	3.6	-	-	-	-	-

(Unattended Baseline Survey)

Sound Level Survey Record

Location			LT_B															
Purpose of Monitoring			Baseline															
Relevant Guidance / Standard			BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014															
Sound Measurement System																		
RPS ID	Manufacturer / Model		Serial Number		Last Lab Verification													
124	Rion NL-52		164421		03/03/16													
Microphone Height	Measurement Interval	Dynamic Range	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?												
1.2 m	100 ms	20 - 130 dB	F	A	Freefield	No												
START				END														
Personnel			JB		JB													
Date / time			28/03/2017		12/04/2017													
Calibration	RPS ID		14		14													
	Manufacturer / Model		RION NC-74		RION NC-74													
	Serial Number		110118		110118													
	Date last verification		03/10/2017		03/10/2017													
	Reference level		94		94													
	Meter reading		94		93.9													
Weather	Set-up			Collection														
	Wind speed (m/s)			>5														
	Cloud cover (100%= 8 oktas)			8														
	Likely temp. inversion / Precipitation / Fog / Wet ground / Frozen ground / Snow cover? (tick boxes)			<table border="1"> <tr> <td>TI</td> <td>P</td> <td>F</td> <td>W</td> <td>Fr</td> <td>Sn</td> </tr> <tr> <td></td> <td>✓</td> <td></td> <td>✓</td> <td></td> <td></td> </tr> </table>			TI	P	F	W	Fr	Sn		✓		✓		
	TI	P	F	W	Fr	Sn												
		✓		✓														
Subjective description / additional details			Very windy and rainy, complete cloud cover															
			Slightly overcast, dry															
Photographs of Measurement Location																		
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))																		
Equipment situated within large field approximately 20m from the road. No nearby reflective surfaces. Overhead pylon located approximately 100m away. Surround soft ground.																		
Description of sound environment at start of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)																		
Wind rustling through foliage / crackling sound from the overhead pylon, becoming more intense during periods of precipitation / traffic noise from local roads																		
Description of sound environment at end of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)																		
Traffic noise from local roads / some distant agricultural noise																		

(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_B1						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
100	RION NA-28	1291243		13/10/16				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.2 m	15 min	F	A	Freefield	No			
Personnel		JB						
Date / time		11/04/2017						
Calibrator	RPS ID	14						
	Manufacturer / Model	RION NC-74						
	Serial Number	110118						
	Date last verification	03/10/2017						
	Reference level	94						
	Meter reading	94						
Photographs of Measurement Location								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
Residential area, hard ground.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	09:57	Local pedestrian activity. Local and distant road traffic. Children playing	2.2	-	-	-	-	-
Day	13:05	Dog barking. Road traffic. Bird song	3.5	-	-	-	-	-
Day	15:38	Distant and local road traffic. Bird song	2.9	-	-	-	-	-
Eve	21:31	Wind rustling trees. Local and distant road traffic	2.5	-	-	-	-	-
Night	00:30	Local and distant road traffic. Distant aircraft	2.1	-	-	-	-	-

(Unattended Baseline Survey)

Sound Level Survey Record

Location				LT_C										
Purpose of Monitoring				Baseline										
Relevant Guidance / Standard				BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014										
Sound Measurement System														
RPS ID		Manufacturer / Model		Serial Number		Last Lab Verification								
115		Rion NL-52		943366		27/01/2017								
Microphone Height	Measurement Interval	Dynamic Range	Time Weighting	Frequency Weighting	Facade / Freefield	Photo?								
1.2 m	100 ms	20 - 130 dB	F	A	Freefield	No								
START					END									
Personnel			JA		JB									
Date / time			06/04/2017		12/04/2017									
Calibration	RPS ID		15		14									
	Manufacturer / Model		RION NC-74		RION NC-74									
	Serial Number		110090		110118									
	Date last verification		17/11/2017		03/10/2017									
	Reference level		94		94									
	Meter reading		94		94									
Weather	Set-up				Collection									
	Wind speed (m/s)		1-2		0.5									
	Cloud cover (100%= 8 oktas)		8		2									
	Likely temp. inversion / Precipitation / Fog / Wet ground / Frozen ground / Snow cover? (tick boxes)		Tl	P	F	W	Fr	Sn	Tl	P	F	W	Fr	Sn
						✓								
	Subjective description / additional details		Overcast.				Dry and sunny.							
Photographs of Measurement Location														
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))														
Equipment located approximately 80 m south-east of road on southern edge of field. A single residential dwelling was approximately 80 m to the east. The surrounding area was farmland.														
Description of sound environment at start of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)														
Local and distant road traffic. Animals. Birds.														
Description of sound environment at end of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)														
Distant road traffic. Birds.														

(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_C1						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model		Serial Number		Last Lab Verification			
100	RION NA-28		1291243		13/10/2016			
Microphone Height	Measurement Interval		Time Weighting	Frequency Weighting	Façade / Freefield	Photo?		
1.5 m	15 min		F	A	Freefield	No		
Personnel				JB				
Date / time				11/04/2017				
Calibrator	RPS ID		14					
	Manufacturer / Model		RION NC-74					
	Serial Number		110118					
	Date last verification		03/10/2017					
	Reference Level		94.0 dB					
	Meter Reading		94.0 dB					
Photographs of Measurement Location								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a grassy verge at the entrance of a farm adjacent to a road. The surrounding area was mainly farmland. The nearby farm was approximately 150 m to the north-east.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog	Ground cover (Wet / Frozen / Snow)
Day		Local and distant road traffic. Animals. Birds. Distant agricultural noise. Aircraft.	2.5	N	-	-	-	-
Day		Local and distant road traffic. Animals. Birds. Distant agricultural noise.	2.7	N	-	-	-	-
Day		Local and distant road traffic. Animals. Birds. Distant agricultural noise.	1.5	N	-	-	-	-
Eve		Animals. Birds. Local and distant road traffic.	1.5	N	-	-	-	-
Night		Local and distant road traffic. Birds.	1.5	N	-	-	-	-



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_C2					
Purpose of Monitoring		Baseline					
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014					
Sound Measurement System							
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification			
100	RION NA-28	1291243		13/10/2016			
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?		
1.5 m	15 min	F	A	Freefield	No		
Personnel		JB					
Date / time		11/04/2017					
Calibrator	RPS ID	14					
	Manufacturer / Model	RION NC-74					
	Serial Number	110118					
	Date last verification	03/10/2017					
	Reference Level	94.0 dB					
	Meter Reading	94.0 dB					
Photographs of Measurement Location							
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/soft ground, topography, intervening features, reflecting surfaces))							
Microphone was positioned on a grassy verge at the entrance of a farm adjacent to a road. The surrounding area was mainly farmland. The nearby farm was approximately 200 m to the north-east.							
Observations Log							
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather				
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)
Day		Local and distant road traffic. Animals. Birds.	0.1	-	-	-	-
Day		Local and distant road traffic. Animals. Birds.	0	-	-	-	-
Day		Local and distant road traffic. Animals. Birds. Workman dealing with pylon nearby.	0.2	-	-	-	-
Eve		Local and distant road traffic. Aircraft. Animals.	0.3	-	-	-	-
Night		Distant road traffic. Animals.	0.3	-	-	-	-

(Unattended Baseline Survey)

Sound Level Survey Record

Location			LT_D												
Purpose of Monitoring			Baseline												
Relevant Guidance / Standard			BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014												
Sound Measurement System															
RPS ID	Manufacturer / Model		Serial Number		Last Lab Verification										
112	Rion NL-52		943363		13/10/16										
Microphone Height	Measurement Interval	Dynamic Range	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?									
1.2 m	100 ms	20 - 130 dB	F	A	Freefield	Yes									
START				END											
Personnel			JB		JW										
Date / time			28/03/2017		12/04/2017										
Calibration	RPS ID		14		15										
	Manufacturer / Model		RION NC-74		RION NC-74										
	Serial Number		110118		110090										
	Date last verification		03/10/2017		17/11/2017										
	Reference level		94		94										
	Meter reading		94		94										
Weather	Set-up			Collection											
	Wind speed (m/s)			2											
	Cloud cover (100%= 8 oktas)			6											
	Likely temp. inversion / Precipitation / Fog / Wet ground / Frozen ground / Snow cover? (tick boxes)			TI	P	F	W	Fr	Sn	TI	P	F	W	Fr	Sn
					✓		✓				✓		✓		
	Subjective description / additional details			Dry and overcast.			Wind and rain.								
Photographs of Measurement Location															
 															
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))															
Equipment situated within large field approximately 20 m north of road. No nearby reflective surfaces. Surrounded by soft ground.															
Description of sound environment at start of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)															
Distant road traffic. Wind noise.															
Description of sound environment at end of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)															
Distant road traffic. Wind noise.															



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_D1						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number			Last Lab Verification			
100	RION NA-28	1291243			13/10/16			
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.2 m	15 min	F	A	Freefield	No			
Personnel		JB						
Date / time		11/04/2017						
Calibrator	RPS ID	14						
	Manufacturer / Model	RION NC-74						
	Serial Number	110118						
	Date last verification	03/10/2017						
	Reference level	94						
	Meter reading	94						
Photographs of Measurement Location								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard or soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a gravel verge at the entrance to a small residential lane on hard ground. The surrounding area was farmland.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wat / Frozen / Snow)	
Day	11:09	Local road traffic. Birds.	0.2	-	-	-	-	-
Day	14:01	Aircraft. Animals. Wind noise. Local road traffic.	1.5	-	-	-	-	-
Day	16:34	Local road traffic. Birds. Animals.	1.8	-	-	-	-	-
Eve	19:10	Local road traffic. Birds. Animals.	1	-	-	-	-	-
Night	01:24	Distant road traffic. Animals.	0.5	-	-	-	-	-



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_D2						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
142	B&K 2270	3010761		13/10/16				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Faade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel								
JW & JB								
Date / time								
11/04/2017								
Calibrator	RPS ID	10						
	Manufacturer / Model	B&K 4231						
	Serial Number	1839057						
	Date last verification	27/10/2017						
	Calibration Sensitivity	42.9 mV/Pa						
Deviation								
-0.01 dB								
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a grassy verge at the entrance of a field, adjacent to a narrow residential lane. The surrounding area was farmland and hedgerows that lined the narrow residential lane.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	08:58	Distant and local road traffic. Nearby farming/construction noise. Birds. Animals. Distant aircraft.	2-4	N	10	-	-	-
Day	13:09	Distant and local road traffic. Nearby farming/construction noise. Birds. Animals. Distant aircraft. Hedgerows rustling.	3-5	N	12	-	-	-
Day	16:23	Birds. Animals. Wind noise. Local and distant road traffic.	4-5	N	14	-	-	-
Eve	19:28	Birds. Animals. Wind noise. Local and distant road traffic.	3.3	-	-	-	-	-
Night	01:19	Animals. Birds. Distant road traffic.	0	N/A	4	-	-	-


(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_D3						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
142	B&K 2270	3010761		13/10/16				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JW						
Date / time		11/04/2017						
Calibrator	RPS ID	10						
	Manufacturer / Model	B&K 4231						
	Serial Number	1839057						
	Date last verification	27/10/2017						
	Calibration Sensitivity	42.9 mV/Pa						
Deviation		-0.01 dB						
Photographs of Measurement Location								
								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a hard gravel verge at the entrance of a field adjacent to a residential road. The surrounding area was farmland.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	08:34	Distant and local road traffic. Birds. Sheep. Distant dogs barking. Distant aircraft.	1-3	N	10	-	-	-
Day	12:39	Distant and local road traffic. Birds. Sheep. Trees and hedgrows rustling.	3-5	N	12	-	-	-
Day	16:02	Distant and local road traffic. Birds. Sheep. Trees and hedgrows rustling.	3-5	E	14	-	-	-
Eve	21:04	Distant and local road traffic. Birds. Sheep. Trees and hedgrows rustling. Crackle noise from nearby pylon.	3-5	N	6	-	-	-
Night	00:57	Sheep. Birds. Distant road traffic. Crackle noise from nearby pylon.	0	N/A	4	-	-	-

(Unattended Baseline Survey)

Sound Level Survey Record

Location			LT_E											
Purpose of Monitoring			Baseline											
Relevant Guidance / Standard			BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014											
Sound Measurement System														
RPS ID	Manufacturer / Model		Serial Number		Last Lab Verification									
Hire	Rion NL-32		903343		28/02/2017									
Microphone Height	Measurement Interval	Dynamic Range	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?								
1.2 m	100 ms	20 - 120 dB	F	A	Freefield	No								
			START		END									
Personnel			JB		JW									
Date / time			30/03/2017		12/04/2017									
Calibration	RPS ID		15		15									
	Manufacturer / Model		RION NC-74		RION NC-74									
	Serial Number		110090		110090									
	Date last verification		17/11/2017		17/11/2017									
	Reference level		94		94									
	Meter reading		94		94									
Weather			Set-up				Collection							
	Wind speed (m/s)		3.2				2-3							
	Cloud cover (100%= 8 oktas)		8				6							
	Likely temp. inversion / Precipitation / Fog / Wet ground / Frozen ground / Snow cover? (tick boxes)		TI	P	F	W	Fr	Sn	TI	P	F	W	Fr	Sn
				✓		✓								
	Subjective description / additional details		Rainy and windy.				Dry and breezy.							
Photographs of Measurement Location														
														
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))														
Equipment situated on the boundary of a small field at the rear of a row of residential dwellings. The equipment was attached to a low wall at the end of a garden, approximately 20 m from the façade of the adjacent residential dwelling. The field is occupied by cows.														
Description of sound environment at start of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)														
Local and distant road traffic. Animals.														
Description of sound environment at end of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)														
Local and distant road traffic. Trees and hedgerows rustling.														



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_E1						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
142	B&K 2270	3010761		16/12/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JW						
Date / time		11/04/2017						
Calibrator	RPS ID	10						
	Manufacturer / Model	B&K 4231						
	Serial Number	1839057						
	Date last verification	27/10/2017						
	Calibration Sensitivity	42.9 mV/Pa						
	Deviation	-0.01 dB						
Photographs of Measurement Location								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a grass verge opposite the entrance of a farm approximately 1 m from the curb of the adjacent road. The surrounding area was mainly farmland, with some farm/residential buildings approximately 20 m to the north.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	10:03	Local and distant road traffic. Animals. Birds. Trees and hedgrows rustling.	3-5	N	12	-	-	-
Day	13:31	Local and distant road traffic. Animals. Birds. Trees and hedgrows rustling.	3-5	N	13	-	-	-
Day	16:43	Local and distant road traffic. Animals. Birds. Trees and hedgrows rustling.	3-5	N	15	-	-	-
Eve	20:45	Local and distant road traffic. Animals. Birds. Trees and hedgrows rustling.	3-4	N	6	-	-	-
Night	00:38	Distant road traffic. Animals. Birds. Nearby pylons crackling.	0	N/A	4	-	-	-



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_E2						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
142	B&K 2270	3010761		16/12/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel								
Date / time		JW						
Date / time		11/04/2017						
Calibrator	RPS ID	10						
	Manufacturer / Model	B&K 4231						
	Serial Number	1839057						
	Date last verification	27/10/2017						
	Calibration Sensitivity	42.9 mV/Pa						
Deviation		-0.01 dB						
Photographs of Measurement Location								
								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a grass verge at the entrance of 2 residential dwellings approximately 10 m from the curb of the adjacent road. The surrounding area was mainly farmland with the nearest residential dwelling approximately 50 m to the west.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	09:40	Local and distant road traffic. Animals. Birds. Trees rustling. Distant aircraft.	2-5	N	13	-	-	-
Day	13:52	Local and distant road traffic. Animals. Birds. Trees rustling. Nearby flagpole pulley system banging against pole consistently.	3-5	N	12	-	-	-
Day	17:03	Local and distant road traffic. Animals. Birds. Trees rustling.	3-5	N	15	-	-	-
Eve	20:25	Local and distant road traffic. Animals. Birds. Trees rustling. Flag pulley.	1-3	N	8	-	-	-
Night	00:17	Distant road traffic. Animals. Birds. Nearby pylons crackling.	0	N/A	5	-	-	-



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_E3					
Purpose of Monitoring		Baseline					
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014					
Sound Measurement System							
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification			
142	B&K 2270	3010761		16/12/2016			
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?		
1.5 m	15 min	F	A	Freefield	Yes		
Personnel		JW					
Date / time		06/04/2017					
Calibrator	RPS ID	10					
	Manufacturer / Model	B&K 4231					
	Serial Number	1839057					
	Date last verification	27/10/2017					
	Calibration Sensitivity	42.9 mV/Pa					
Deviation		-0.01 dB					
Photographs of Measurement Location							
 							
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/soft ground, topography, intervening features, reflecting surfaces))							
Microphone was positioned on a gravel verge at the entrance of field approximately 2 m from the curb of the adjacent B5111. The surrounding area was farmland.							
Observations Log							
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather				
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog / Ground cover (Wet / Frozen / Snow)
Day	12:16	Local and distant road traffic. Distant wind turbines. Birds. Animals.	0	N/A	10	-	-
Day	14:37	Local and distant road traffic. Distant wind turbines. Distant aircraft. Birds. Animals.	2-3	N	10	-	-
Day	17:05	Local and distant road traffic. Distant helicopter. Animals. Birds.	0-1	N	9	-	-
Eve	19:00	Local and distant road traffic. Animals. Birds.	0	N/A	8	-	-
Night	23:54	Local and distant road traffic. Animals. Birds. Nearby pylons crackling. Distant aircraft.	0	N/A	5	-	-

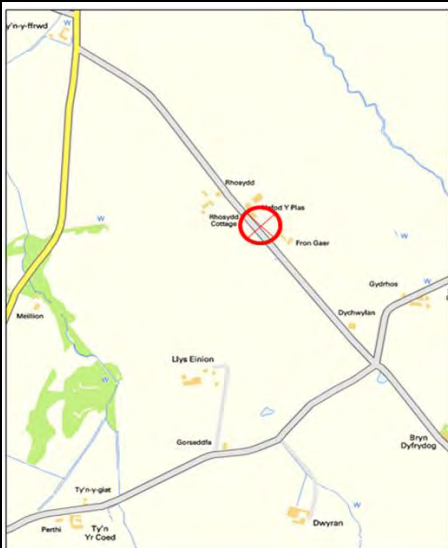

(Unattended Baseline Survey)

Sound Level Survey Record

Location			LT_F												
Purpose of Monitoring			Baseline												
Relevant Guidance / Standard			BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014												
Sound Measurement System															
RPS ID	Manufacturer / Model		Serial Number		Last Lab Verification										
Hire Kit	Rion NL-52		932323		12/12/2016										
Microphone Height	Measurement Interval	Dynamic Range	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?									
1.2 m	100 ms	20 - 130 dB	F	A	Freefield	Yes									
START			END												
Personnel			JB		JW										
Date / time			29/03/2017		12/04/2017										
Calibration	RPS ID		14		15										
	Manufacturer / Model		RION NC-74		RION NC-74										
	Serial Number		110118		110090										
	Date last verification		03/10/2017		17/11/2017										
	Reference level		94		94										
	Meter reading		94		94										
Weather	Set-up			Collection											
	Wind speed (m/s) & dir _q 1			2		3-5									
	Cloud cover (100%= 8 oktas)			8		8									
	Likely temp. inversion / Precipitation / Fog / Wet ground / Frozen ground / Snow cover? (tick boxes)			TI	P	F	W	Fr	Sn	TI	P	F	W	Fr	Sn
							✓								
Subjective description / additional details			Wet ground and overcast.				Dry and overcast.								
Photographs of Measurement Location															
 															
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))															
Equipment situated within large field on its northern boundary, adjacent to a hedgrow. Surrounded by soft ground. The adjacent field to the north is a caravan park. The field the equipment is situated contains a large flock of sheep.															
Description of sound environment at start of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)															
Distant road traffic. Animals.															
Description of sound environment at end of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)															
Distant road traffic. Wind noise. Animals.															



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_F1						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
142	B&K 2270	3010761		13/10/16				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JW						
Date / time		06/04/2017 & 10/04/2017						
Calibrator	RPS ID	10						
	Manufacturer / Model	B&K 4231						
	Serial Number	1839057						
	Date last verification	27/10/2017						
	Calibration Sensitivity	42.9 mV/Pa						
Deviation		-0.01 dB						
Photographs of Measurement Location								
								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a grass verge at the entrance to a small farm storage building adjacent to a narrow residential lane (approx. 1m from the curb). The residential lane was bordered by hedgerows and the surrounding area was mainly farmland.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog	Ground cover (Wet / Frozen / Snow)
Day	12:39	Distant road traffic. Birds. Animals.	1-2	N	10	-	-	-
Day	14:56	Distant road traffic. Birds. Animals.	0-2	N/A	10	-	-	-
Day	17:27	Distant road traffic. Birds. Animals. Aircraft.	1-2	NW	9	-	-	-
Eve	19:19	Distant road traffic. Birds. Animals.	0	N/A	8	-	-	-
Night	23:14	Distant road traffic. Animals.	0	N/A	6	-	-	-

(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_F2						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
142	B&K 2270	3010761		13/10/16				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel								
JW								
Date / time								
06/04/2017 & 10/04/2017								
Calibrator	RPS ID	10						
	Manufacturer / Model	B&K 4231						
	Serial Number	1839057						
	Date last verification	27/10/2017						
	Calibration Sensitivity	42.9 mV/Pa						
	Deviation	-0.01 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a grassy verge near the entrance of a farm, adjacent to a narrow residential lane. The surrounding area was farmland and hedgerows that lined the narrow residential lane.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	13:00	Distant road traffic. Birds. Distant dogs. Animals.	0	N/A	11	-	-	-
Day	15:20	Distant and local road traffic. Animals. Aircraft. Distant farming machinery activity.	0	N/A	10	-	-	-
Day	17:51	Distant road traffic. Birds. Distant dogs. Animals.	0	N/A	10	-	-	-
Eve	19:41	Distant road traffic. Birds. Distant dogs. Animals.	0	N/A	8	-	-	-
Night	23:34	Distant road traffic. Animals. Birds. Distant crackling from pylons.	0	N/A	6	-	-	-

(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_F3						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
142	B&K 2270	3010761		13/10/16				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JW						
Date / time		06/04/2017 & 10/04/2017						
Calibrator	RPS ID	10						
	Manufacturer / Model	B&K 4231						
	Serial Number	1839057						
	Date last verification	27/10/2017						
	Calibration Sensitivity	42.9 mV/Pa						
Deviation		-0.01 dB						
Photographs of Measurement Location								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a grass verge at the entrance of a field adjacent to a narrow residential lane. The surrounding area was farmland.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	13:25	Distant road traffic. Animals. Distant farm activity, including the use of a quad bike.	0	N/A	11	-	-	-
Day	15:46	Distant road traffic. Distant farm activity. Animals. Distant aircraft.	0-1	N/A	10	-	-	-
Day	18:26	Distant road traffic. Distant aircraft. Animals. Nearby stream.	0	N/A	9	-	-	-
Eve	20:17	Distant road traffic. Animals. Nearby stream.	0	N/A	8	-	-	-
Night	23:18	Low level wind noise. Animals. Nearby stream.	1-2	N	5	-	-	-

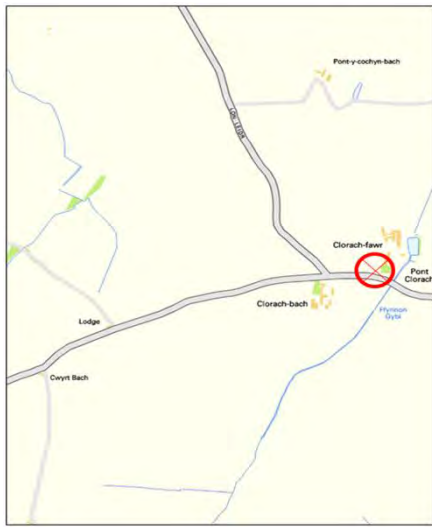

(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_F4 (Traffic)						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number			Last Lab Verification			
142	B&K 2270	3010761			13/10/16			
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JW						
Date / time		06/04/2017						
Calibrator	RPS ID	10						
	Manufacturer / Model	B&K 4231						
	Serial Number	1839057						
	Date last verification	27/10/2017						
	Calibration Sensitivity	42.9 mV/Pa						
Deviation		-0.01 dB						
Photographs of Measurement Location								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a grass verge at the entrance of a field adjacent to the B5111. The surrounding area was farmland.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	11:55	Local and distant road traffic (B5111). Distant farm activity. Animals. Distant aircraft.	0	N/A	10	-	-	-
Day	14:17	Local and distant road traffic (B5111). Distant farm activity. Animals. Distant aircraft.	2.5-3.5	N	8	-	-	-
Day	16:38	Local and distant road traffic (B5111). Distant farm activity. Animals. Distant aircraft.	2-3	N	10	-	-	-



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_G1						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
142	B&K 2270	3010761		16/12/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JW						
Date / time		11/04/2017						
Calibrator	RPS ID	10						
	Manufacturer / Model	B&K 4231						
	Serial Number	1839057						
	Date last verification	27/10/2017						
	Reference Level	94.0 dB						
	Meter Reading	94.0 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a grass verge next to the entrance of a farm approximately 3 m from the curb of the adjacent road. The surrounding area was mainly farmland, with some farm/residential buildings approximately 80 m to the north.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	10:34	Local and distant road traffic. Birds. Animals. Distant aircraft.	0-1	N/A	14	-	-	-
Day	14:18	Local and distant road traffic. Birds. Animals. Aircraft. Trees, grass and hedgrows rustling.	2-4	N	14	-	-	-
Day	17:29	Local and distant road traffic. Birds. Animals. Trees, grass and hedgrows rustling.	4-5	N	13	-	-	-
Eve	20:00	Local and distant road traffic. Birds. Animals. Trees, grass and hedgrows rustling.	1-3	N	9	-	-	-
Night	00:13	Local and distant road traffic. Birds. Animals. Trees, grass and hedgrows rustling.	3-5	N	8	-	-	-



(Unattended Baseline Survey)

Sound Level Survey Record

Location			LT_H												
Purpose of Monitoring			Baseline												
Relevant Guidance / Standard			BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014												
Sound Measurement System															
RPS ID	Manufacturer / Model		Serial Number		Last Lab Verification										
116	Rion NL-52		943367		27/01/2017										
Microphone Height	Measurement Interval	Dynamic Range	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?									
1.2 m	100 ms	20 - 130 dB	F	A	Freefield	Yes									
			START		END										
Personnel			JA		JW										
Date / time			28/03/2017		12/04/2017										
Calibration	RPS ID		15		15										
	Manufacturer / Model		RION NC-74		RION NC-74										
	Serial Number		110090		110090										
	Date last verification		17/11/2017		17/11/2017										
	Reference level		94		94										
	Meter reading		94		94										
Weather				Set-up		Collection									
	Wind speed (m/s) & dir. 1			2.5-3.5		2-3									
	Cloud cover (100%= 8 oktas)			8		8									
	Likely temp. inversion / Precipitation / Fog / Wet ground / Frozen ground / Snow cover? (tick boxes)			TI	P	F	W	Fr	Sn	TI	P	F	W	Fr	Sn
	Subjective description / additional details			Overcast and breezy.		Dry and overcast.									
Photographs of Measurement Location															
 															
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))															
Equipment situated within large field on its western boundary, approximately 12 m from the curb of the adjacent residential road. Surrounded by soft ground. There is a single residential dwelling approximately 20 m to the north.															
Description of sound environment at start of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)															
Local and distant road traffic. Animals. Wind noise. Distant wind turbine noise.															
Description of sound environment at end of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)															
Distant road traffic. Wind noise. Animals. <i>Note: There was a fly that was trapped in the windsheild, was close enough to the microphone to potentially affect levels.</i>															



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_H1						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
142	B&K 2270	3010761		16/12/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JW						
Date / time		11/04/2017						
Calibrator	RPS ID	10						
	Manufacturer / Model	B&K 4231						
	Serial Number	1839057						
	Date last verification	27/10/2017						
	Calibration Sensitivity	42.9 mV/Pa						
	Deviation	-0.01 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a grass verge at the entrance to a small residential car park approximately 5m away from the curb of the adjacent residential road. The surrounding area was mainly residential.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	11:46	Distant and local road traffic. Birds. Animals. Trees rustling.	2-4	N	13	-	-	-
Day	14:56	Distant and local road traffic. Birds. Animals. Trees and grass rustling. Distant aircraft.	3-5	N	14	-	-	-
Day	17:59	Distant and local road traffic. Birds. Animals. Trees and grass rustling. Dogs barking nearby.	2-4	N	14	-	-	-
Eve	19:19	Distant and local road traffic. Birds. Animals. Trees and grass rustling. Residents talking nearby.	1-3	N	9	-	-	-
Night	23:34	Distant and local road traffic. Birds. Animals. Trees and grass rustling.	3-5	N	4	-	-	-



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_H2						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
142	B&K 2270	3010761		16/12/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JW						
Date / time		11/04/2017						
Calibrator	RPS ID	10						
	Manufacturer / Model	B&K 4231						
	Serial Number	1839057						
	Date last verification	27/10/2017						
	Calibration Sensitivity	42.9 mV/Pa						
Deviation		-0.01 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a tarmacked lay-by approximately 2 m from the curb of the adjacent residential road. The surrounding area was farmland and hedgerows that lined the residential road.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	11:22	Distant and local road traffic. Distant quad bike working in a nearby field. Birds. Animals. Trees and hedrows rustling. Distant aircraft.	2-4	N	14	-	-	-
Day	14:38	Distant and local road traffic. Birds. Animals. Trees and hedrows rustling. Distant aircraft.	2-4	N	14	-	-	-
Day	17:06	Distant and local road traffic. Birds. Animals. Trees and hedrows rustling.	2-4	N	14	-	-	-
Eve	19:00	Distant and local road traffic. Birds. Animals. Trees and hedrows rustling.	2-4	N	10	-	-	-
Night	23:15	Distant road traffic. Birds. Animals. Trees and hedrows rustling. Wind noise.	3-5	N	4	-	-	-



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_H3						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
142	B&K 2270	3010761		16/12/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Facade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JW						
Date / time		11/04/2017						
Calibrator	RPS ID	10						
	Manufacturer / Model	B&K 4231						
	Serial Number	1839057						
	Date last verification	27/10/2017						
	Calibration Sensitivity	42.9 mV/Pa						
	Deviation	-0.01 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a muddy verge at the entrance of a field adjacent to a narrow residential lane. The surrounding area was mainly farmland. There was a residential dwelling on the opposite side of the residential lane.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	12:10	Distant and local road traffic. Birds. Large number of seagulls nearby. Animals. Trees rustling.	3-5	N	12	-	-	-
Day	15:16	Distant and local road traffic. Birds. Animals. Trees and grass rustling.	4-5	N	14	-	-	-
Day	17:25	Distant and local road traffic. Birds. Animals. Trees and grass rustling. Wind blowing over OHL insulators making a 'blowing over a bottle' noise.	4-5	N	12	-	-	-
Eve	19:41	Distant and local road traffic. Birds. Animals. Trees and grass rustling. Wind blowing over OHL insulators making a 'blowing over a bottle' noise.	4-5	N	8	-	-	-
Night	23:54	Distant road traffic. Birds. Animals. Trees and grass rustling. Wind blowing over OHL insulators making a 'blowing over a bottle' noise.	4-5	N	4	-	-	-



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_H4 (Traffic)						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number			Last Lab Verification			
142	B&K 2270	3010761			16/12/2016			
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JW						
Date / time		06/04/2017						
Calibrator	RPS ID	10						
	Manufacturer / Model	B&K 4231						
	Serial Number	1839057						
	Date last verification	27/10/2017						
	Calibration Sensitivity	42.9 mV/Pa						
Deviation		-0.01 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a concrete verge behind a low level wall at the entrance of a residential track approximately 2 m to the curb of the B5111. Approximately 3 m behind the microphone was the façade of a residential dwelling. The majority of the surrounding area was farmland.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog	Ground cover (Wet / Frozen / Snow)
Day	11:18	Local and distant road traffic (B5111). Distant farm machinery. Animals. Distant aircraft.	0	N/A	10	-	-	-
Day	13:55	Local and distant road traffic (B5111). Animals.	2-3	N	9	-	-	-
Day	16:15	Local and distant road traffic (B5111). Animals. Distant aircraft.	2-4	NW	10	-	-	-



(Unattended Baseline Survey)

Sound Level Survey Record

Location			LT_I											
Purpose of Monitoring			Baseline											
Relevant Guidance / Standard			BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014											
Sound Measurement System														
RPS ID	Manufacturer / Model		Serial Number		Last Lab Verification									
Hire Kit	Rion NL-52		510143		25/02/2017									
Microphone Height	Measurement Interval	Dynamic Range	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?								
1.2 m	100 ms	20 - 130 dB	F	A	Freefield	Yes								
			START		END									
Personnel			JA		JB									
Date / time			28/03/2017		12/04/2017									
Calibration	RPS ID		15		14									
	Manufacturer / Model		RION NC-74		RION NC-74									
	Serial Number		110090		110118									
	Date last verification		17/11/2017		03/10/2017									
	Reference level		94		94									
	Meter reading		94		94									
Weather			Set-up				Collection							
	Wind speed (m/s)		4-5				2.5							
	Cloud cover (100%= 8 oktas)		8				8							
	Likely temp. inversion / Precipitation / Fog / Wet ground / Frozen ground / Snow cover? (tick boxes)		TI	P	F	W	Fr	Sn	TI	P	F	W	Fr	Sn
						✓								
	Subjective description / additional details		Very breezy and overcast				Dry and overcast.							
Photographs of Measurement Location														
 														
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))														
Equipment situated within large field approximately 20 m NW of a single residential dwelling and 10 m E of a farm building. Surrounded by soft ground.														
Description of sound environment at start of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)														
Birds. Wind noise.														
Description of sound environment at end of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)														
Distant aircraft. Animals.														



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_11						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
100	RION NA-28	1291243		13/10/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JA & JB						
Date / time		06/04/2017 & 11/04/2017						
Calibrator	RPS ID	14						
	Manufacturer / Model	RION NC-74						
	Serial Number	110118						
	Date last verification	03/10/2017						
	Reference Level	94.0 dB						
	Meter Reading	94.0 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a grass verge approximately 1.5 from the curb of the B110. On the opposite side of the B110 there was a small number of residential and farm buildings. Surrounding are is mainly farmland.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog	Ground cover (Wet / Frozen / Snow)
Day	11:54	Local and distant road traffic. Birds. Animals	0-2	N/A	-	-	-	-
Day	13:06	Local and distant road traffic. Birds. Animals	0	N/A	-	-	-	-
Day	14:11	Local and distant road traffic. Birds. Animals	0	N/A	-	-	-	-
Eve	19:26	Local and distant road traffic. Birds. Animals. Nearby lamb. Distant aircraft.	0	N/A	-	-	-	-
Night	00:07	Animals.	0	N/A	-	-	-	-

(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_I2					
Purpose of Monitoring		Baseline					
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014					
Sound Measurement System							
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification			
100	RION NA-28	1291243		13/10/2016			
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?		
1.5 m	15 min	F	A	Freefield	Yes		
Personnel		JA & JB					
Date / time		06/04/2017 & 11/04/2017					
Calibrator	RPS ID	14					
	Manufacturer / Model	RION NC-74					
	Serial Number	110118					
	Date last verification	03/10/2017					
	Reference Level	94.0 dB					
	Meter Reading	94.0 dB					
Photographs of Measurement Location							
 							
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))							
Microphone was positioned on a grassy verge approximately 5 m from the curb near the entrance of a residential lane. The surrounding area was mainly farmland with a few nearby residential dwellings.							
Observations Log							
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather				
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)
Day	11:29	Local and distant road traffic. Birds. Distant aircraft.	0	N/A	-	-	-
Day	12:45	Local and distant road traffic. Birds. Music from passing car.	0	N/A	-	-	-
Day	13:43	Local and distant road traffic. Birds. Animals. Car pulling out of nearby residential driveway.	0.5	N/A	-	-	-
Eve	19:06	Local and distant road traffic. Birds. Animals. Car pulling into nearby residential driveway.	0	N/A	-	-	-
Night		Animals.	0	N/A	-	-	-



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_I3						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
100	RION NA-28	1291243		13/10/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JA						
Date / time		06/04/2017						
Calibrator	RPS ID	14						
	Manufacturer / Model	RION NC-74						
	Serial Number	110118						
	Date last verification	03/10/2017						
	Reference Level	94.0 dB						
	Meter Reading	94.0 dB						
Photographs of Measurement Location								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a grassy verge at the entrance of a field approximately 2 m from the curb of the adjacent road. The surrounding area was farmland.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	12:28	Local and distant road traffic. Birds. Animals.	0-2	N	15	-	-	-
Day	14:12	Local and distant road traffic. Birds. Animals.	1-2.5	N	-	-	-	-
Day	15:33	Local and distant road traffic. Birds. Animals. Aircraft.	1-2.5	N	-	-	-	-
Eve	20:16	Local and distant road traffic. Birds. Animals. Distant pedestrian shouting.	1-2.5	N	-	-	-	-
Night	00:14	Local and distant road traffic. Birds. Animals.	0	N/A	-	-	-	-



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_14 (Traffic)						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
100	RION NA-28	1291243		13/10/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JA						
Date / time		06/04/2017						
Calibrator	RPS ID	10						
	Manufacturer / Model	B&K 4231						
	Serial Number	1839057						
	Date last verification	27/10/2017						
	Reference Level	94.0 dB						
	Meter Reading	94.0 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a grassy verge approximately 3m from the curb of the adjacent road. The surrounding area was farmland.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	10:51	Local and distant road traffic. Birds.	0	N/A	-	-	-	-
Day	12:21	Local and distant road traffic. Birds. Animals.	0.5	N/A	-	-	-	-
Day	13:30	Local and distant road traffic. Birds. Animals. Distant dog barking.	0	N/A	-	-	-	-



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_I5 (Traffic)						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
100	RION NA-28	1291243		13/10/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JA						
Date / time		06/04/2017						
Calibrator	RPS ID	14						
	Manufacturer / Model	RION NC-74						
	Serial Number	110118						
	Date last verification	03/10/2017						
	Reference Level	94.0 dB						
	Meter Reading	94.0 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a pavement sidewalk approximately 1 m from the curb of the adjacent road. Approximately 35 m N of the nearest residential dwelling. The surrounding area was mainly farmland.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog	Ground cover (Wet / Frozen / Snow)
Day	12:55	Local and distant road traffic. Passing pedestrian. Distant plant activity. Birds. Animals. Cars manoeuvring near residential dwelling.	2-3	N	11	-	-	-
Day	14:35	Local and distant road traffic. Birds. Distant idle tractor. Nearby lambs. Cars pulling into Pencoed.	0-1.5	N	-	-	-	-
Day	16:05	Local and distant road traffic. Birds. Dog barking nearby. Nearby sheep. Aircraft.	0.5-1.5	NW	-	-	-	-

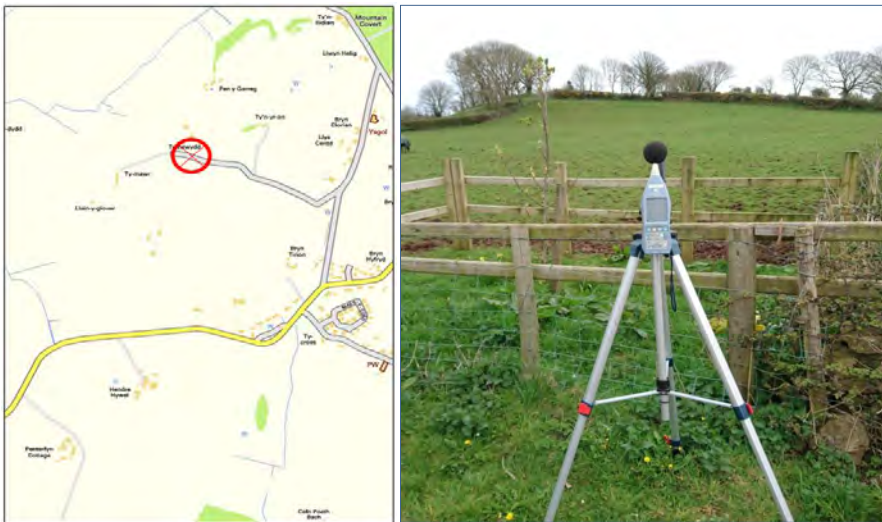
(Unattended Baseline Survey)

Sound Level Survey Record

Location			LT_J											
Purpose of Monitoring			Baseline											
Relevant Guidance / Standard			BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014											
Sound Measurement System														
RPS ID	Manufacturer / Model		Serial Number		Last Lab Verification									
127	Rion NL-52		164424		03/03/2016									
Microphone Height	Measurement Interval	Dynamic Range	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?								
1.2 m	100 ms	20 - 130 dB	F	A	Freefield	Yes								
			START		END									
Personnel			JA		JB									
Date / time			28/03/2017		12/04/2017									
Calibration	RPS ID		15		14									
	Manufacturer / Model		RION NC-74		RION NC-74									
	Serial Number		110090		110118									
	Date last verification		17/11/2017		03/10/2017									
	Reference level		94		94									
	Meter reading		94		94.1									
Weather			Set-up				Collection							
	Wind speed (m/s)		0				3.8							
	Cloud cover (100%= 8 oktas)		8				5							
	Likely temp. inversion / Precipitation / Fog / Wet ground / Frozen ground / Snow cover? (tick boxes)		TI	P	F	W	Fr	Sn	TI	P	F	W	Fr	Sn
						✓								
Subjective description / additional details		Overcast and still. Wet ground.				Dry and breezy.								
Photographs of Measurement Location														
 														
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))														
Equipment situated on the boundary of a large field adjacent to a narrow residential lane and approximately 170 m from the B5109. Surrounded by soft ground. There is a single residential dwelling approximately 65 m to the north.														
Description of sound environment at start of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)														
Local and distant road traffic. Animals. Aircraft.														
Description of sound environment at end of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)														
Local and distant road traffic.														



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_J1						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
100	RION NA-28	1291243		13/10/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JA						
Date / time		06/04/2017						
Calibrator	RPS ID	14						
	Manufacturer / Model	RION NC-74						
	Serial Number	110118						
	Date last verification	03/10/2017						
	Reference Level	94.0 dB						
Meter Reading								
94.0 dB								
Photographs of Measurement Location								
								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a grass verge at the entrance of a narrow residential lane. The surrounding area was mainly farmland.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog / Ground cover (Wet / Frozen / Snow)	
Day	11:38	Distant road traffic. Birds. Animals. Small construction noise from building approximately 300 m away.	0-1	NE	-	-	-	-
Day	17:22	Distant road traffic. Birds. Animals. Distant dog barking. Very slight audible crackling from over head line.	0-1	NE	-	-	-	-
Day	18:27	Distant road traffic. Birds. Animals. Very slight audible crackling from over head line.	0-1.5	W	-	-	-	-
Eve	19:33	Distant road traffic. Birds. Animals. Very slight audible crackling from over head line.	0-1	NE	-	-	-	-
Night	23:34	Distant road traffic. Animals. Very slight audible crackling from over head line.	0	N/A	-	-	-	-


(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_J2						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
100	RION NA-28	1291243		13/10/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JA						
Date / time		06/04/2017						
Calibrator	RPS ID	14						
	Manufacturer / Model	RION NC-74						
	Serial Number	110118						
	Date last verification	03/10/2017						
	Reference Level	94.0 dB						
Meter Reading								
94.0 dB								
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a grass verge approximately 2 m from the curb of the adjacent road. The surrounding area was residential and farmland.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog / Ground cover (Wet / Frozen / Snow)	
Day	12:02	Local and distant road traffic. Birds. Distant cutting sound. Distant dog barking. Distant muffled radio.	0-2.5	NE	-	-	-	-
Day	17:43	Local and distant road traffic. Birds. Cars pulling in and out of nearby residential driveways.	0-1	NE	-	-	-	-
Day	18:47	Local and distant road traffic. Continuous plant activity to the west. Birds. Distant talking. Cars pulling in and out of nearby residential driveways. Van idling at bus stop.	0	N/A	-	-	-	-
Eve	19:54	Local and distant road traffic. Birds. Animals. Ball hitting a wall nearby.	0	N/A	-	-	-	-
Night	23:54	Local and distant road traffic. Nearby stream. Animals.	0	N/A	-	-	-	-



(Unattended Baseline Survey)

Sound Level Survey Record

Location			LT_K												
Purpose of Monitoring			Baseline												
Relevant Guidance / Standard			BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014												
Sound Measurement System															
RPS ID	Manufacturer / Model		Serial Number		Last Lab Verification										
113	Rion NL-52		943364		27/01/2017										
Microphone Height	Measurement Interval	Dynamic Range	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?									
1.2 m	100 ms	20 - 130 dB	F	A	Freefield	No									
			START		END										
Personnel			JA		JB										
Date / time			30/03/2017		12/04/2017										
Calibration	RPS ID		15		14										
	Manufacturer / Model		RION NC-74		RION NC-74										
	Serial Number		110090		110118										
	Date last verification		17/11/2017		03/10/2017										
	Reference level		94		94										
	Meter reading		94		94										
Weather				Set-up		Collection									
	Wind speed (m/s)			0		1.5									
	Cloud cover (100%= 8 oktas)			8		4									
	Likely temp. inversion / Precipitation / Fog / Wet ground / Frozen ground / Snow cover? (tick boxes)			TI	P	F	W	Fr	Sn	TI	P	F	W	Fr	Sn
							✓								
	Subjective description / additional details			Overcast and still.		Dry with patchy cloud.									
Photographs of Measurement Location															
															
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))															
Equipment situated on the boundary of a large field attached to a small fence of an adjacent residential garden. The equipment is approximately 20 m from the B5420. The surrounding area is mainly farmland with a single residential dwelling approximately 50 m to the west.															
Description of sound environment at start of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)															
Local and distant road traffic. Animals. Dog barking very close to microphone.															
Description of sound environment at end of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)															
Local and distant road traffic. Birds.															



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_K1						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
100	RION NA-28	1291243		13/10/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JA						
Date / time		06/04/2017						
Calibrator	RPS ID	14						
	Manufacturer / Model	RION NC-74						
	Serial Number	110118						
	Date last verification	03/10/2017						
	Reference Level	94.0 dB						
Meter Reading		94.0 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a muddy verge along a narrow residential lane. The surrounding area was mainly farmland. There was a single residential dwelling approximately 12 m to the North.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog / Ground cover (Wet / Frozen / Snow)	
Day	11:14	Distant farm plant and reversing alarm.	2-3.5	NW	12	-	-	-
Day	17:22	Local and distant road traffic. Birds. Distant aircraft. Nearby muffled hedge cutting.	0.5-1	NW	-	-	-	-
Day	18:03	Local and distant road traffic. Animals. Birds.	1-2	NW	-	-	-	-
Eve	19:07	Distant road traffic. Animals. Birds. Slightly audible crackling from over head line.	0-1.5	W	-	-	-	-
Night	23:10	Distant road traffic. Birds. Animals. Slightly audible crackling from overhead line.	0-1	W	-	-	-	-



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_K2						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
100	RION NA-28	1291243		13/10/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JA						
Date / time		06/04/2017						
Calibrator	RPS ID	14						
	Manufacturer / Model	RION NC-74						
	Serial Number	110118						
	Date last verification	03/10/2017						
	Reference Level	94.0 dB						
	Meter Reading	94.0 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
Microphone was positioned on a grass verge approximately 3 m from the curb of the A5114 and approximately 100m north of the A5 roundabout. The surrounding area was farmland.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	13:38	Local and distant road traffic. Birds.	2.5-4	N	-	-	-	-
Day	15:04	Local and distant road traffic. Birds.	1.5-3	N	-	-	-	-
Day	16:32	Local and distant road traffic. Birds.	1-2	N	-	-	-	-



(Unattended Baseline Survey)

Sound Level Survey Record

Location			LT_L											
Purpose of Monitoring			Baseline											
Relevant Guidance / Standard			BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014											
Sound Measurement System														
RPS ID	Manufacturer / Model		Serial Number		Last Lab Verification									
113	Rion NL-52		943364		27/01/2017									
Microphone Height	Measurement Interval	Dynamic Range	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?								
1.2 m	100 ms	20 - 130 dB	F	A	Freefield	No								
			START		END									
Personnel			JB		JB									
Date / time			30/03/2017		12/04/2017									
Calibration	RPS ID		14		14									
	Manufacturer / Model		RION NC-74		RION NC-74									
	Serial Number		110118		110118									
	Date last verification		03/10/2017		03/10/2017									
	Reference level		94		94									
	Meter reading		94		93.9									
Weather			Set-up				Collection							
	Wind speed (m/s)		5				1							
	Cloud cover (100%= 8 oktas)		8				8							
	Likely temp. inversion / Precipitation / Fog / Wet ground / Frozen ground / Snow cover? (tick boxes)		TI	P	F	W	Fr	Sn	TI	P	F	W	Fr	Sn
						✓								
	Subjective description / additional details		Overcast, wind and rain.				Dry and overcast.							
Photographs of Measurement Location														
 														
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))														
Equipment situated on the boundary of a large field. The surrounding area is farmland.														
Description of sound environment at start of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)														
Animals. Distant farming activity. Crackling from over head line.														
Description of sound environment at end of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)														
Animals. Distant farming activity. Crackling from over head line.														



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_L1						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
142	B&K 2270	3010761		16/12/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JW						
Date / time		05/04/2017						
Calibrator	RPS ID	10						
	Manufacturer / Model	B&K 4231						
	Serial Number	1839057						
	Date last verification	27/10/2017						
	Calibration Sensitivity	42.9 mV/Pa						
Deviation		-0.01 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
The equipment was positioned on a muddy verge next to the adjacent road approximately 20 m downhill from the nearest residential dwelling and 40 m north of the B5420. The ground was hard but surrounded by farmland.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	12:24	Local and distant road traffic. Dogs barking nearby. Geese and birds. Trees and hedgerows rustling.	2-3	N	10	-	-	-
Day	14:44	Local and distant road traffic. Dogs barking nearby. Geese and birds. Trees and hedgerows rustling.	2.5-3	N	10	-	-	-
Day	16:44	Local and distant road traffic. Dogs barking nearby. Geese and birds. Trees and hedgerows rustling.	1	N	10	-	-	-
Eve	20:08	Local and distant road traffic. Animals. Birds. Distant aircraft.	0	N/A	6	-	-	-
Night	00:32	Nearby stream. Distant roads traffic. Sheep.	0	N/A	4	-	-	-



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_L2 (Traffic)						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
142	B&K 2270	3010761		16/12/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JW						
Date / time		05/04/2017						
Calibrator	RPS ID	10						
	Manufacturer / Model	B&K 4231						
	Serial Number	1839057						
	Date last verification	27/10/2017						
	Calibration Sensitivity	42.9 mV/Pa						
Deviation		-0.01 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
The equipment was positioned on a tarmaced entrance to a farm approximately 3 m from the curb of the B5420. The ground was hard but generally surrounded by farmland.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog	Ground cover (Wet / Frozen / Snow)
Day	12:48	Local and distant road traffic. Birds. Cows.	1	E	12	-	-	-
Day	15:04	Local and distant road traffic. Birds. Cows.	1-1.5	N	10	-	-	-
Day	16:25	Local and distant road traffic. Birds. Cows.	0-1	N/A	12	-	-	-



(Unattended Baseline Survey)

Sound Level Survey Record

Location			LT_M				
Purpose of Monitoring			Baseline				
Relevant Guidance / Standard			BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014				
Sound Measurement System							
RPS ID	Manufacturer / Model		Serial Number		Last Lab Verification		
Hire Kit	Rion NL-32		103137		01/03/2017		
Microphone Height	Measurement Interval	Dynamic Range	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?	
1.2 m	100 ms	20 - 130 dB	F	A	Freefield	No	
START			END				
Personnel			JA		JW		
Date / time			30/03/2017		12/04/2017		
Calibration	RPS ID		15		15		
	Manufacturer / Model		RION NC-74		RION NC-74		
	Serial Number		110090		110090		
	Date last verification		17/11/2017		17/11/2017		
	Reference level		94		94		
	Meter reading		94		93.9		
Weather	Set-up			Collection			
	Wind speed (m/s)		>5		1		
	Cloud cover (100%= 8 oktas)		8		8		
	Likely temp. inversion / Precipitation / Fog / Wet ground / Frozen ground / Snow cover? (tick boxes)	TI	P	F	W	Fr	Sn
			✓		✓		
	Subjective description / additional details		Overcast, wind and rain.		Dry and overcast.		
Photographs of Measurement Location							
 							
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))							
Equipment was positioned in the middle of a field approximately 30 m south of the adjacent residential road and approximately 750 m north of the A55. The ground was soft and surrounded by farmland. The nearest residential dwelling was approximately 60 m away.							
Description of sound environment at start of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)							
Distant road traffic. Wind noise.							
Description of sound environment at end of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)							
Distant road traffic. Trees and hedgerows rustling. Dogs. Birds.							


(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_M1						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
142	B&K 2270	3010761		16/12/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JW						
Date / time		05/04/2017						
Calibrator	RPS ID	10						
	Manufacturer / Model	B&K 4231						
	Serial Number	1839057						
	Date last verification	27/10/2017						
	Calibration Sensitivity	42.9 mV/Pa						
	Deviation	-0.01 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
Equipment was positioned on a grassy verge approximately 3 m from the curb of the adjacent residential road and approximately 40 m north of the nearest residential dwelling.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog	Ground cover (Wet / Frozen / Snow)
Day	13:10	Nearby stream. Trees and hedgerows rustling. Distant road traffic. Birds. Residents talking nearby.	2.5-3	N	10	-	-	-
Day	15:25	Nearby stream. Trees and hedgerows rustling. Distant road traffic. Birds. Residents talking nearby. Aircraft.	1	N/A	10	-	-	-
Day	18:33	Nearby stream. Distant road traffic. Birds. Residents talking nearby. Distant tractor.	0	N/A	7	-	-	-
Eve	20:30	Nearby stream. Birds. Distant road traffic.	0	N/A	6	-	-	-
Night	00:11	Nearby stream. Birds. Distant road traffic.	0	N/A	4	-	-	-



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_M2						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
142	B&K 2270	3010761		16/12/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JW						
Date / time		05/04/2017						
Calibrator	RPS ID	10						
	Manufacturer / Model	B&K 4231						
	Serial Number	1839057						
	Date last verification	27/10/2017						
	Calibration Sensitivity	42.9 mV/Pa						
Deviation		-0.01 dB						
Photographs of Measurement Location								
								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/soft ground, topography, intervening features, reflecting surfaces))								
The equipment was positioned on a grassy verge approximately 1 m from the curb of the adjacent residential road. The ground was soft and surrounded by farmland. The nearest residential dwelling was approximately 30 m to the north.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog	Ground cover (Wet / Frozen / Snow)
Day	13:33	Distant road traffic (A55 dominant). Birds. Trees and hedgerows rustling. Distant agricultural activity.	2-3	N	10	-	-	-
Day	16:00	Distant road traffic (A55 dominant). Birds. Trees and hedgerows rustling. Aircraft.	1-2	N	10	-	-	-
Day	18:52	Distant road traffic (A55 dominant). Birds. Trees and hedgerows rustling.	0-1	N	7	-	-	-
Evening	20:53	Distant road traffic (A55 dominant). Birds. Trees and hedgerows rustling.	0-1	N	6	-	-	-
Night	23:50	Distant road traffic (A55 dominant). Nearby stream flowing fast. Birds.	0-1	N/A	4	-	-	-

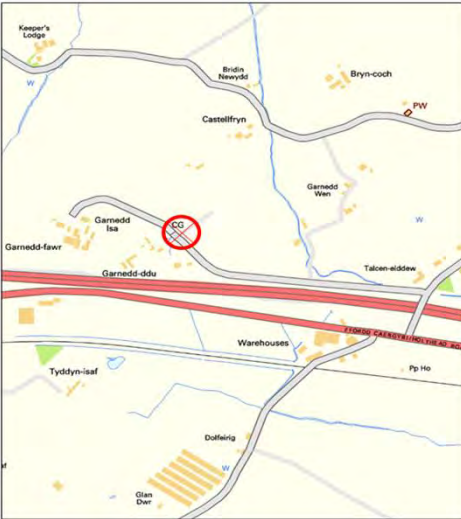

(Unattended Baseline Survey)

Sound Level Survey Record

Location			LT_N (Unit 8)												
Purpose of Monitoring			Baseline												
Relevant Guidance / Standard			BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014												
Sound Measurement System															
RPS ID	Manufacturer / Model		Serial Number		Last Lab Verification										
N/A	B&K 2250		3007928		14/02/2017										
Microphone Height	Measurement Interval	Dynamic Range	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?									
1.2 m	15 minutes	20-140dB	F	A	Freefield	Y									
			START		END										
Personnel			RM		RM										
Date / time			29/03/2017		12/04/2017										
Calibration	RPS ID		N/A		N/A										
	Manufacturer / Model		B&K 4231		B&K 4231										
	Serial Number		3012462		3012462										
	Date last verification		15/02/2017		15/02/2017										
	Reference level		94		94										
	Deviation		0.05		0.08										
Weather				Set-up		Collection									
	Wind speed (m/s)														
	Cloud cover (100%= 8 oktas)			8		8									
	Likely temp. inversion / Precipitation / Fog / Wet ground / Frozen ground / Snow cover? (tick boxes)			TI	P	F	W	Fr	Sn	TI	P	F	W	Fr	Sn
					✓										
Subjective description / additional details			Gusty breeze		Dry										
Photographs of Measurement Location															
 															
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))															
The equipment was positioned on a grassy yard approximately 6 m behind the nearest farm building.															
Description of sound environment at start of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)															
Trees rustling. Sheep. Bangs and clutters from nearby farm building.															
Description of sound environment at end of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)															
Trees rustling, some animal noise.															



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_N1						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
142	B&K 2270	3010761		16/12/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JW						
Date / time		05/04/2017						
Calibrator	RPS ID	10						
	Manufacturer / Model	B&K 4231						
	Serial Number	1839057						
	Date last verification	27/10/2017						
	Calibration Sensitivity	42.9 mV/Pa						
Deviation		-0.01 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
Equipment was positioned approximately 5 m from the curb of the adjacent residential road on the corner of a field at a residential crossroads. The majority of the surrounding area was farmland with the nearest residential dwelling approximately 50 m to the west.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	11:32	Local and distant road traffic (A55 dominant). Train passbys. Dogs. Cows. Birds.	0-1.5	N	12	-	-	-
Day	13:58	Local and distant road traffic (A55 dominant). Train passbys. Dogs. Cows. Birds.	1.5-2.5	N	10	-	-	-
Day	17:50	Local and distant road traffic (A55 dominant). Train passbys. Dogs. Cows. Birds.	1	N	8	-	-	-
Eve	19:17	Local and distant road traffic (A55 dominant). Nearby residents talking. Nearby idle car.	0-1	N	7	-	-	-
Night	23:06	Distant road traffic (A55 dominant). Train passby.	0-1	N/A	5	-	-	-



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_N2						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
142	B&K 2270	3010761		16/12/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Facade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JW						
Date / time		05/04/2017						
Calibrator	RPS ID	10						
	Manufacturer / Model	B&K 4231						
	Serial Number	1839057						
	Date last verification	27/10/2017						
	Calibration Sensitivity	42.9 mV/Pa						
	Deviation	-0.01 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
The equipment was positioned on a tarmaced area in a small retail/commercial area approximately 30 m from the curb of the adjacent A5 and, approximately 5 m from an adjacent retail building. All the immediate surrounding ground was hard.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	11:55	Local and distant road traffic (A5 dominant). Train passbys.	1-1.5	N	12	-	-	-
Day	14:18	Local and distant road traffic (A5 dominant). Nearby car wash spray noise.	1.5-3	N	10	-	-	-
Day	18:11	Local and distant road traffic (A5 dominant). Train passbys. Birds. Nearby car wash spray noise.	0	N/A	7	-	-	-
Evening	19:43	Local and distant road traffic (A5 dominant). Train passbys. Crane working nearby. Birds.	0	N/A	6	-	-	-
Night	23:26	Local and distant road traffic (A5/A55 dominant). Train passing. Birds.	0-1	N/A	4	-	-	-



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_N3						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
142	B&K 2270	3010761		16/12/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JW						
Date / time		04/04/2017 - 05/04/2017						
Calibrator	RPS ID	10						
	Manufacturer / Model	B&K 4231						
	Serial Number	1839057						
	Date last verification	27/10/2017						
	Calibration Sensitivity	42.9 mV/Pa						
	Deviation	-0.01 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
Equipment was positioned on a grassy verge at the entrance of a narrow gravel lane leading to a farm approximately 4 m from the curb of the adjacent road. The majority of the surrounding area was farmland with the nearest residential dwellings approximately 20 m away on the opposite side of the road.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	15:41	Local and distant road traffic. Distant train. Birds. Trees and hedgerows rustling. Cockerel cooing. Nearby agricultural activity.	0.5-1	N	15	-	-	-
Day	16:58	Local and distant road traffic. Distant train. Birds. Trees and hedgerows rustling. Cockerel cooing. Nearby agricultural activity. Aircraft.	1-2	N	13	-	-	-
Day	18:44	Local and distant road traffic. Distant train. Birds. Nearby tractor.	0-0.5	N/A	13	-	-	-
Evening	19:29	Local and distant road traffic. Birds. Nearby residents talking. Distant train.	0	N/A	12	-	-	-
Night	00:16	Local and distant road traffic. Birds.	0-0.5	N/A	4	-	-	-



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_N4						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
142	B&K 2270	3010761		16/12/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JW						
Date / time		04/04/2017 - 05/04/2017						
Calibrator	RPS ID	10						
	Manufacturer / Model	B&K 4231						
	Serial Number	1839057						
	Date last verification	27/10/2017						
	Calibration Sensitivity	42.9 mV/Pa						
Deviation		-0.01 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
The equipment was positioned on a grassy verge along a narrow dirt track leading to a farm. The surrounding area was farmland.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	16:04	Distant road traffic. Birds. Horses. Trees rustling.	1.5-2.5	N	14	-	-	-
Day	17:19	Local and distant road traffic. Birds. Horses. Trees rustling. Aircraft.	0-1	N	14	-	-	-
Day	11:10	Local and distant road traffic. Distant train. Aircraft. Birds. Sheep.	0	N/A	10	-	-	-
Evening	19:07	Distant road traffic. Birds.	0	N/A	13	-	-	-
Night	00:37	Distant road traffic.	0	N/A	3	-	-	-



(Unattended Baseline Survey)

Sound Level Survey Record

Location			LT_O (Unit 7)												
Purpose of Monitoring			Baseline												
Relevant Guidance / Standard			BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014												
Sound Measurement System															
RPS ID	Manufacturer / Model		Serial Number		Last Lab Verification										
N/A	B&K 2250		3007843		14/02/2017										
Microphone Height	Measurement Interval	Dynamic Range	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?									
1.2 m	15 minutes	20-140dB	F	A	Freefield	Y									
			START		END										
Personnel			RM		RM										
Date / time			29/03/2017		12/04/2017										
Calibration	RPS ID		N/A		N/A										
	Manufacturer / Model		B&K 4231		B&K 4231										
	Serial Number		3012443		3012443										
	Date last verification		15/02/2017		15/02/2017										
	Reference level		94		94										
	Deviation		0.05		0										
Weather				Set-up		Collection									
	Wind speed (m/s)			3		<3									
	Cloud cover (100%= 8 oktas)			8		8									
	Likely temp. inversion / Precipitation / Fog / Wet ground / Frozen ground / Snow cover? (tick boxes)			TI	P	F	W	Fr	Sn	TI	P	F	W	Fr	Sn
	Subjective description / additional details			Overcast and breezy.				Dry							
Photographs of Measurement Location															
 															
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))															
Location in field of sheep. Approximately 20m from side of property. Weather station attached to monitor.															
Description of sound environment at start of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)															
Trees rustling. Sheep. Birds.															
Description of sound environment at end of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)															
Trees rustling. Sheep. Birds.															



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_O1						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
142	B&K 2270	3010761		16/12/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JW						
Date / time		04/04/2017 - 05/04/2017						
Calibrator	RPS ID	10						
	Manufacturer / Model	B&K 4231						
	Serial Number	1839057						
	Date last verification	27/10/2017						
	Calibration Sensitivity	42.9 mV/Pa						
	Deviation	-0.01 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/soft ground, topography, intervening features, reflecting surfaces))								
Equipment was positioned on a grassy verge at the entrance to a field next to an adjacent narrow dirt track leading to a nearby farm. The surrounding area was farmland.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	12:59	Local and distant road traffic. Distant trains. Trees and hedgerows rustling.	2-3	N	15	-	-	-
Day	14:23	Local and distant road traffic. Distant trains. Trees and hedgerows rustling. Birds. Distant agricultural activity.	1.5	N	15	-	-	-
Day	17:42	Local and distant road traffic. Birds. Trees and hedgerows rustling. Distant trains.	1-2	N	14	-	-	-
Eve	19:51	Local and distant road traffic. Lots of bird noise.	0	N/A	10	-	-	-
Night	23:55	Distant road traffic. Birds.	0	N/A	4	-	-	-

(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_O2						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
142	B&K 2270	3010761		16/12/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JW						
Date / time		04/04/2017						
Calibrator	RPS ID	10						
	Manufacturer / Model	B&K 4231						
	Serial Number	1839057						
	Date last verification	27/10/2017						
	Calibration Sensitivity	42.9 mV/Pa						
	Deviation	-0.01 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
The equipment was positioned on a grassed area near a residential dwelling adjacent to the A4080. The residential dwelling was approximately 10 m away and the surrounding area was mainly farmland.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	12:35	Local and distant road traffic. Birds. Trees and hedgerows rustling.	1-2	N	15	-	-	-
Day	14:03	Local and distant road traffic. Birds. Sheep. Trees and hedgerows rustling. Distant train.	1-2	N	15	-	-	-
Day	18:02	Local and distant road traffic. Birds. Trees and hedgerows rustling.	0-1	N	14	-	-	-
Evening	20:12	Local and distant road traffic. Lots of bird noise.	0	N/A	10	-	-	-
Night	23:35	Local and distant road traffic.	0	N/A	4	-	-	-



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_O3						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
142	B&K 2270	3010761		16/12/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	No			
Personnel								
JW								
Date / time								
04/04/2017								
Calibrator	RPS ID		10					
	Manufacturer / Model		B&K 4231					
	Serial Number		1839057					
	Date last verification		27/10/2017					
	Calibration Sensitivity		42.9 mV/Pa					
	Deviation		-0.01 dB					
Photographs of Measurement Location								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
<p>The equipment was positioned on a grassy verge approximately 1 m from the curb of a residential road and approximately 25 m from the curb of the adjacent A4080. The surrounding areas were mainly wooded.</p>								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	13:43	Local and distant road traffic. Birds. Trees and hedgerows rustling.	0-2	N	15	-	-	-
Day	15:04	Local and distant road traffic. Birds. Trees and hedgerows rustling.	1	N	15	-	-	-
Day	18:21	Local and distant road traffic. Birds. Distant aircraft.	0-1	N/A	13	-	-	-
Evening	20:32	Local and distant road traffic. Birds.	0	N/A	8	-	-	-
Night	23:15	Local and distant road traffic. Birds.	0-1	N/A	4	-	-	-

(Attended Baseline Survey)



Sound Level Survey Record

Location		ST_O4 (Traffic)						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
142	B&K 2270	3010761		16/12/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JW						
Date / time		04/04/2017						
Calibrator	RPS ID	10						
	Manufacturer / Model	B&K 4231						
	Serial Number	1839057						
	Date last verification	27/10/2017						
	Calibration Sensitivity	42.9 mV/Pa						
Deviation		-0.01 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
The equipment was positioned on a muddy verge approximately 3 m from the curb of the adjacent residential road. The surrounding area was mainly farmland and the nearest residential dwelling was approximately 20 m to the south.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog	Ground cover (Wet / Frozen / Snow)
Day	13:20	Local and distant road traffic. Nearby train. Trees and hedgerows rustling.	3-4.5	N	14	-	-	-
Day	14:44	Local and distant road traffic. Nearby train. Trees and hedgerows rustling.	2-3	N	14	-	-	-
Day	16:28	Local and distant road traffic. Nearby train. Trees and hedgerows rustling. Farmer collecting sheep nearby.	2-3	N	13	-	-	-

Appendix B – Survey Record Sheets - Gwynedd



(Unattended Baseline Survey)

Sound Level Survey Record

Location			LT_P (Unit 1)												
Purpose of Monitoring			Baseline												
Relevant Guidance / Standard			BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014												
Sound Measurement System															
RPS ID	Manufacturer / Model		Serial Number		Last Lab Verification										
N/A	B&K 2250		3007838		09/01/2017										
Microphone Height	Measurement Interval	Dynamic Range	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?									
1.2 m	15 minutes	20-140 dB	F	A	Freefield	Y									
			START		END										
Personnel			RM		RM										
Date / time			28/03/2017		12/04/2017										
Calibration	RPS ID		N/A		N/A										
	Manufacturer / Model		B&K 4231		B&K 4231										
	Serial Number		3012420		3012420										
	Date last verification		09/01/2017		09/01/2017										
	Reference level		94		94										
	Deviation		0.01		0.01										
Weather				Set-up		Collection									
	Wind speed (m/s)			>3		<3									
	Cloud cover (100%= 8 oktas)			6											
	Likely temp. inversion / Precipitation / Fog / Wet ground / Frozen ground / Snow cover? (tick boxes)			TI	P	F	W	Fr	Sn	TI	P	F	W	Fr	Sn
	Subjective description / additional details			Bright and breezy		Dry									
Photographs of Measurement Location															
 															
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))															
Exposed location in grassy field approximately 10m from front façade of property.															
Description of sound environment at start of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)															
Distant road traffic. Birds. Trees rustling.															
Description of sound environment at end of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)															
Distant road traffic. Birds. Trees rustling.															



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_P1						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
100	RION NA-28	1291243		13/10/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JA						
Date / time		05/04/2017						
Calibrator	RPS ID	15						
	Manufacturer / Model	RION NC-74						
	Serial Number	110090						
	Date last verification	17/11/2017						
	Reference Level	94 dB						
	Meter Reading	94 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
The equipment was positioned on a grassy verge along a narrow residential lane approximately 1 m from the curb. The nearest residential dwelling was approximately 35 m to the west and the surrounding area was mainly farmland.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day		Local and distant road traffic. Nearby stream. Birds.	1	NW	-	-	-	-
Day		Local and distant road traffic. Birds. Distant muffled music.	1.5	NE	-	-	-	-
Day		Local and distant road traffic. Birds.	0	N/A	-	-	-	-
Eve		Distant road traffic. Birds.	0	N/A	-	-	-	-
Night		Distant road traffic.	0	N/A	5	-	-	-

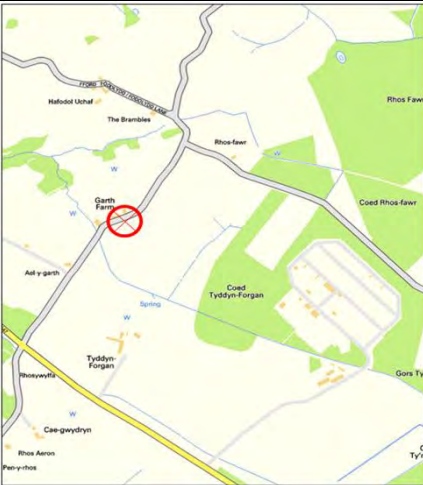

(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_P2						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
32	B&K 2250	2579764		13/10/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JA						
Date / time		04/04/2017 & 06/04/2017						
Calibrator	RPS ID	15						
	Manufacturer / Model	RION NC-74						
	Serial Number	110090						
	Date last verification	17/11/2017						
	Reference Level	94 dB						
	Meter Reading	94 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
The equipment was positioned on a grassy verge along a narrow residential lane, approximately 10 m to the east of the nearest residential dwelling. The surrounding area was mainly farmland.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	12:59	Local and distant road traffic. Birds. Trees and hedgerows rustling. Some nearby agricultural activity.	1.5	N	12	-	-	-
Day	18:14	Local and distant road traffic. Nearby stream. Birds.	0	N/A	-	-	-	-
Day	18:02	Local and distant road traffic. Nearby stream. Birds.	0-0.5	N/A	-	-	-	-
Evening	20:23	Distant road traffic. Nearby stream. Birds.	0	N/A	7	-	-	-
Night	00:40	Nearby stream. Distant road traffic. Nearby Owl.	0	N/A	5	-	-	-



(Unattended Baseline Survey)

Sound Level Survey Record

Location			LT_Q (Unit 4)											
Purpose of Monitoring			Baseline											
Relevant Guidance / Standard			BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014											
Sound Measurement System														
RPS ID	Manufacturer / Model		Serial Number		Last Lab Verification									
N/A	B&K 2250		3007834		09/01/2017									
Microphone Height	Measurement Interval	Dynamic Range	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?								
1.2 m	15 minutes	20-140 dB	F	A	Freefield	Y								
			START		END									
Personnel			RM		RM									
Date / time			28/03/2017		12/04/2017									
Calibration	RPS ID		N/A		N/A									
	Manufacturer / Model		B&K 4231		B&K 4231									
	Serial Number		3012398		3012398									
	Date last verification		09/01/2017		09/01/2017									
	Reference level		94		94									
	Deviation		0.06		0.07									
Weather			Set-up				Collection							
	Wind speed (m/s)		2.5				<3							
	Cloud cover (100%= 8 oktas)		8				6							
	Likely temp. inversion / Precipitation / Fog / Wet ground / Frozen ground / Snow cover? (tick boxes)		TI	P	F	W	Fr	Sn	TI	P	F	W	Fr	Sn
	Subjective description / additional details		Overcast and breezy.				Dry							
Photographs of Measurement Location														
 														
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))														
In grassy field close to field boundary by small road.														
Description of sound environment at start of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)														
Local and distant road traffic. Birds. Animals. Shunt reactor low level hum. Distant whine to the south. Dog barking. Helicopter. Aircraft.														
Description of sound environment at end of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)														
Local and distant road traffic. Birds. Animals. Shunt reactor low level hum. Distant whine to the south.														



(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_Q1						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
32	B&K 2250	2579764		13/10/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JA						
Date / time		04/04/2017						
Calibrator	RPS ID	15						
	Manufacturer / Model	RION NC-74						
	Serial Number	110090						
	Date last verification	17/11/2017						
	Reference Level	94 dB						
	Meter Reading	94 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/soft ground, topography, intervening features, reflecting surfaces))								
The equipment was positioned on a raised grassy verge along the adjacent B4547 approximately 3 m from the curb.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog	Ground cover (Wet/Frozen/Snow)
Day	12:04	Local and distant road traffic. Birds. Trees and hedgerows rustling.	0.5	N/A	13	-	-	-
Day	16:04	Local and distant road traffic. Birds. Trees and hedgerows rustling. Nearby stream.	1	N	12	-	-	-
Day	17:02	Local and distant road traffic. Birds. Nearby stream.	1	W	-	-	-	-
Eve	19:19	Local and distant road traffic. Nearby stream. Birds.	0.5	E	-	-	-	-
Night	23:33	Local and distant road traffic. Nearby stream.	0	N/A	5	-	-	-

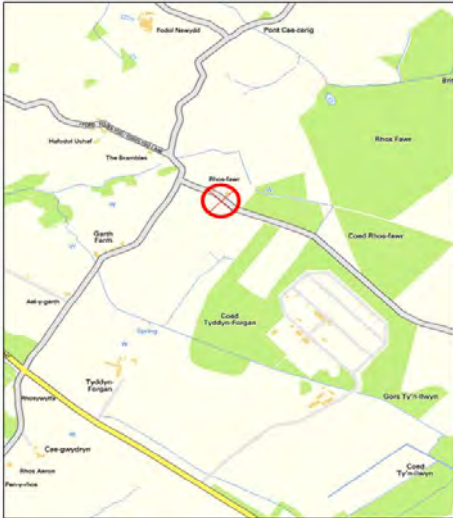

(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_Q2						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
32	B&K 2250	2579764		13/10/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JA						
Date / time		04/04/2017						
Calibrator	RPS ID	15						
	Manufacturer / Model	RION NC-74						
	Serial Number	110090						
	Date last verification	17/11/2017						
	Reference Level	94 dB						
	Meter Reading	94 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/soft ground, topography, intervening features, reflecting surfaces))								
The equipment was positioned on a gravel/grass verge at the entrance to small residential lane approximately 90 m south of the B4547. The surrounding area was mainly farmland.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	11:39	Local and distant traffic noise. Birds. Distant hum of the substation.	1	NE	12	-	-	-
Day	16:43	Local and distant traffic noise. Birds.	0-3	N	11	-	-	-
Day	-	-	-	-	-	-	-	-
Evening	19:01	Local and distant road traffic. Birds. Animals. Distant aircraft.	0	N/A	-	-	-	-
Night	23:14	Local and distant road traffic.	0	N/A	5	-	-	-


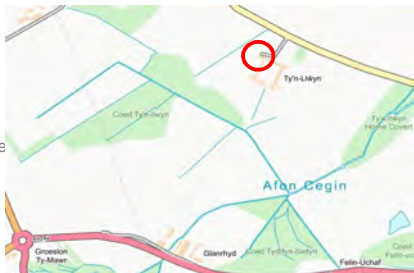
(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_Q3						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
100	RION NA-28	1291243		13/10/2016				
Microphone Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	Yes			
Personnel		JA						
Date / time		04/04/2017						
Calibrator	RPS ID	15						
	Manufacturer / Model	RION NC-74						
	Serial Number	110090						
	Date last verification	17/11/2017						
	Reference Level	94 dB						
	Meter Reading	94 dB						
Photographs of Measurement Location								
 								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
The equipment was positioned on a grass verge near the entrance to a residential dwelling adjacent to a narrow residential lane. The residential dwelling was approximately 10 m away and the surrounding area was mainly farmland.								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog Ground cover (Wet / Frozen / Snow)	
Day	12:25	Local and distant road traffic. Birds. Trees and hedgerows rustling. Animals. Distant dog. Bees.	1	N	13	-	-	-
Day	17:48	Local and distant road traffic. Birds. Nearby agricultural activity. Distant aircraft. Distant waste vehicle. Animals. Bees.	0	N/A	12	-	-	-
Day	18:25	Local and distant road traffic. Animals. Birds. Distant aircraft.	1	W	-	-	-	-
Evening	20:01	Local and distant road traffic. Birds. Animals.	0	N/A	8	-	-	-
Night	00:15	Distant road traffic.	0	N/A	5	-	-	-

(Unattended Baseline Survey)

Sound Level Survey Record

Location			LT_R (Unit 2)											
Purpose of Monitoring			Baseline											
Relevant Guidance / Standard			BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014											
Sound Measurement System														
RPS ID	Manufacturer / Model		Serial Number		Last Lab Verification									
N/A	B&K 2250		3006938		09/01/2017									
Microphone Height	Measurement Interval	Dynamic Range	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?								
1.2 m	15 minutes	20-140 dB	F	A	Freefield	Y								
			START		END									
Personnel														
Date / time			28/03/2017		12/04/2017									
Calibration	RPS ID		N/A		N/A									
	Manufacturer / Model		B&K 4231		B&K 4231									
	Serial Number		3012375		3012375									
	Date last verification		09/01/2017		09/01/2017									
	Reference level		94		94									
	Deviation		0.01		0									
Weather	Set-up		Collection											
	Wind speed (m/s)		>3		<3									
	Cloud cover (100%= 8 oktas)		7		4									
	Likely temp. inversion / Precipitation / Fog / Wet ground / Frozen ground / Snow cover? (tick boxes)		TI	P	F	W	Fr	Sn	TI	P	F	W	Fr	Sn
	Subjective description / additional details		Bright and breezy				Dry							
Photographs of Measurement Location														
 														
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))														
The equipment was positioned on a grassy area next to a field approximately 40 m west from the nearest farm buildings. The surrounding area was mainly farmland. Approximately 520m from Pentir substation.														
Description of sound environment at start of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)														
Distant road traffic. Bird song.														
Description of sound environment at end of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)														
Distant road traffic. Bird song.														

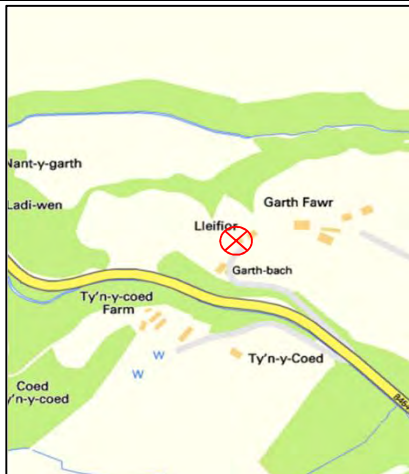

(Attended Baseline Survey)

Sound Level Survey Record

Location		ST_R1						
Purpose of Monitoring		Baseline						
Relevant Guidance / Standard		BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014						
Sound Measurement System								
RPS ID	Manufacturer / Model	Serial Number		Last Lab Verification				
100	RION NA-28	1291243		13/10/2016				
Height	Measurement Interval	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?			
1.5 m	15 min	F	A	Freefield	No			
Personnel		JA						
Date / time		04/04/2017						
Calibrator	RPS ID	15						
	Manufacturer / Model	RION NC-74						
	Serial Number	110090						
	Date last verification	17/11/2017						
	Reference Level	94 dB						
Meter Reading								
94 dB								
Photographs of Measurement Location								
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))								
<p>The equipment was located on a grass verge approximately 2.5 m from the curb of the adjacent A4244. The surrounding area was mainly farmland with a number of farm buildings on the opposite side of the road approximately 20 m away.</p>								
Observations Log								
Period	Time	Description of sound environment (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)	Weather					
			Wind Speed (m/s)	Wind Direction	Temp. (degrees C)	Precipitation	Fog	Ground cover (Wet / Frozen / Snow)
Day	11:29	Local and distant road traffic. Birds. Nearby agricultural activity.	2	NW	12	-	-	-
Day	14:42	Local and distant road traffic. Birds. Nearby agricultural activity.	0	N/A	-	-	-	-
Day	16:19	Local and distant road traffic. Birds. Nearby agricultural activity.	1.5	N	11	-	-	-

(Unattended Baseline Survey)

Sound Level Survey Record

Location			LT_S (Unit 6)											
Purpose of Monitoring			Baseline											
Relevant Guidance / Standard			BS 7445-1:2003 / BS 7445-2:1991 / BS 4142:2014 / BS 8233:2014											
Sound Measurement System														
RPS ID	Manufacturer / Model		Serial Number		Last Lab Verification									
N/A	B&K 2250		3007673		15/02/2017									
Microphone Height	Measurement Interval	Dynamic Range	Time Weighting	Frequency Weighting	Façade / Freefield	Photo?								
1.2 m	15 minutes	20-140 dB	F	A	Freefield	Y								
			START		END									
Personnel			RM		RM									
Date / time			28/03/2017		12/04/2017									
Calibration	RPS ID		N/A		N/A									
	Manufacturer / Model		B&K 4231		B&K 4231									
	Serial Number		3012379		3012379									
	Date last verification		15/02/2017		15/02/2017									
	Reference level		94		94									
	Deviation		0.01		0.05									
Weather			Set-up				Collection							
	Wind speed (m/s)		>3				<3							
	Cloud cover (100%= 8 oktas)		7				4							
	Likely temp. inversion / Precipitation / Fog / Wet ground / Frozen ground / Snow cover? (tick boxes)		TI	P	F	W	Fr	Sn	TI	P	F	W	Fr	Sn
						✓								
	Subjective description / additional details		Light breeze				Light breeze, dry.							
Photographs of Measurement Location														
 														
Description of site (location of equipment, general surroundings, nature of ground between NSR and sound source(s) (hard/ soft ground, topography, intervening features, reflecting surfaces))														
An open and elevated position between farm buildings and residential property, approx. 40m from side of Lleifor and 80m from nearest shed.														
Description of sound environment at start of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)														
Distant road traffic. Bangs and thuds from nearby quarry/landfill. Noise from nearby haulage/container business i.e. diesel vehicles, jet wash, moving containers. Trees rustling. Birds.														
Description of sound environment at end of survey (principal environmental and natural sound sources, which sources are dominant, character of the sound environment cf. to the character of the new source)														
Trees rustling, bird song.														

Appendix C – Results Summary Tables & Time History Plots

Anglesey

LT_A - LT_M

Long Term Global Data - Full Period				
LT Location	Start Date	End Date	Ambient, dB L _{Aeq, T}	Background, dB L _{A90, T}
A	28/03/2017	12/04/2017	50	26
B	28/03/2017	12/04/2017	51	27
C	06/04/2017	12/04/2017	50	23
D	28/03/2017	12/04/2017	48	24
E	30/03/2017	07/04/2017	51	23
F	29/03/2017	12/04/2017	49	25
H (Week 1)	28/03/2017	06/04/2017	48	24
H (Week 2)	06/04/2017	12/04/2017	48	21
I	29/03/2017	12/04/2017	45	21
J (Week 1)	30/03/2017	06/04/2017	51	26
J (Week 2)	06/04/2017	12/04/2017	48	25
K (Week 1)	28/03/2017	05/04/2017	60	32
K (Week 2)	06/04/2017	12/04/2017	59	30
L	29/03/2017	12/04/2017	49	27
M	29/03/2017	06/04/2017	49	32

LT_N

Long Term Global Data - Full Period				
LT Location	Start Date	End Date	Ambient, dB L _{Aeq, T}	Background, dB L _{A90, T}
LT_N	29/03/2017	30/03/2017	55	44
	30/03/2017	31/03/2017	50	40
	31/03/2017	01/04/2017	47	31
	01/04/2017	02/04/2017	46	33
	02/04/2017	03/04/2017	46	29
	03/04/2017	04/04/2017	48	33
	04/04/2017	05/04/2017	48	36
	05/04/2017	06/04/2017	47	35
	06/04/2017	07/04/2017	46	28
	07/04/2017	08/04/2017	46	34
	08/04/2017	09/04/2017	47	31
	09/04/2017	10/04/2017	46	31
	10/04/2017	11/04/2017	47	32
	11/04/2017	12/04/2017	47	36

LT_O

Long Term Global Data - Full Period				
LT Location	Start Date	End Date	Ambient, dB L _{Aeq, T}	Background, dB L _{A90, T}
LT_O	29/03/2017	30/03/2017	49	39
	30/03/2017	31/03/2017	50	38
	31/03/2017	01/04/2017	45	26
	01/04/2017	02/04/2017	41	32
	02/04/2017	03/04/2017	49	25
	03/04/2017	04/04/2017	47	29
	04/04/2017	05/04/2017	45	36
	05/04/2017	06/04/2017	44	34
	06/04/2017	07/04/2017	44	28
	07/04/2017	08/04/2017	43	32
	08/04/2017	09/04/2017	45	29
	09/04/2017	10/04/2017	44	31
	10/04/2017	11/04/2017	44	31
	11/04/2017	12/04/2017	56	30

LT_A

Operational Hours

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_A						
Range	39 - 60	30 - 50	29 - 52	20 - 45	19 - 54	18 - 45
Log Average	48	40	44	35	42	33
Average	47	38	41	31	35	28
St dev	3	3	6	6	8	7
25th percentile	45	36	37	26	29	23
50th percentile	47	38	41	31	34	28
75th percentile	49	40	46	36	40	34

Construction Hours

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_A						
Range	40 - 60	30 - 50	29 - 56	20 - 45	19 - 54	18 - 45
Log Average	49	40	46	36	42	33
Average	48	39	43	34	35	28
St dev	3	3	5	6	8	7
25th percentile	46	37	39	30	29	23
50th percentile	47	39	44	35	34	28
75th percentile	49	41	47	38	40	34

ST_A1

Associated Long Term Location	Location ID	Period	Duration	Time		L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
				Start	End				
LT_A	ST_A1	Day	15 minutes	08:42	08:57	55	78	37	51
		Day	15 minutes	11:53	12:08	56	78	39	53
		Day	15 minutes	14:25	14:40	55	84	40	54
		Evening	15 minutes	20:33	20:48	38	59	32	41
		Night	15 minutes	23:36	23:51	44	66	24	44

ST_A2

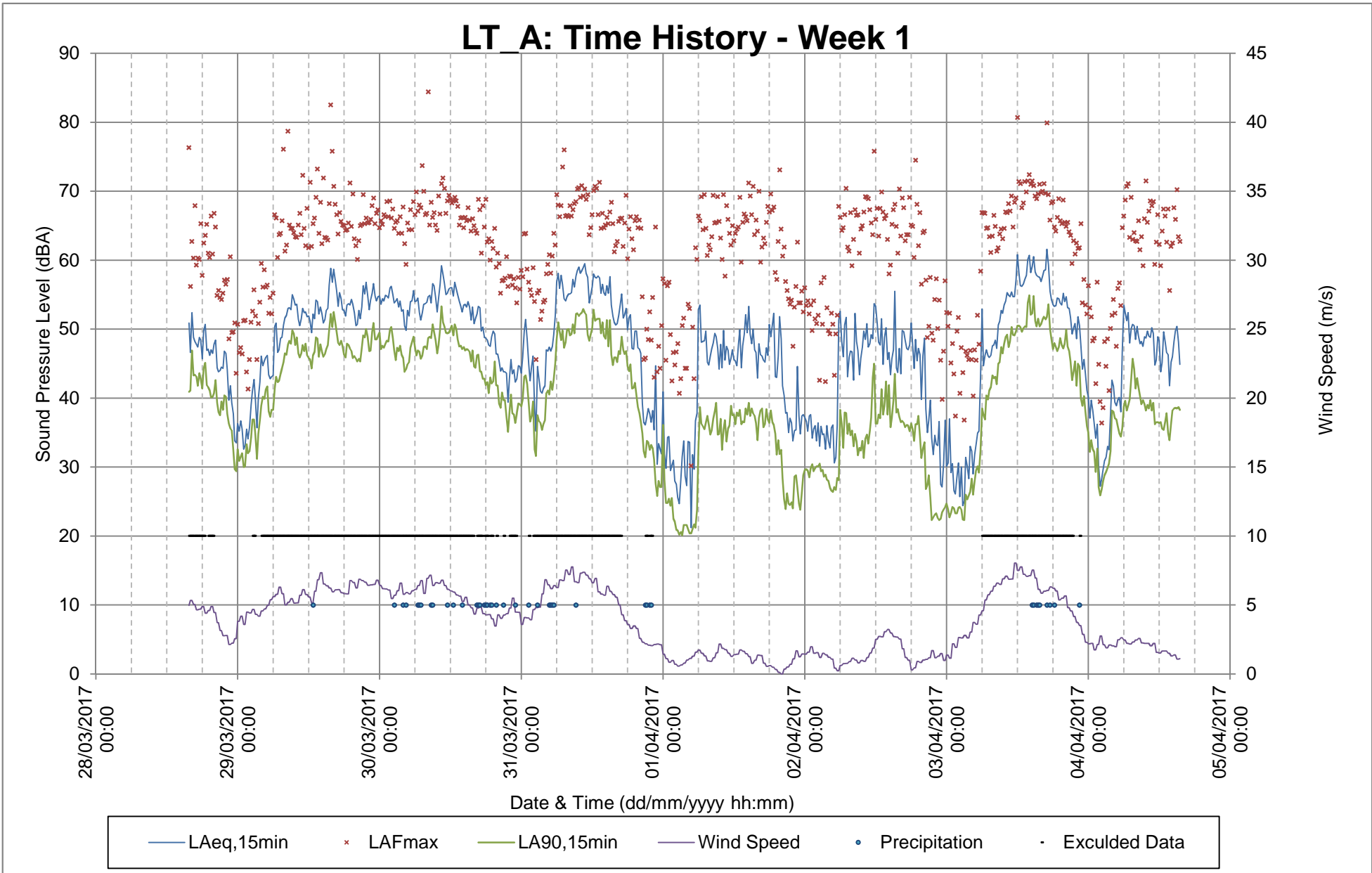
Associated Long Term Location	Location ID	Period	Duration	Time		L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
				Start	End				
LT_A	ST_A2	Day	15 minutes	08:59	09:14	43	66	32	45
		Day	15 minutes	12:09	12:24	45	67	34	47
		Day	15 minutes	14:42	14:57	49	73	35	47
		Evening	15 minutes	20:50	21:05	39	61	28	41
		Night	15 minutes	23:52	00:07	35	60	19	31

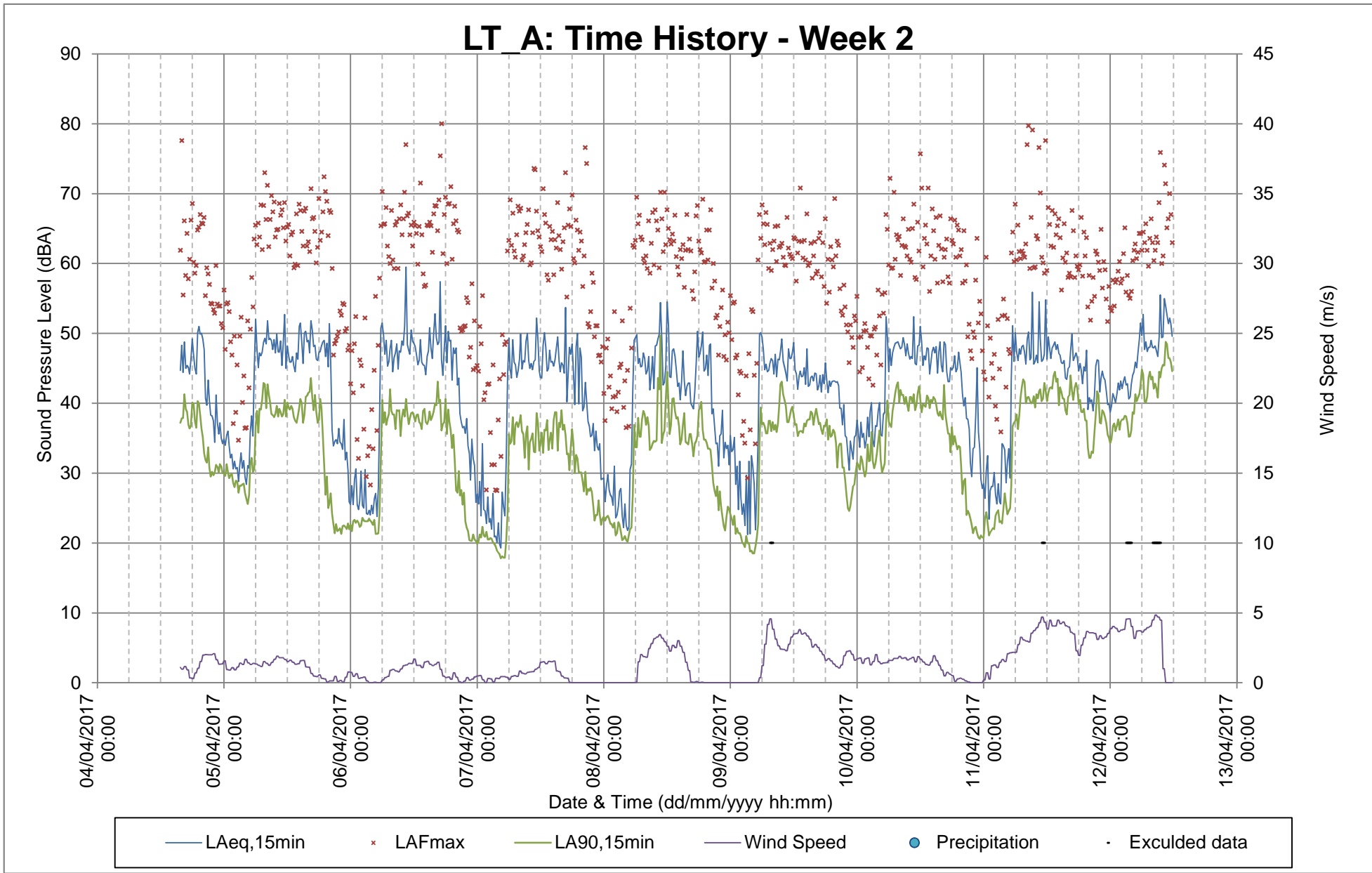
ST_A3

Associated Long Term Location	Location ID	Period	Duration	Time		L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
				Start	End				
LT_A	ST_A3	Day	15 minutes	09:22	09:38	56	79	34	58
		Day	15 minutes	12:09	12:24	57	81	36	59
		Day	15 minutes	14:42	14:57	55	80	34	59
		Evening	15 minutes	20:50	21:05	46	68	30	45
		Night	15 minutes	23:52	00:07	34	60	20	31

ST_A4 (Traffic)

Associated Long Term Location	Location ID	Period	Duration	Time		L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
				Start	End				
LT_A	ST_A4 (Traffic)	Day	15 minutes	11/04/2017 09:22	11/04/2017 09:38	57	78	35	61
		Day	15 minutes	11/04/2017 12:09	11/04/2017 12:24	56	77	35	58
		Day	15 minutes	11/04/2017 14:42	11/04/2017 14:57	57	82	32	58





LT_B

Operational Hours

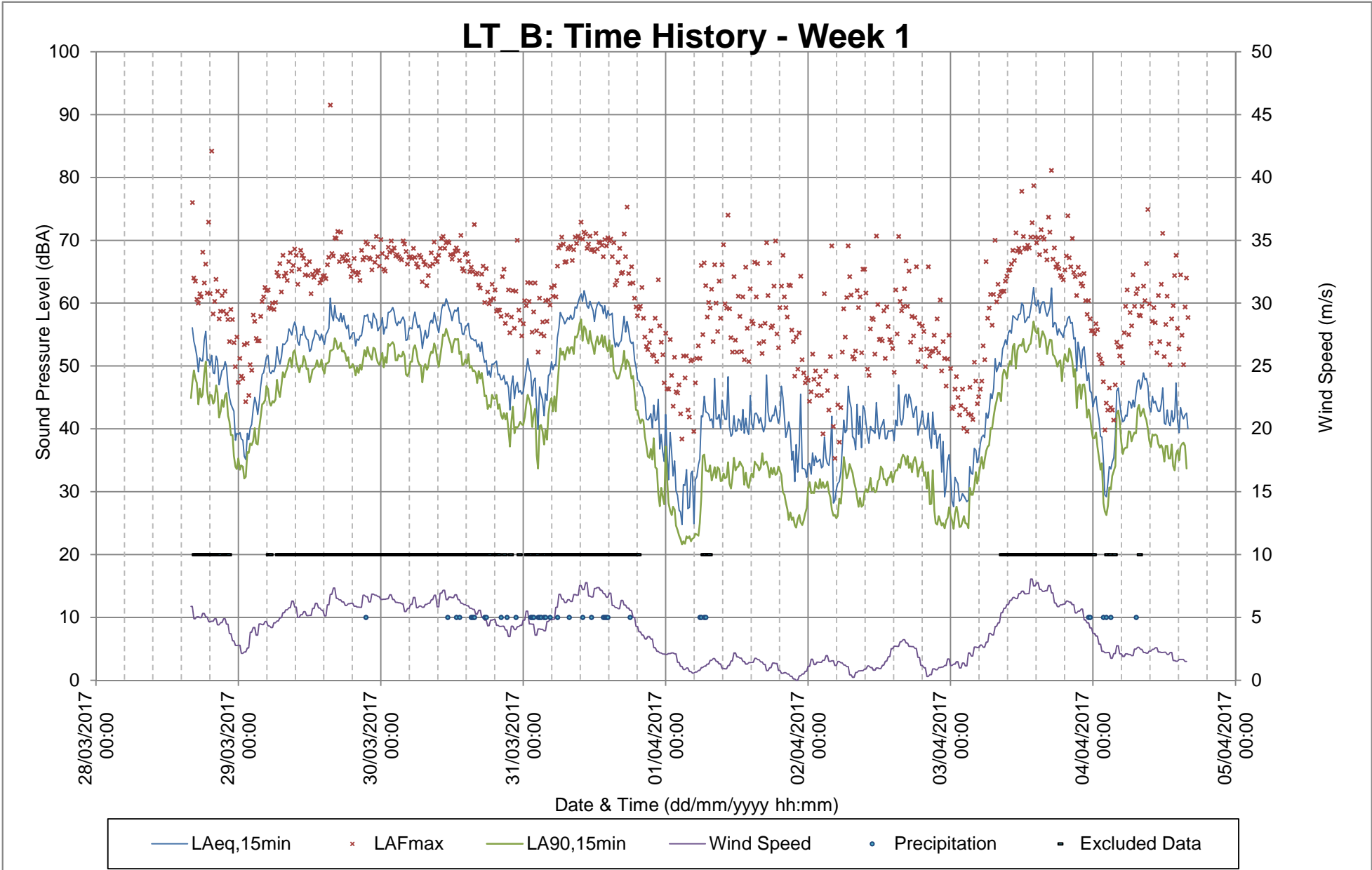
	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_B						
Range	37 - 61	28 - 46	28 - 55	19 - 44	19 - 56	17 - 45
Log Average	46	37	43	35	41	35
Average	43	36	40	31	35	29
St dev	4	4	5	6	7	7
25th percentile	41	33	38	26	29	23
50th percentile	43	35	40	31	35	29
75th percentile	45	38	43	35	41	35

Construction Hours

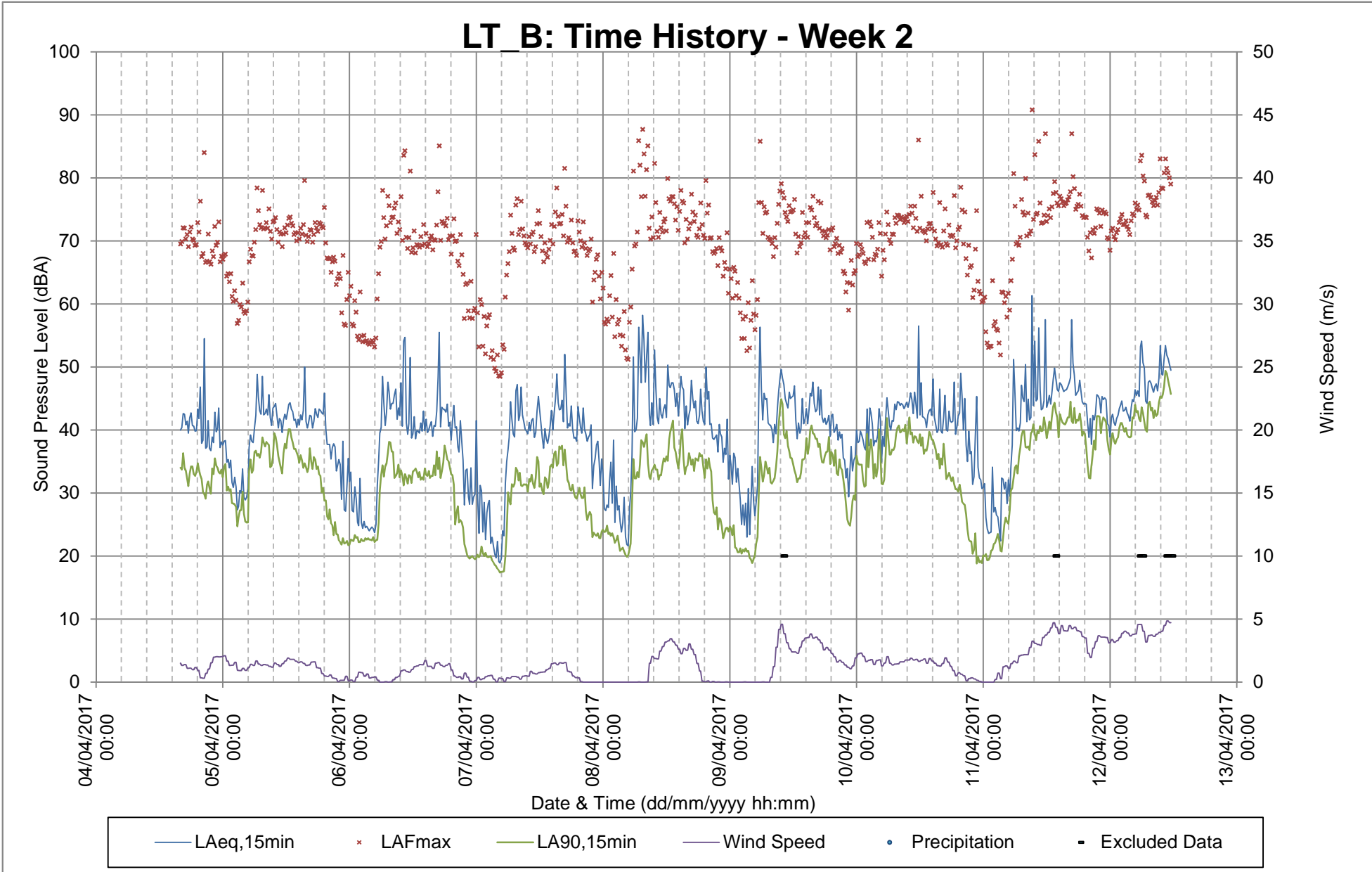
	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_B						
Range	37 - 61	29 - 46	28 - 55	19 - 44	19 - 56	17 - 45
Log Average	46	38	43	35	41	35
Average	44	36	41	32	35	29
St dev	4	4	4	5	7	7
25th percentile	41	33	39	29	29	23
50th percentile	43	36	41	33	35	29
75th percentile	46	39	44	36	41	35

ST_B1

Associated Long Term Location	Location ID	Period	Duration	Time		L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
				Start	End				
LT_B	ST_B1	Day	15 minutes	09:57	10:12	56	80	37	57
		Day	15 minutes	13:05	13:20	46	67	36	49
		Day	15 minutes	15:38	15:53	48	67	37	52
		Evening	15 minutes	21:31	21:46	49	70	35	50
		Night	15 minutes	00:30	00:45	37	61	21	33



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B *h'otoÚ())**e

LT_C

Operational Hours

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_C						
Range	37 - 65	30 - 47	24 - 50	21 - 40	22 - 71	19 - 44
Log Average	49	37	41	32	51	33
Average	46	36	37	29	34	27
St dev	4	3	7	5	10	7
25th percentile	43	33	32	23	26	22
50th percentile	46	35	39	30	31	24
75th percentile	48	38	41	33	42	35

Construction Hours

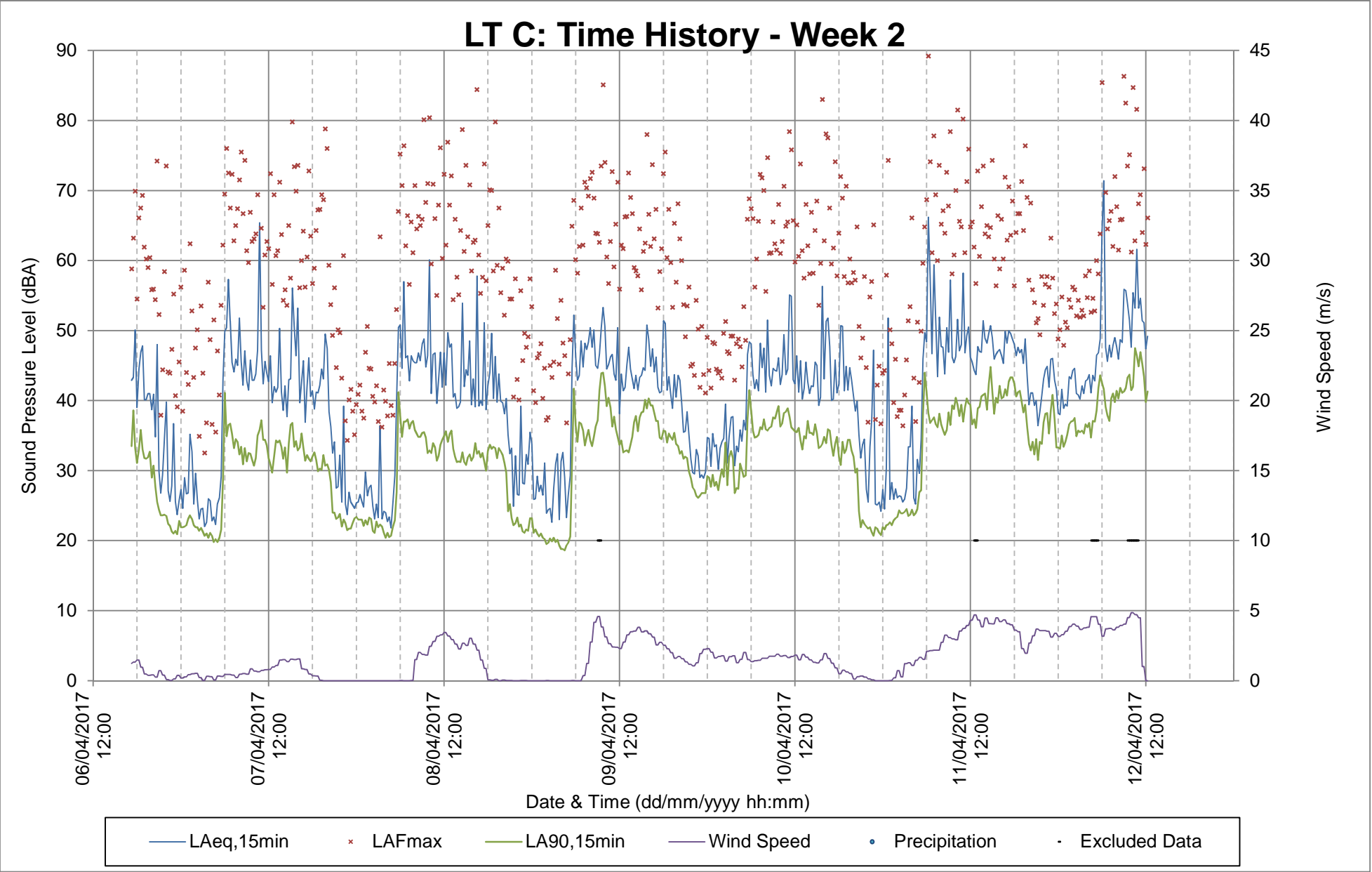
	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_C						
Range	37 - 65	30 - 47	24 - 58	21 - 44	22 - 71	19 - 44
Log Average	50	38	45	34	51	33
Average	46	36	40	31	34	27
St dev	5	4	7	5	10	7
25th percentile	43	33	38	28	26	22
50th percentile	46	36	41	33	31	24
75th percentile	48	39	45	35	42	35

ST_C1

Associated Long Term Location	Location ID	Time							
		Period	Duration	Start	End	L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
LT_C	ST_C1	Day	15 minutes	10:29	10:44	61	82	36	60
		Day	15 minutes	13:23	13:38	64	87	41	61
		Day	15 minutes	15:57	16:12	61	85	36	57
		Evening	15 minutes	19:53	20:09	58	81	31	54
		Night	15 minutes	00:48	01:03	51	78	20	33

ST_C2

Associated Long Term Location	Location ID	Time							
		Period	Duration	Start	End	L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
LT_C	ST_C2	Day	15 minutes	10:47	11:02	50	77	27	50
		Day	15 minutes	13:42	13:57	59	87	25	41
		Day	15 minutes	16:15	16:30	46	69	27	41
		Evening	15 minutes	20:11	20:26	42	67	20	39
		Night	15 minutes	01:05	01:20	23	42	19	26



LT_D**Operational Hours**

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_D						
Range	39 - 61	27 - 58	24 - 54	17 - 46	18 - 57	16 - 50
Log Average	49	39	45	35	43	34
Average	47	35	43	30	35	27
St dev	3	5	5	7	8	8
25th percentile	44	32	39	23	28	21
50th percentile	46	34	43	30	35	24
75th percentile	48	37	46	34	41	35

Construction Hours

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_D						
Range	41 - 61	27 - 58	24 - 55	17 - 46	18 - 57	16 - 50
Log Average	49	40	45	35	43	34
Average	47	36	44	31	35	27
St dev	4	5	4	6	8	8
25th percentile	45	32	42	27	28	21
50th percentile	47	35	44	31	35	24
75th percentile	49	38	46	34	41	35

ST_D1

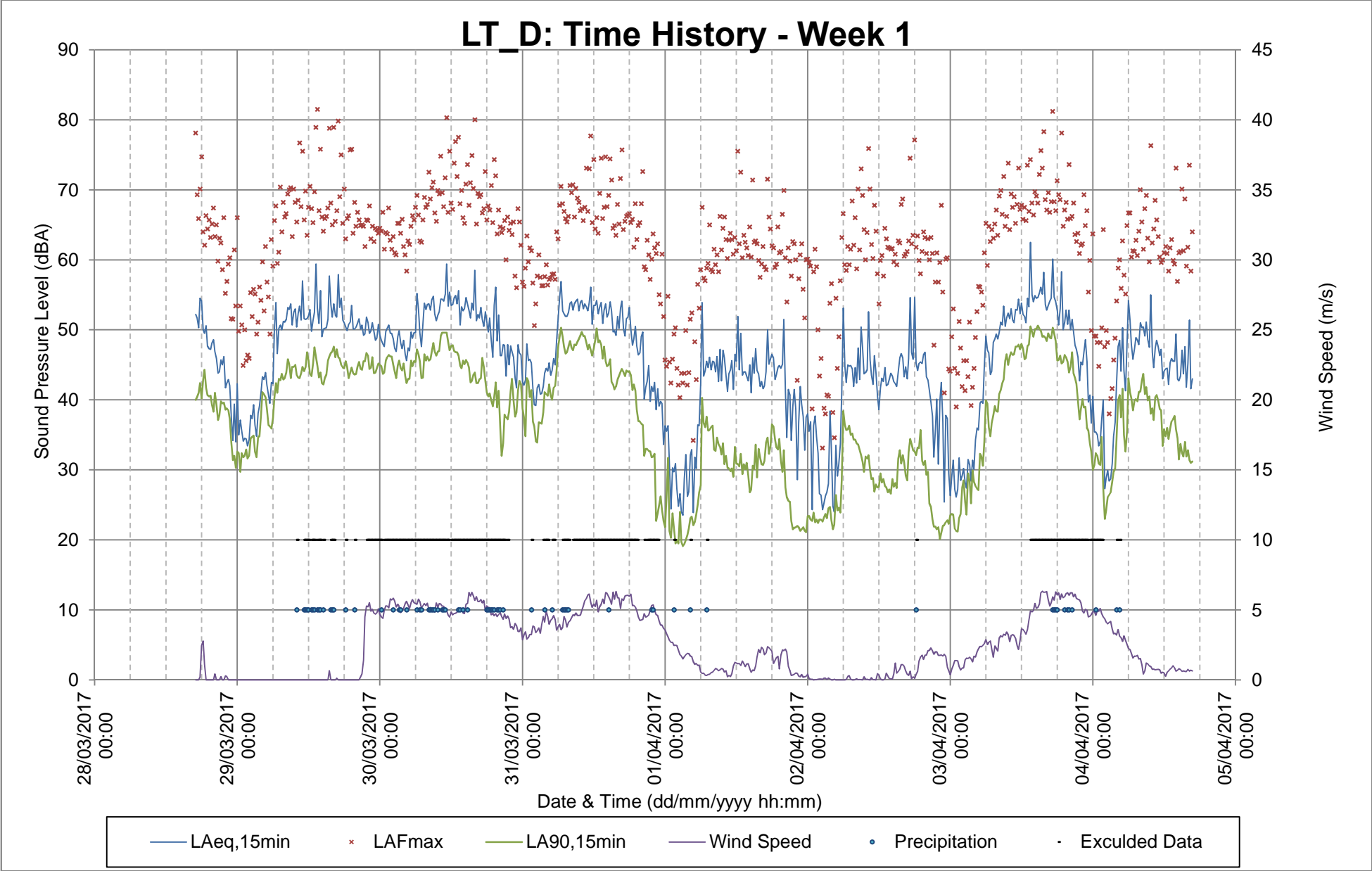
Associated Long Term Location	Location ID	Period	Duration	Time		L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
				Start	End				
LT_D	ST_D1	Day	15 minutes	11:09	11:24	58	81	33	61
		Day	15 minutes	14:01	14:16	56	79	33	55
		Day	15 minutes	16:34	16:49	62	83	35	65
		Evening	15 minutes	19:10	19:25	56	77	31	57
		Night	15 minutes	01:24	01:39	45	69	24	35

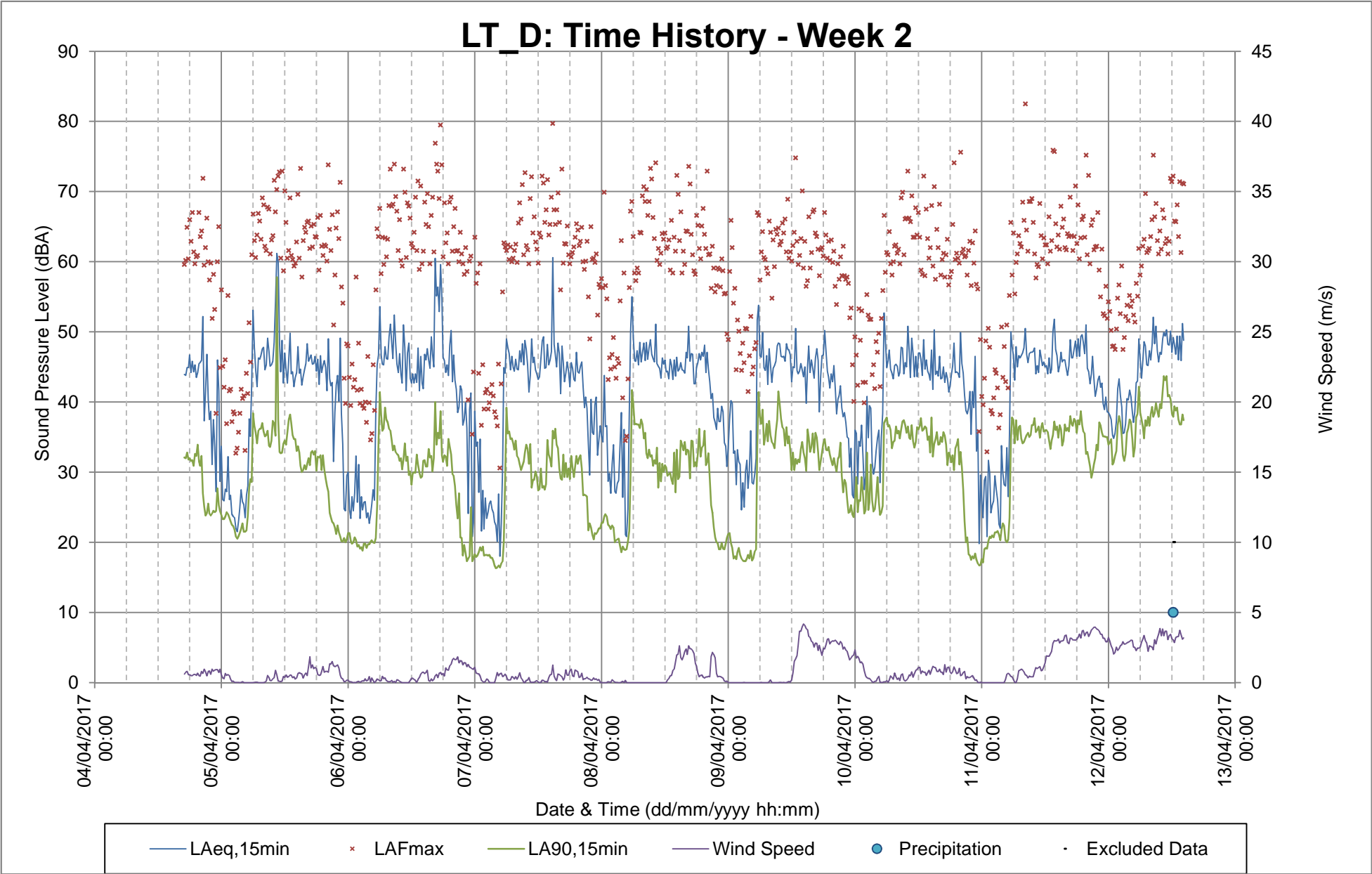
ST_D2

Associated Long Term Location	Location ID	Period	Duration	Time		L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
				Start	End				
LT_D	ST_D2	Day	15 minutes	08:58	09:13	55	73	46	58
		Day	15 minutes	13:09	13:24	59	74	49	63
		Day	15 minutes	16:23	16:38	58	76	48	63
		Evening	15 minutes	19:28	19:45	41	67	28	41
		Night	15 minutes	01:19	01:34	38	58	34	40

ST_D3

Associated Long Term Location	Location ID	Period	Duration	Time		L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
				Start	End				
LT_D	ST_D3	Day	15 minutes	08:34	08:49	64	87	44	63
		Day	15 minutes	12:39	12:54	61	85	47	63
		Day	15 minutes	16:02	16:17	65	84	54	63
		Evening	15 minutes	21:04	21:19	59	85	47	58
		Night	15 minutes	00:57	01:12	40	64	36	42





LT_E

Operational Hours

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_E						
Range	42 - 63	27 - 46	31 - 63	20 - 36	20 - 62	18 - 45
Log Average	52	37	49	30	48	32
Average	50	35	43	28	35	25
St dev	4	4	7	4	10	7
25th percentile	47	33	37	24	28	21
50th percentile	49	35	41	28	33	23
75th percentile	53	37	48	32	38	30

Construction Hours

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_E						
Range	43 - 63	27 - 46	31 - 63	20 - 42	20 - 62	18 - 45
Log Average	52	37	49	33	48	32
Average	50	36	45	30	35	25
St dev	4	4	6	5	10	7
25th percentile	47	33	40	27	28	21
50th percentile	49	35	46	31	33	23
75th percentile	53	37	49	33	38	30

ST_E1

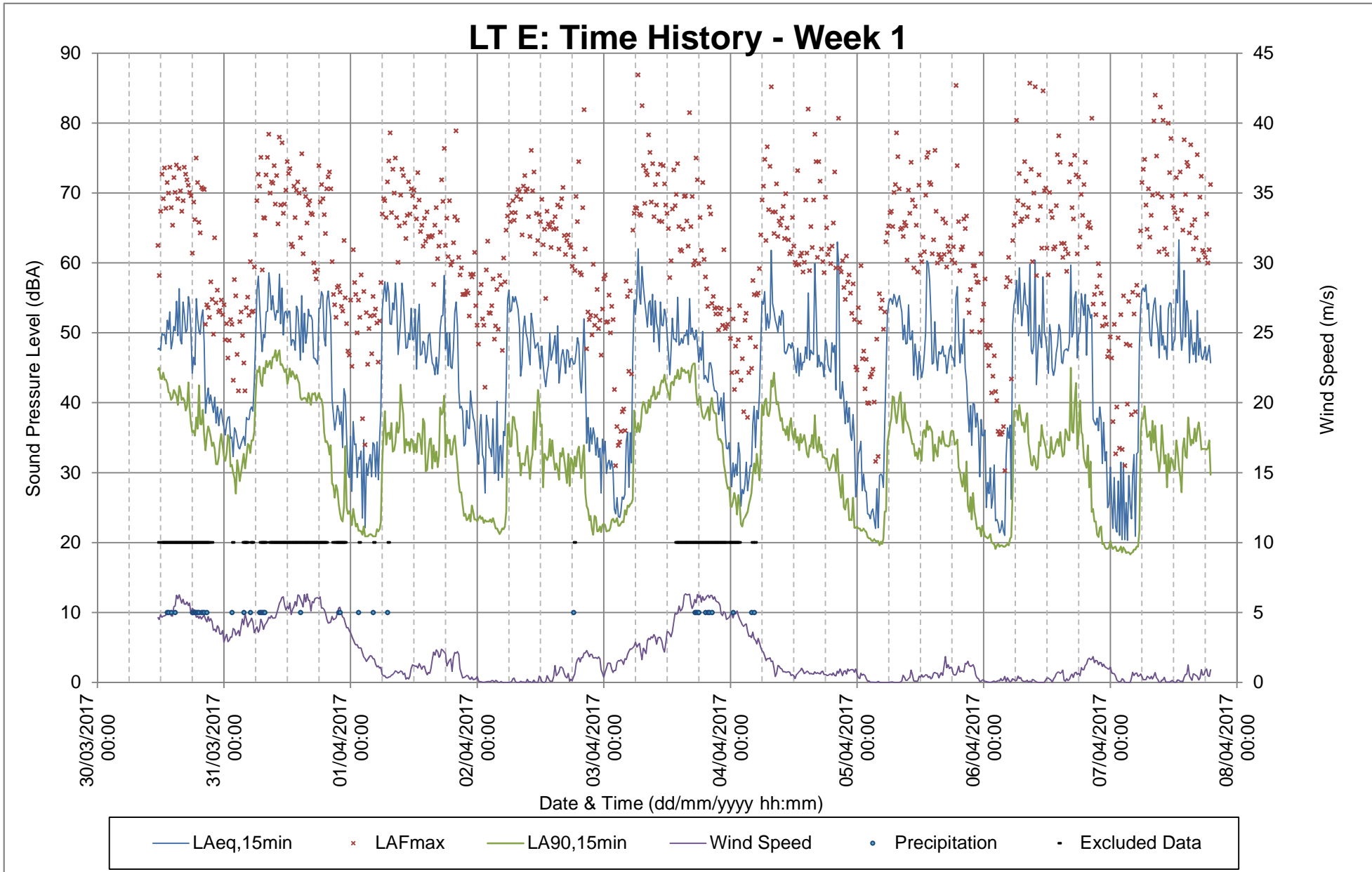
Associated Long Term Location	Location ID	Time							
		Period	Duration	Start	End	L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
LT_E	ST_E1	Day	15 minutes	10:03	10:18	65	94	44	56
		Day	15 minutes	13:31	13:46	61	87	42	55
		Day	15 minutes	16:43	16:58	65	90	44	62
		Evening	15 minutes	20:45	21:00	56	81	32	45
		Night	15 minutes	00:38	00:53	32	55	20	33

ST_E2

Associated Long Term Location	Location ID	Time							
		Period	Duration	Start	End	L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
LT_E	ST_E2	Day	15 minutes	09:40	09:55	64	85	49	66
		Day	15 minutes	13:52	14:07	66	88	52	67
		Day	15 minutes	17:03	17:18	67	87	55	67
		Evening	15 minutes	20:25	20:40	61	85	42	57
		Night	15 minutes	00:17	00:32	39	62	30	42

ST_E3

Associated Long Term Location	Location ID	Time							
		Period	Duration	Start	End	L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
LT_E	ST_E3	Day	15 minutes	12:16	12:31	67	92	44	67
		Day	15 minutes	14:37	14:52	70	97	44	70
		Day	15 minutes	17:05	17:20	75	104	50	70
		Evening	15 minutes	19:00	19:15	66	88	43	66
		Night	15 minutes	23:54	00:09	48	77	28	46



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LT_F

Operational Hours

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_F						
Range	33 - 60	23 - 54	21 - 59	18 - 49	20 - 60	18 - 50
Log Average	50	42	46	38	44	38
Average	45	34	38	31	34	29
St dev	6	7	9	7	9	8
25th percentile	40	29	30	25	27	23
50th percentile	43	31	38	29	32	28
75th percentile	48	37	43	34	40	33

Construction Hours

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_F						
Range	33 - 60	24 - 54	21 - 59	18 - 49	20 - 60	18 - 50
Log Average	50	43	46	37	44	38
Average	45	35	40	31	34	29
St dev	7	8	8	6	9	8
25th percentile	40	29	35	27	27	23
50th percentile	44	31	41	29	32	28
75th percentile	50	39	45	34	40	33

ST_F1

Associated Long Term Location	Location ID	Time							
		Period	Duration	Start	End	L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
LT_F	ST_F1	Day	15 minutes	12:39	12:54	51	76	31	47
		Day	15 minutes	14:56	15:11	43	69	31	44
		Day	15 minutes	17:27	17:42	48	70	36	50
		Evening	15 minutes	19:19	19:34	42	68	28	44
		Night	15 minutes	23:14	23:29	39	66	18	36

ST_F2

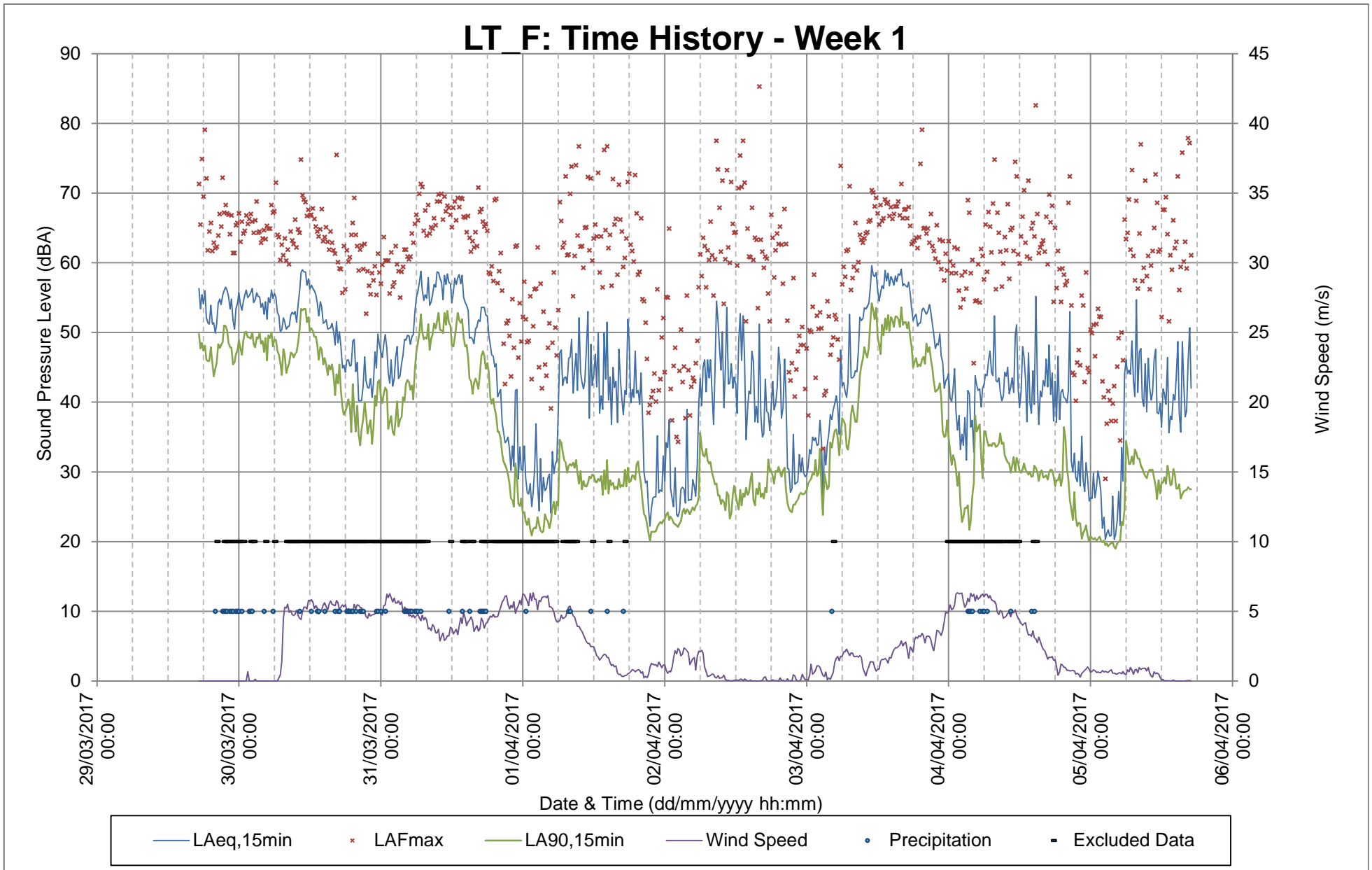
Associated Long Term Location	Location ID	Time							
		Period	Duration	Start	End	L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
LT_F	ST_F2	Day	15 minutes	13:00	13:15	50	74	38	53
		Day	15 minutes	15:20	15:35	55	88	39	52
		Day	15 minutes	17:51	18:06	50	73	39	52
		Evening	15 minutes	19:41	19:56	52	69	40	57
		Night	15 minutes	23:34	23:49	31	59	25	31

ST_F3

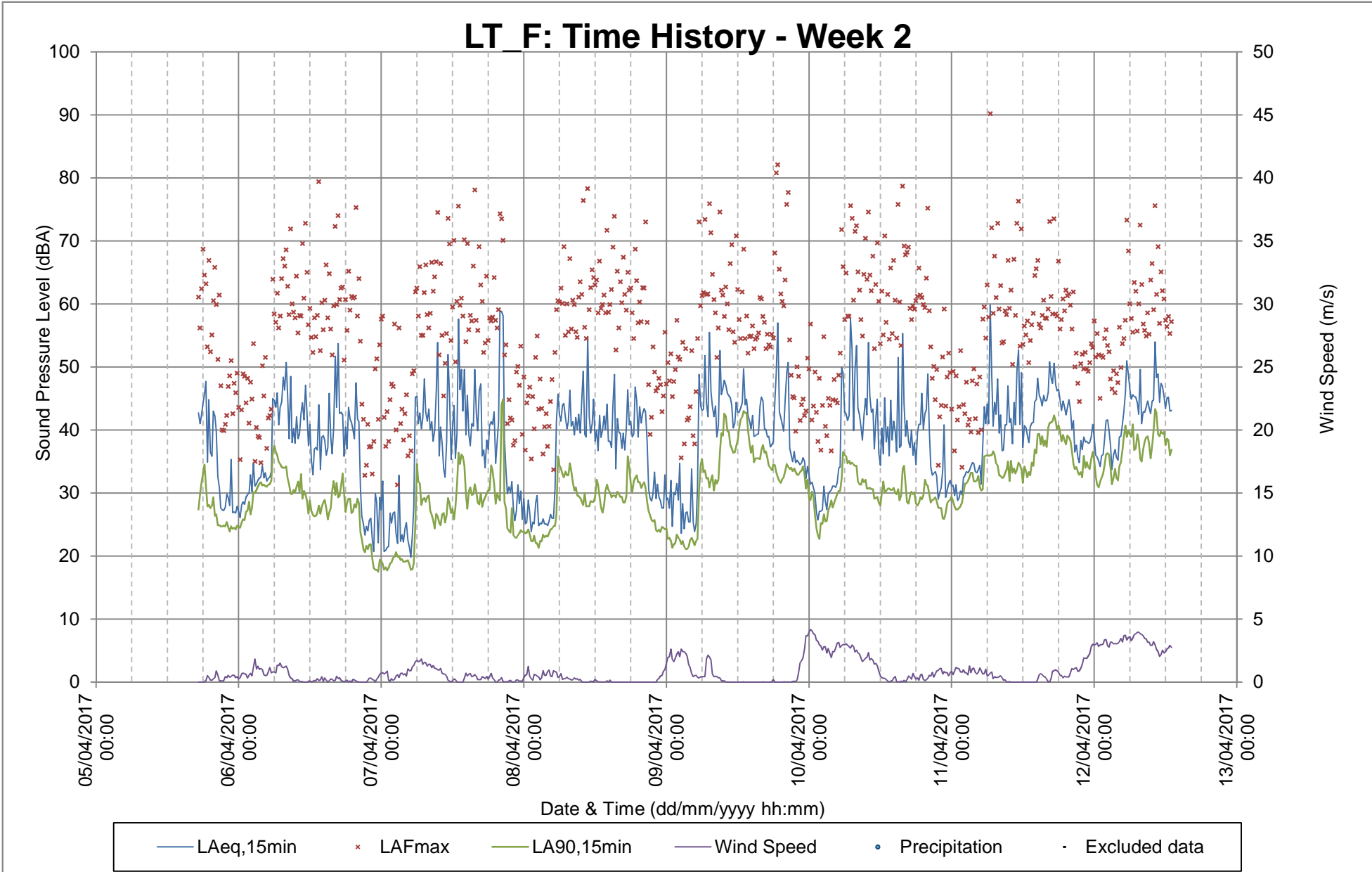
Associated Long Term Location	Location ID	Time							
		Period	Duration	Start	End	L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
LT_F	ST_F3	Day	15 minutes	13:25	13:40	53	77	44	55
		Day	15 minutes	15:46	16:01	51	64	44	54
		Day	15 minutes	18:26	18:41	46	67	39	54
		Evening	15 minutes	20:17	20:32	30	46	23	33
		Night	15 minutes	23:18	23:33	43	70	31	40

ST_F4 (Traffic)

Associated Long Term Location	Location ID	Time							
		Period	Duration	Start	End	L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
LT_F	ST_F4 (Traffic)	Day	15 minutes	06/04/2017 13:25	06/04/2017 13:40	65	89	48	67
		Day	15 minutes	06/04/2017 15:46	06/04/2017 16:01	69	92	49	70
		Day	15 minutes	06/04/2017 18:26	06/04/2017 18:41	71	99	50	70



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LT_G

16 hour day (0700-2300) / 8 hour night (2300-0700)

	Day		Night	
	Ambient, dB L _{Aeq} 16hr	Background, dB L _{A90} 16hr	Ambient, dB L _{Aeq} 8hr	Background, dB L _{A90} 8hr
LT_G				
Range	42 - 57	34 - 41	37 - 41	21 - 30
Log Average	50	37	39	24
Average	47	37	39	23

ST_G1

Associated Long Term Location	Location ID	Time							
		Period	Duration	Start	End	L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
LT_G (IACC)	ST_G1	Day	15 minutes	10:34	10:49	58	80	36	56
		Day	15 minutes	14:18	14:33	61	85	38	55
		Day	15 minutes	17:29	17:44	61	85	43	62
		Evening	15 minutes	20:00	20:15	34	62	27	35
		Night	15 minutes	00:13	00:28	34	62	27	35

LT_H

Operational Hours

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_H						
Range	39 - 68	24 - 48	21 - 53	17 - 46	17 - 51	16 - 45
Log Average	49	38	43	33	40	32
Average	47	35	41	28	34	26
St dev	3	5	6	7	9	7
25th percentile	45	31	39	23	25	20
50th percentile	47	35	42	28	35	24
75th percentile	49	38	44	33	41	33

Construction Hours

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_H						
Range	40 - 68	24 - 48	21 - 55	17 - 46	17 - 51	16 - 45
Log Average	50	38	45	34	40	32
Average	48	35	43	30	34	26
St dev	3	5	5	6	9	7
25th percentile	46	31	41	26	25	20
50th percentile	48	35	44	31	35	24
75th percentile	50	39	46	35	41	33

ST_H1

Associated Long Term Location	Location ID	Period	Duration	Time		L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
				Start	End				
LT_H	ST_H1	Day	15 minutes	11:46	12:01	54	75	34	53
		Day	15 minutes	14:56	15:11	55	79	34	51
		Day	15 minutes	17:59	18:14	54	76	34	52
		Evening	15 minutes	19:19	19:34	52	76	31	45
		Night	15 minutes	23:34	23:49	40	61	34	43

ST_H2

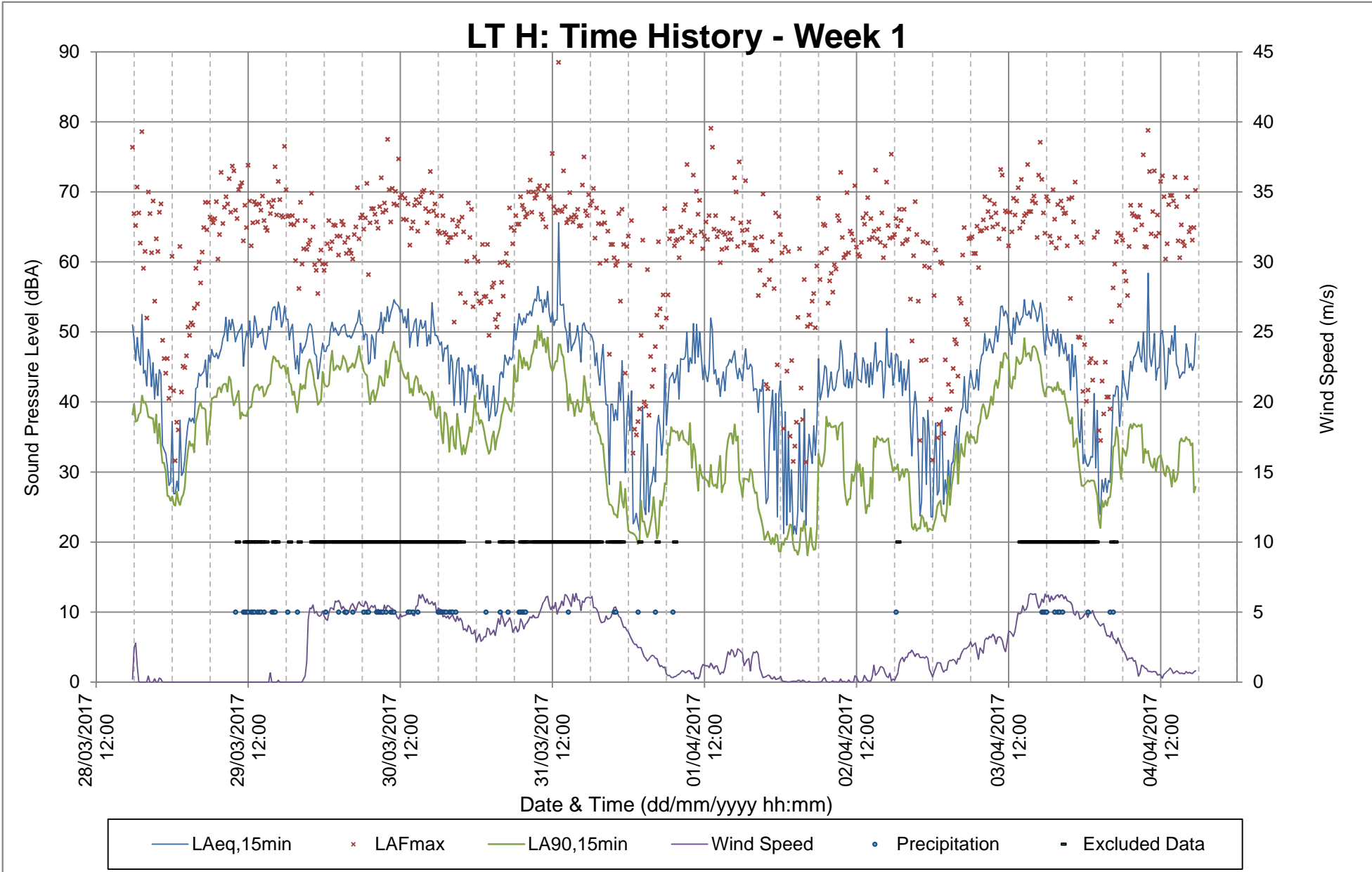
Associated Long Term Location	Location ID	Period	Duration	Time		L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
				Start	End				
LT_H	ST_H2	Day	15 minutes	11:22	11:37	68	94	50	67
		Day	15 minutes	14:38	14:53	64	87	52	66
		Day	15 minutes	17:06	17:21	49	72	34	66
		Evening	15 minutes	19:00	19:15	59	84	47	59
		Night	15 minutes	23:15	23:30	54	73	43	57

ST_H3

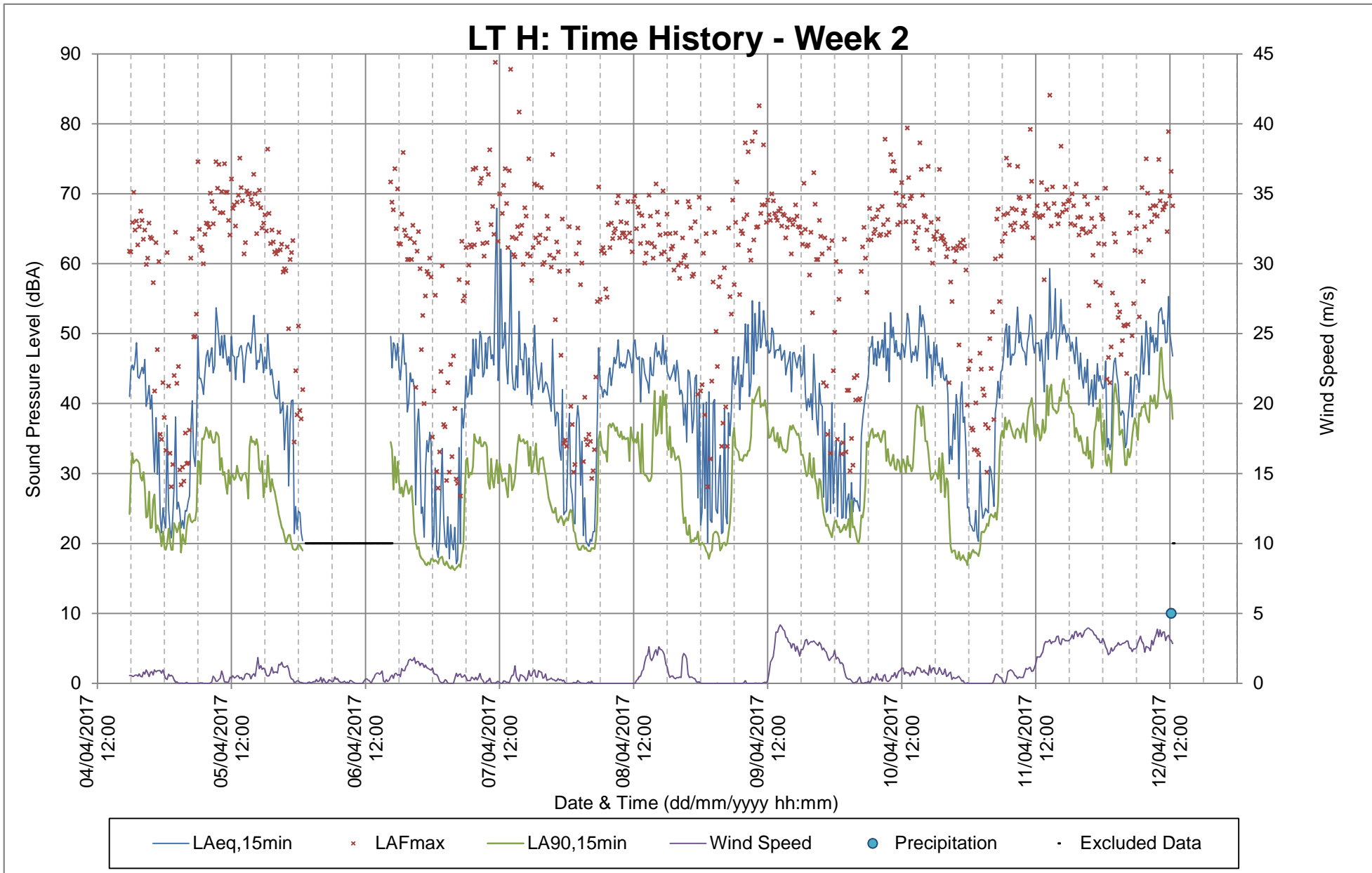
Associated Long Term Location	Location ID	Period	Duration	Time		L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
				Start	End				
LT_H	ST_H3	Day	15 minutes	12:10	12:25	64	89	50	64
		Day	15 minutes	15:16	15:31	77	104	57	71
		Day	15 minutes	17:25	17:40	49	76	37	71
		Evening	15 minutes	19:41	19:56	65	89	56	68
		Night	15 minutes	23:54	00:09	57	83	47	58

ST_H4 (Traffic)

Associated Long Term Location	Location ID	Period	Duration	Time		L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
				Start	End				
LT_H	ST_H4 (Traffic)	Day	15 minutes	11/04/2017 12:10	11/04/2017 12:25	69	91	44	71
		Day	15 minutes	11/04/2017 15:16	11/04/2017 15:31	72	93	43	73
		Day	15 minutes	11/04/2017 17:25	11/04/2017 17:40	73	96	48	73



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LT_I

Operational Hours

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_I						
Range	30 - 70	23 - 48	21 - 59	17 - 45	16 - 49	15 - 46
Log Average	48	37	43	35	39	33
Average	41	32	37	29	30	25
St dev	5	6	7	7	9	8
25th percentile	37	27	32	23	24	19
50th percentile	40	30	36	27	28	22
75th percentile	43	34	42	32	37	29

Construction Hours

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_I						
Range	30 - 70	23 - 48	21 - 59	17 - 45	16 - 49	15 - 46
Log Average	49	38	42	34	39	33
Average	41	32	37	29	30	25
St dev	6	6	6	6	9	8
25th percentile	38	28	34	25	24	19
50th percentile	41	31	38	28	28	22
75th percentile	45	36	41	31	37	29

ST_I1

Associated Long Term Location	Location ID	Period	Duration	Time		L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
				Start	End				
LT_I	ST_I1	Day	15 minutes	11:54	12:10	70	91	35	73
		Day	15 minutes	13:06	13:21	68	87	33	72
		Day	15 minutes	14:11	14:26	69	91	32	73
		Evening	15 minutes	19:26	19:42	66	90	30	66
		Night	15 minutes	00:07	00:22	41	56	34	44

ST_I2

Associated Long Term Location	Location ID	Period	Duration	Time		L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
				Start	End				
LT_I	ST_I2	Day	15 minutes	11:29	11:48	56	84	28	56
		Day	15 minutes	12:45	13:01	51	76	23	53
		Day	15 minutes	13:53	14:08	55	84	25	53
		Evening	15 minutes	19:06	19:21	49	76	20	50
		Night	15 minutes	00:00	00:00	37	64	28	36

ST_I3

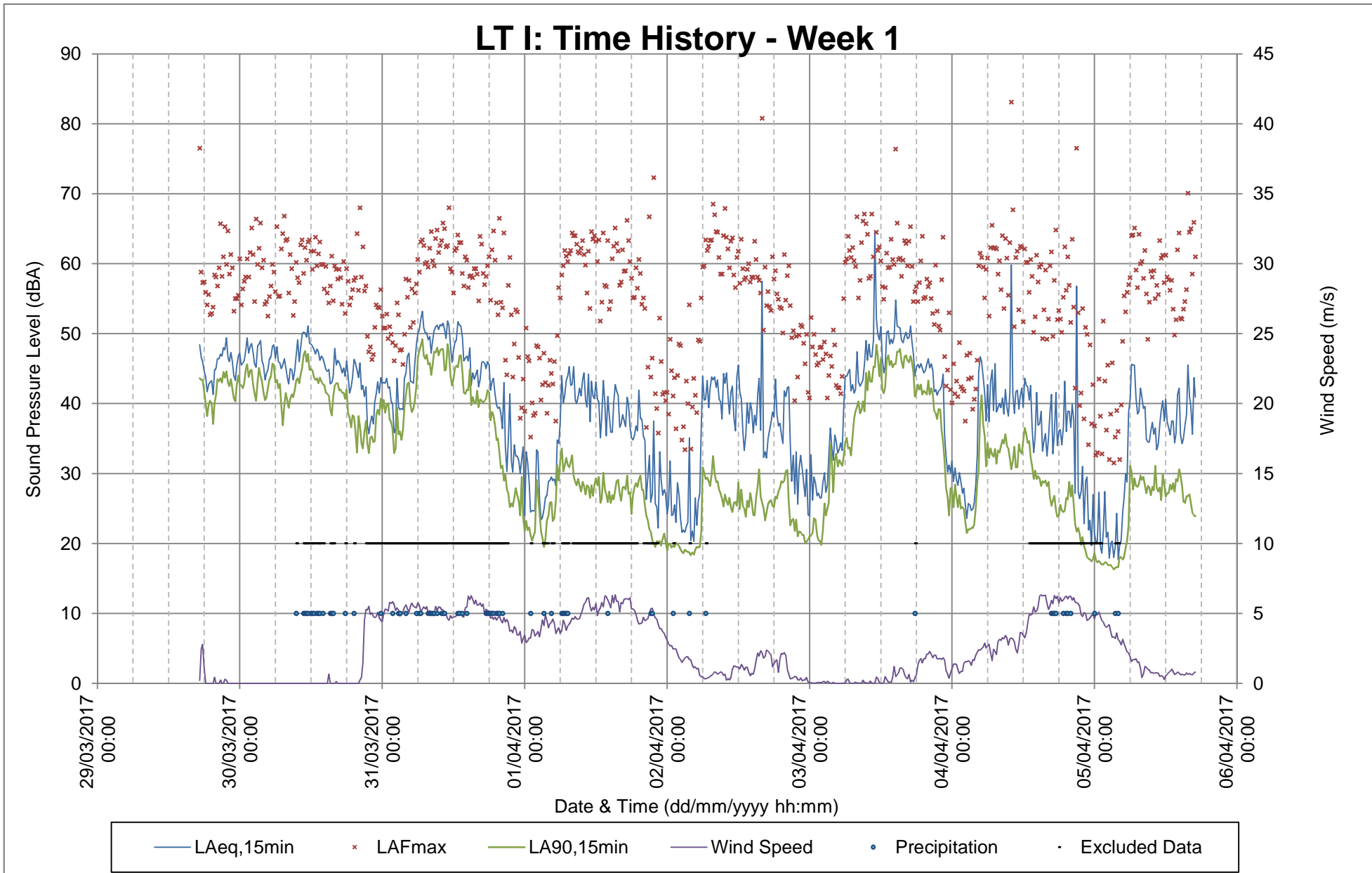
Associated Long Term Location	Location ID	Period	Duration	Time		L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
				Start	End				
LT_I	ST_I3	Day	15 minutes	12:28	12:43	61	91	34	55
		Day	15 minutes	14:12	14:27	56	83	30	56
		Day	15 minutes	15:33	15:59	56	82	29	56
		Evening	15 minutes	20:16	20:31	50	81	20	45
		Night	15 minutes	00:14	00:30	42	68	19	34

ST_I4 (Traffic)

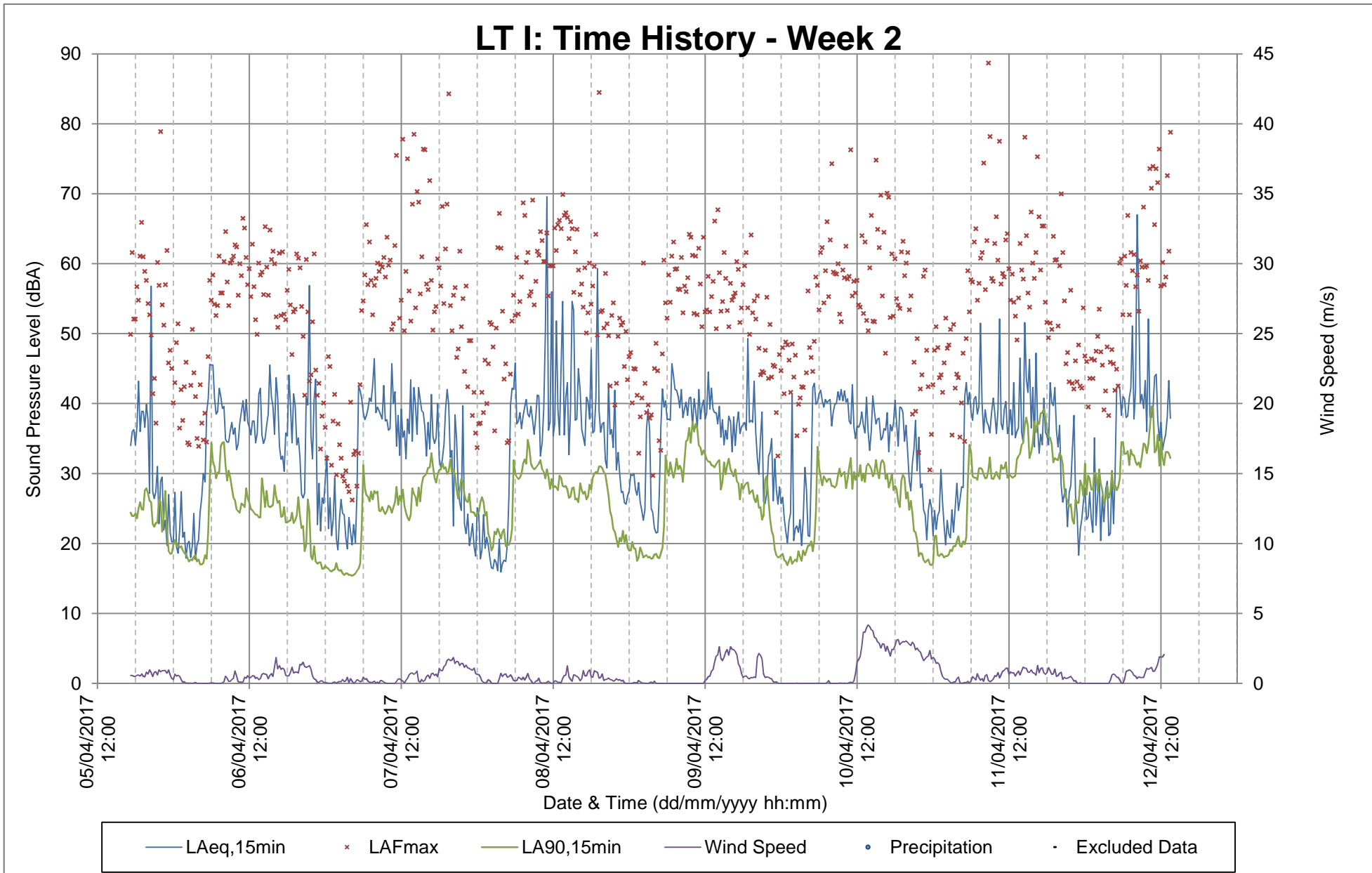
Associated Long Term Location	Location ID	Period	Duration	Time		L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
				Start	End				
LT_I	ST_I4 (Traffic)	Day	15 minutes	06/04/2017 10:51	06/04/2017 11:06	54	75	22	57
		Day	15 minutes	06/04/2017 12:21	06/04/2017 12:37	54	76	23	56
		Day	15 minutes	06/04/2017 13:30	06/04/2017 13:45	57	81	25	56

ST_I5 (Traffic)

Associated Long Term Location	Location ID	Period	Duration	Time		L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
				Start	End				
LT_I	ST_I5 (Traffic)	Day	15 minutes	05/04/2017 12:55	05/04/2017 13:14	56	83	34	58
		Day	15 minutes	05/04/2017 14:35	05/04/2017 14:50	57	80	30	59
		Day	15 minutes	05/04/2017 16:05	05/04/2017 16:23	59	84	33	59



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LT_J

Operational Hours

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_J						
Range	37 - 68	30 - 51	24 - 55	19 - 46	20 - 59	19 - 52
Log Average	51	41	43	33	45	36
Average	47	38	37	29	36	29
St dev	5	5	7	6	9	8
25th percentile	43	34	32	25	28	22
50th percentile	46	36	37	28	34	28
75th percentile	51	41	41	34	44	36

Construction Hours

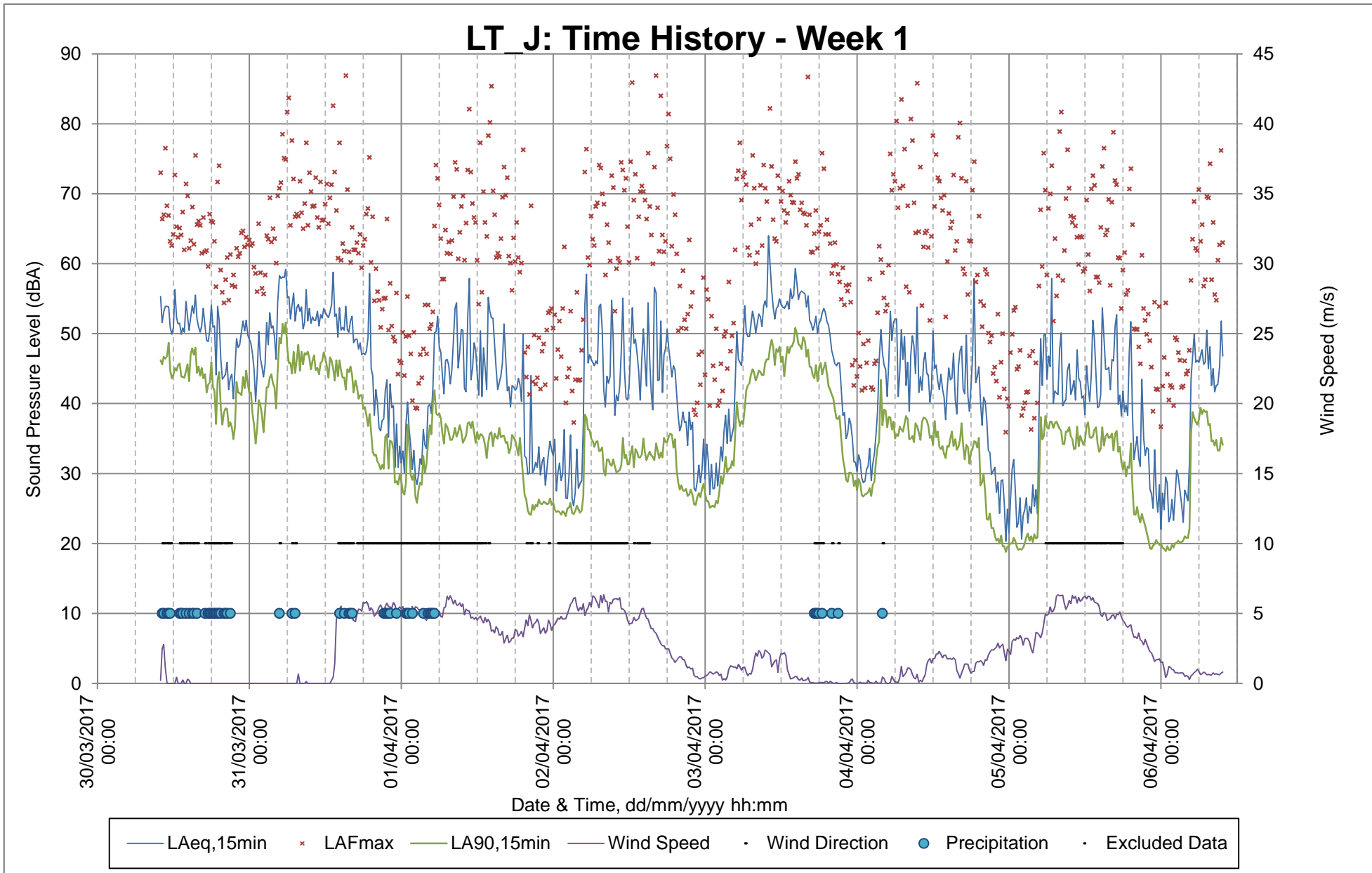
	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_J						
Range	37 - 68	30 - 51	24 - 63	19 - 46	20 - 59	19 - 52
Log Average	52	42	47	35	45	36
Average	47	38	41	32	36	29
St dev	6	5	7	6	9	8
25th percentile	43	34	35	27	28	22
50th percentile	46	37	41	33	34	28
75th percentile	51	43	46	36	44	36

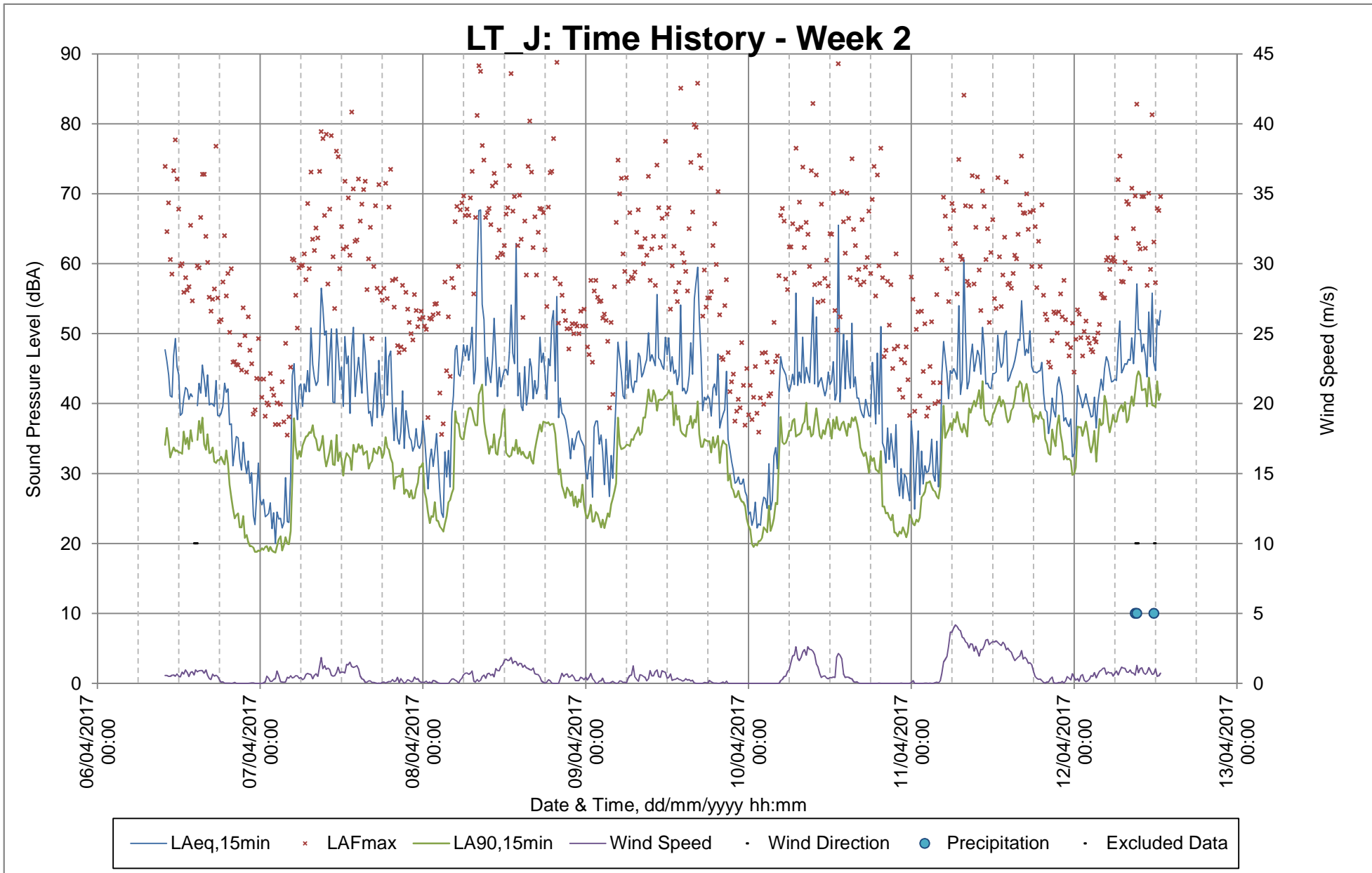
ST_J1

Associated Long Term Location	Location ID	Time							
		Period	Duration	Start	End	LAeq	LAFmax	LA90	LA10
LT_J	ST_J1	Day	15 minutes	11:38	11:53	40	65	31	42
		Day	15 minutes	17:22	17:38	42	62	30	45
		Day	15 minutes	18:27	18:43	40	61	28	41
		Evening	15 minutes	19:33	19:48	43	69	28	44
		Night	15 minutes	23:34	23:49	33	62	19	29

ST_J2

Associated Long Term Location	Location ID	Time							
		Period	Duration	Start	End	LAeq	LAFmax	LA90	LA10
LT_J	ST_J2	Day	15 minutes	12:02	12:17	51	73	23	53
		Day	15 minutes	17:43	17:58	52	76	26	53
		Day	15 minutes	18:47	19:02	51	73	38	53
		Evening	15 minutes	19:54	20:09	48	72	21	45
		Night	15 minutes	23:54	00:10	34	64	19	20





LT_K

Operational Hours

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_K						
Range	47 - 75	32 - 57	26 - 71	25 - 55	27 - 61	24 - 51
Log Average	61	41	57	37	49	35
Average	59	39	55	34	43	33
St dev	3	4	4	4	9	4
25th percentile	58	36	53	31	34	30
50th percentile	60	38	55	34	45	32
75th percentile	61	41	57	37	51	34

Construction Hours

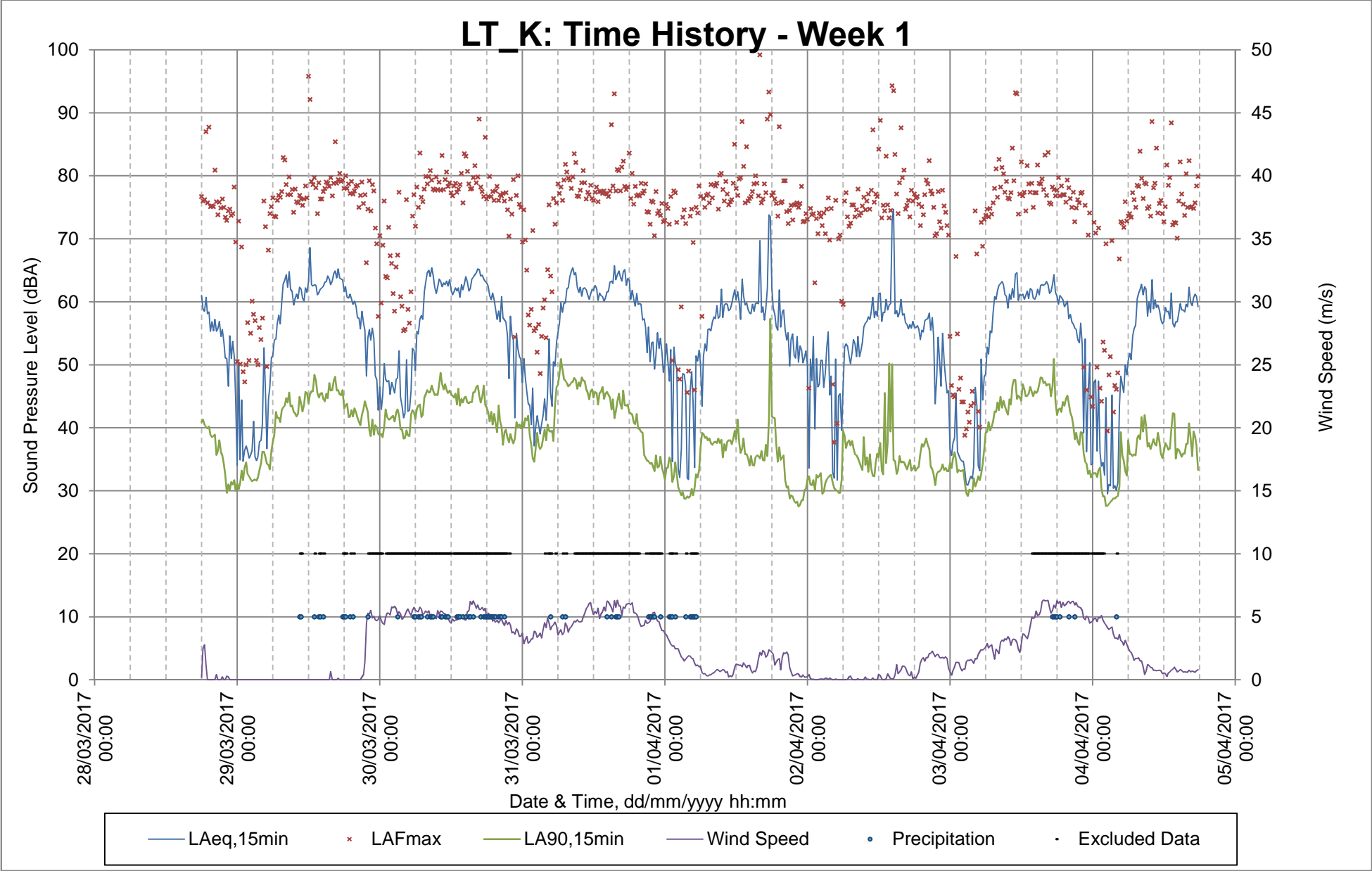
	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_K						
Range	55 - 69	32 - 48	26 - 75	25 - 57	27 - 61	24 - 51
Log Average	61	41	60	39	49	35
Average	60	39	56	35	43	33
St dev	2	4	5	4	9	4
25th percentile	59	37	54	33	34	30
50th percentile	60	38	56	35	45	32
75th percentile	61	41	59	38	51	34

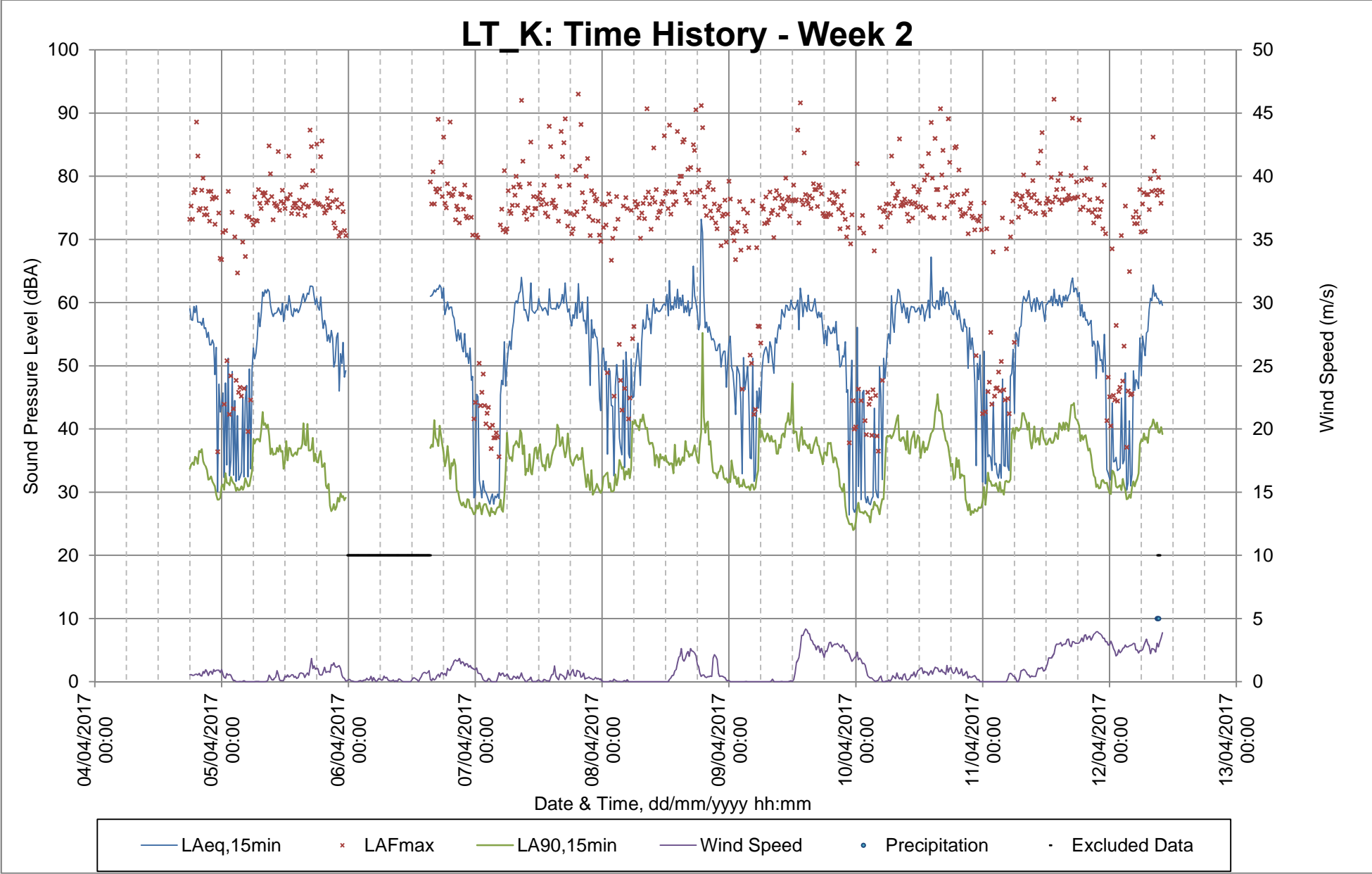
ST_K1

Associated Long Term Location	Location ID	Period	Duration	Time		LAeq	LAFmax	LA90	LA10
				Start	End				
LT_K	ST_K1	Day	15 minutes	11:14	11:29	51	79	34	47
		Day	15 minutes	17:00	17:15	55	91	33	42
		Day	15 minutes	18:03	18:18	48	76	31	41
		Evening	15 minutes	19:07	19:23	50	81	28	44
		Night	15 minutes	23:10	23:26	30	59	22	29

ST_K2

Associated Long Term Location	Location ID	Period	Duration	Time		LAeq	LAFmax	LA90	LA10
				Start	End				
LT_K	ST_K2	Day	15 minutes	13:38	13:53	62	81	49	65
		Day	15 minutes	15:04	15:19	63	83	49	65
		Day	15 minutes	16:32	16:47	63	85	52	65





LT_L

Operational Hours

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_L						
Range	35 - 67	27 - 49	25 - 58	21 - 45	22 - 63	21 - 47
Log Average	51	39	45	34	47	33
Average	47	36	38	31	34	29
St dev	6	4	8	5	9	5
25th percentile	43	33	31	27	28	25
50th percentile	47	36	37	30	30	27
75th percentile	51	40	45	35	37	31

Construction Hours

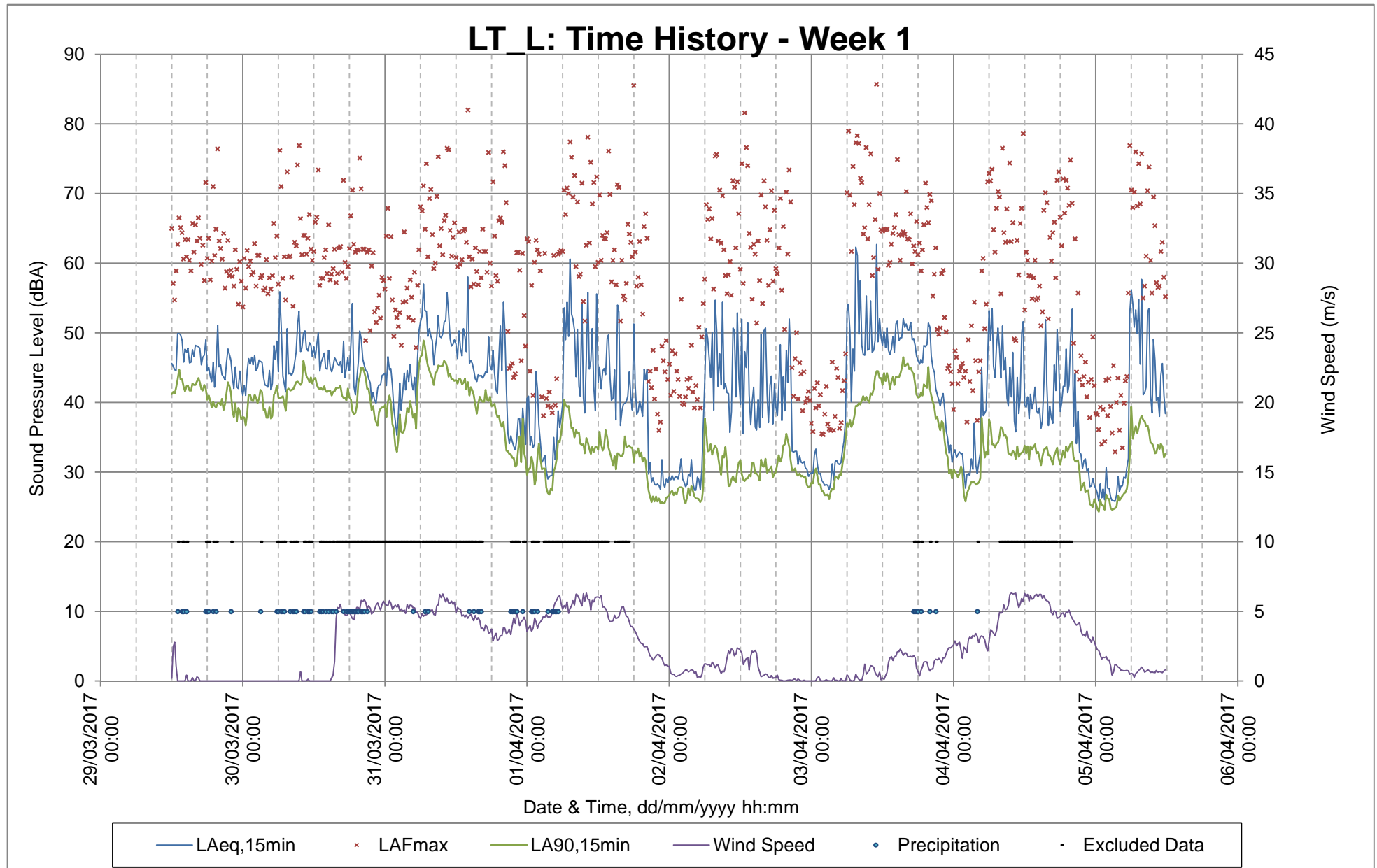
	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_L						
Range	35 - 67	27 - 49	25 - 58	21 - 45	22 - 63	21 - 47
Log Average	52	39	46	34	47	33
Average	48	37	40	32	34	29
St dev	6	4	8	5	9	5
25th percentile	44	34	34	29	28	25
50th percentile	48	37	41	32	30	27
75th percentile	52	41	46	35	37	31

ST_L1

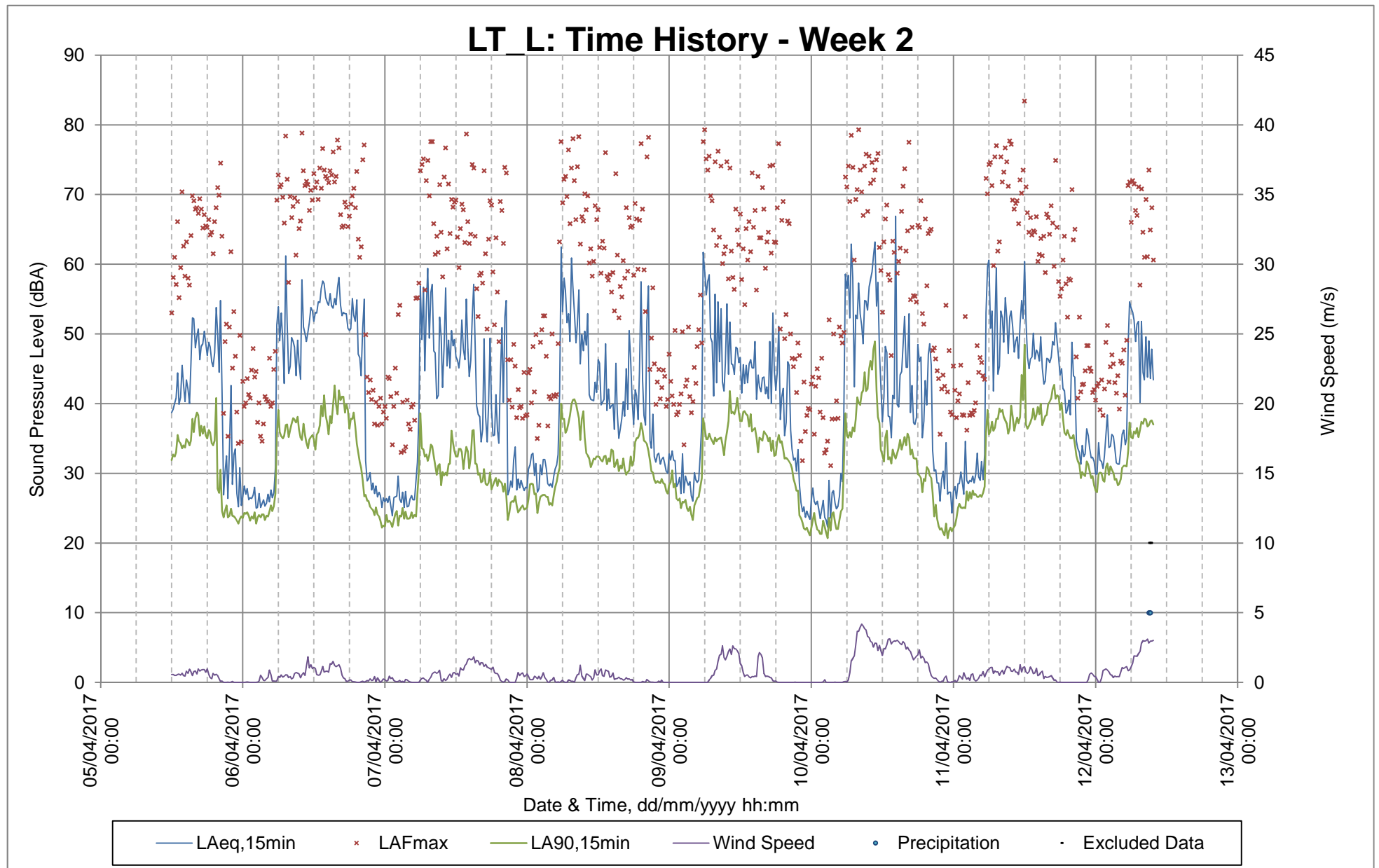
Associated Long Term Location	Location ID	Time							
		Period	Duration	Start	End	L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
LT_L	ST_L1	Day	15 minutes	12:24	12:39	51	72	35	54
		Day	15 minutes	14:44	14:59	49	70	35	52
		Day	15 minutes	16:44	16:59	52	78	36	55
		Evening	15 minutes	20:08	20:23	51	76	33	52
		Night	15 minutes	00:32	00:47	35	57	28	35

ST_L2 (Traffic)

Associated Long Term Location	Location ID	Time							
		Period	Duration	Start	End	L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
LT_L	ST_L2 (Traffic)	Day	15 minutes	12:48	13:03	68	95	40	66
		Day	15 minutes	15:04	15:19	67	91	42	68
		Day	15 minutes	16:25	16:40	70	95	48	68



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LT_M

Operational Hours

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_M						
Range	41 - 58	31 - 51	27 - 51	25 - 48	27 - 53	21 - 47
Log Average	50	45	46	42	44	38
Average	49	41	43	38	39	33
St dev	3	6	7	7	7	7
25th percentile	46	36	40	31	34	27
50th percentile	48	38	46	38	38	32
75th percentile	51	48	48	44	46	39

Construction Hours

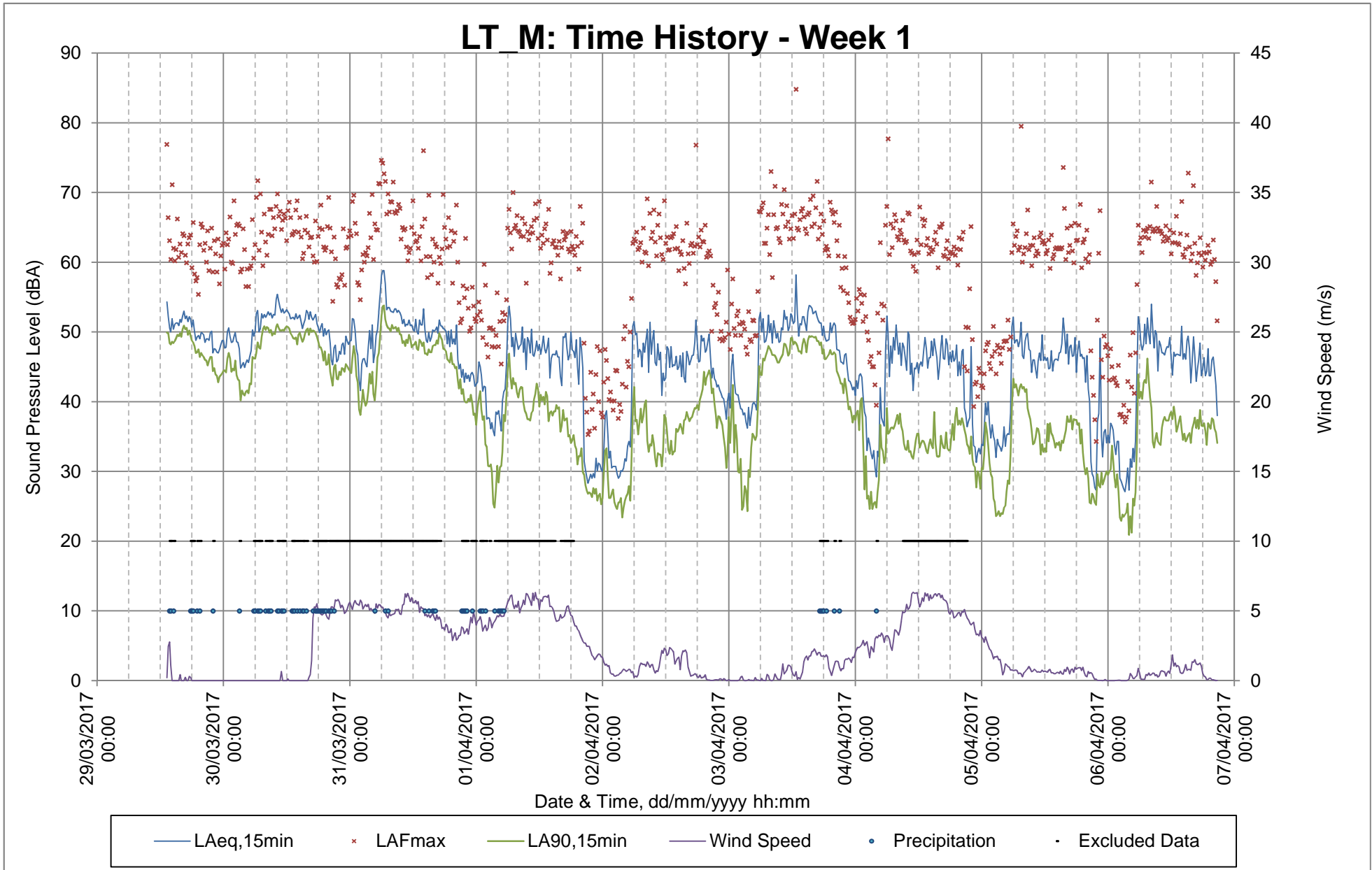
	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_M						
Range	43 - 58	32 - 51	27 - 52	25 - 48	27 - 53	21 - 47
Log Average	50	46	47	41	44	38
Average	49	42	44	37	39	33
St dev	3	6	6	6	7	7
25th percentile	47	36	43	33	34	27
50th percentile	49	42	46	37	38	32
75th percentile	52	49	48	42	46	39

ST_M1

Associated Long Term Location	Location ID	Period	Duration	Time		LAeq	LAFmax	LA90	LA10
				Start	End				
LT_M	ST_M1	Day	15 minutes	13:10	13:25	43	69	40	44
		Day	15 minutes	15:25	15:40	47	72	40	44
		Day	15 minutes	18:33	18:48	46	67	40	48
		Evening	15 minutes	20:30	20:45	43	64	40	42
		Night	15 minutes	00:11	00:26	41	57	40	42

ST_M2

Associated Long Term Location	Location ID	Period	Duration	Time		LAeq	LAFmax	LA90	LA10
				Start	End				
LT_M	ST_M2	Day	15 minutes	13:33	13:48	54	68	48	57
		Day	15 minutes	16:00	16:15	58	79	49	58
		Day	15 minutes	18:52	19:07	54	81	47	58
		Evening	15 minutes	20:53	21:08	50	66	43	52
		Night	15 minutes	23:50	00:05	52	70	43	55



LT_N

Operational Hours

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_N						
Range	39 - 64	32 - 49	32 - 56	27 - 45	27 - 58	23 - 47
Log Average	49	42	45	38	45	38
Average	47	41	43	37	39	33
St dev	3	3	4	4	6	6
25th percentile	45	38	40	35	35	29
50th percentile	47	41	42	37	38	32
75th percentile	50	43	45	39	42	38

Construction Hours

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_N						
Range	39 - 64	34 - 49	32 - 56	27 - 45	27 - 58	23 - 47
Log Average	49	43	46	39	45	38
Average	48	42	44	37	39	33
St dev	3	3	4	3	6	6
25th percentile	46	40	41	36	35	29
50th percentile	48	42	44	37	38	32
75th percentile	50	44	47	40	42	38

LT_O

Operational Hours

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_O						
Range	31 - 82	29 - 50	29 - 59	24 - 41	25 - 54	23 - 49
Log Average	55	39	44	36	43	36
Average	45	38	41	35	38	32
St dev	5	4	5	4	7	6
25th percentile	41	35	38	33	33	27
50th percentile	44	38	41	36	37	31
75th percentile	48	41	44	38	42	37

Construction Hours

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_O						
Range	33 - 82	30 - 50	29 - 59	24 - 48	25 - 54	23 - 49
Log Average	56	40	46	36	43	36
Average	45	39	42	35	38	32
St dev	4	3	5	4	7	6
25th percentile	42	37	39	32	33	27
50th percentile	45	39	41	35	37	31
75th percentile	48	41	44	37	42	37

ST_01

Associated Long Term Location	Location ID	Time		Start	End	LAeq	LAFmax	LA90	LA10
		Period	Duration						
LT_O	ST_01	Day	15 minutes	12:59	13:14	48	72	45	50
		Day	15 minutes	14:23	14:38	50	73	46	50
		Day	15 minutes	17:42	17:57	47	69	42	49
		Evening	15 minutes	19:51	20:06	50	72	41	54
		Night	15 minutes	23:55	00:10	41	55	35	44

ST_02

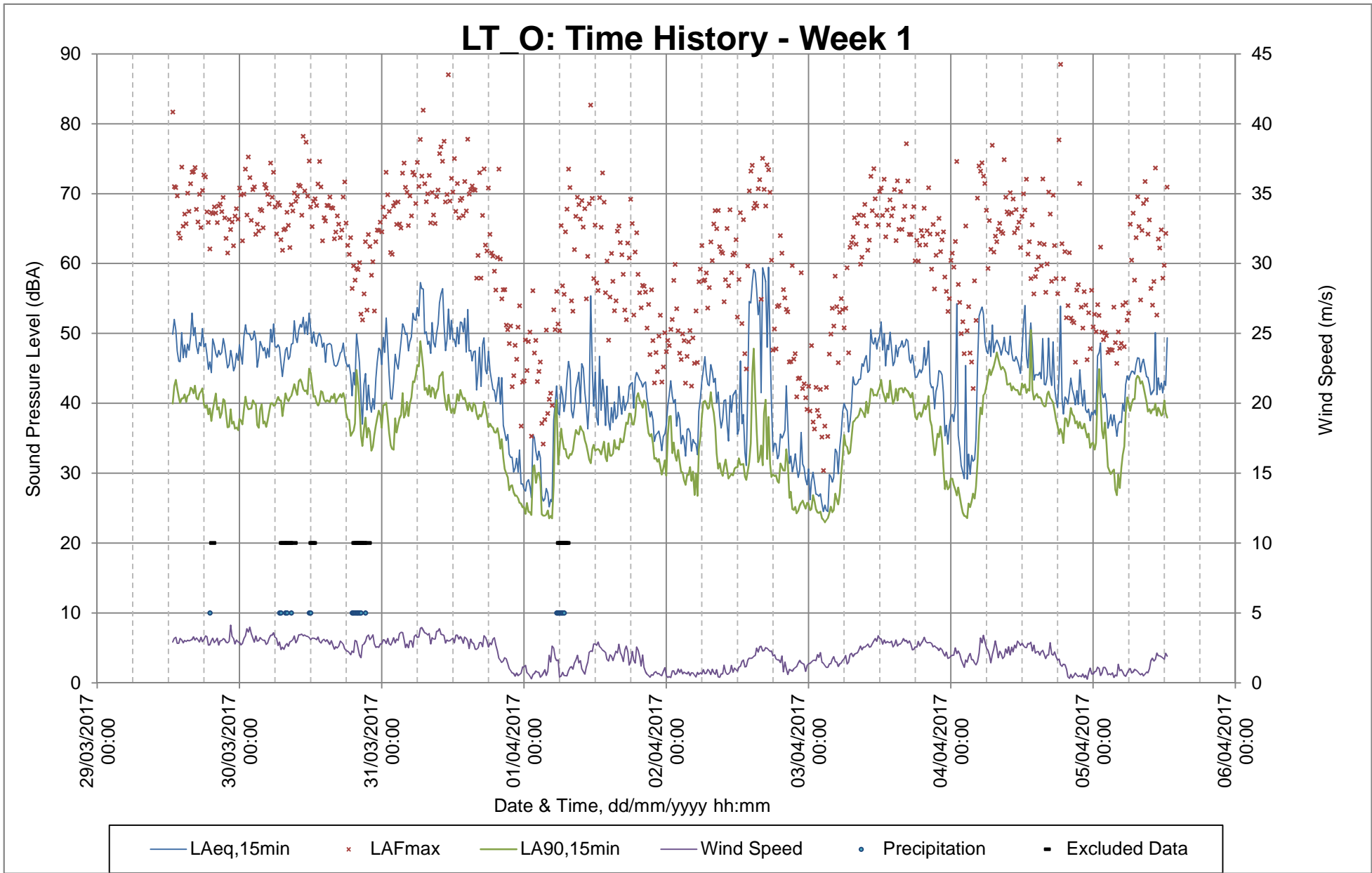
Associated Long Term Location	Location ID	Time		Start	End	LAeq	LAFmax	LA90	LA10
		Period	Duration						
LT_O	ST_02	Day	15 minutes	12:35	12:50	69	93	53	72
		Day	15 minutes	14:03	14:18	68	92	53	72
		Day	15 minutes	18:02	18:17	71	98	50	72
		Evening	15 minutes	20:12	20:27	66	90	51	67
		Night	15 minutes	23:35	23:50	53	81	46	51

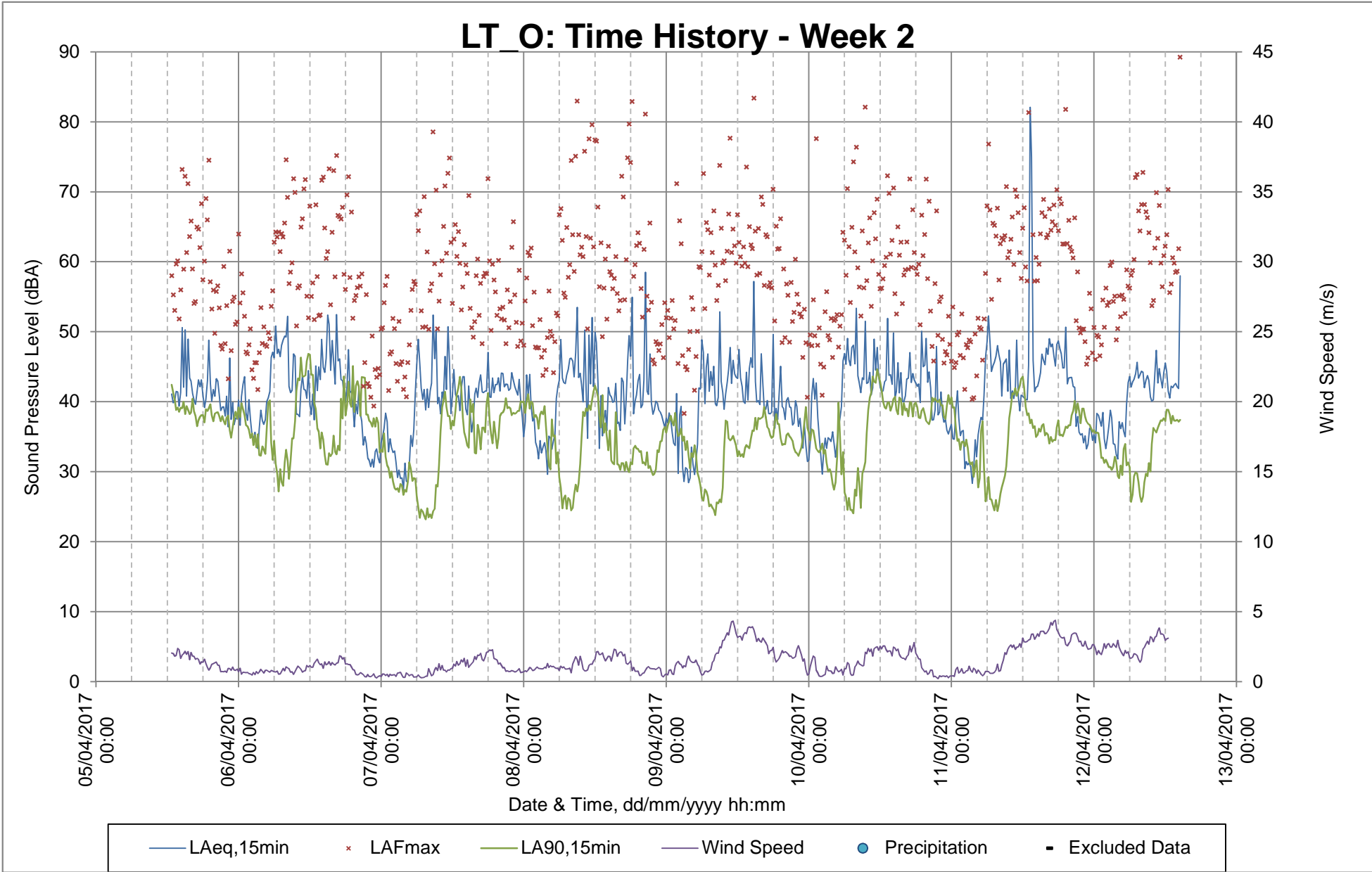
ST_03

Associated Long Term Location	Location ID	Time		Start	End	LAeq	LAFmax	LA90	LA10
		Period	Duration						
LT_O	ST_03	Day	15 minutes	13:43	13:58	67	88	52	70
		Day	15 minutes	15:04	15:19	67	87	49	71
		Day	15 minutes	18:21	18:36	70	94	45	71
		Evening	15 minutes	20:32	20:47	64	84	45	67
		Night	15 minutes	23:15	23:30	55	81	41	49

ST_04 (Traffic)

Associated Long Term Location	Location ID	Time		Start	End	LAeq	LAFmax	LA90	LA10
		Period	Duration						
LT_O	ST_04 (Traffic)	Day	15 minutes	00:00	00:00	66	92	56	64
		Day	15 minutes	14:44	14:59	62	82	56	62
		Day	15 minutes	16:28	16:43	67	94	57	67





ST_N1

Associated Long Term Location	Location ID			Time		LAeq	LAFmax	LA90	LA10
		Period	Duration	Start	End				
LT_N	ST_N1	Day	15 minutes	11:32	11:47	46	68	39	48
		Day	15 minutes	13:58	14:13	49	75	43	48
		Day	15 minutes	17:50	18:05	51	67	46	53
		Evening	15 minutes	19:17	19:32	50	74	41	52
		Night	15 minutes	23:06	23:21	52	66	42	56

ST_N2

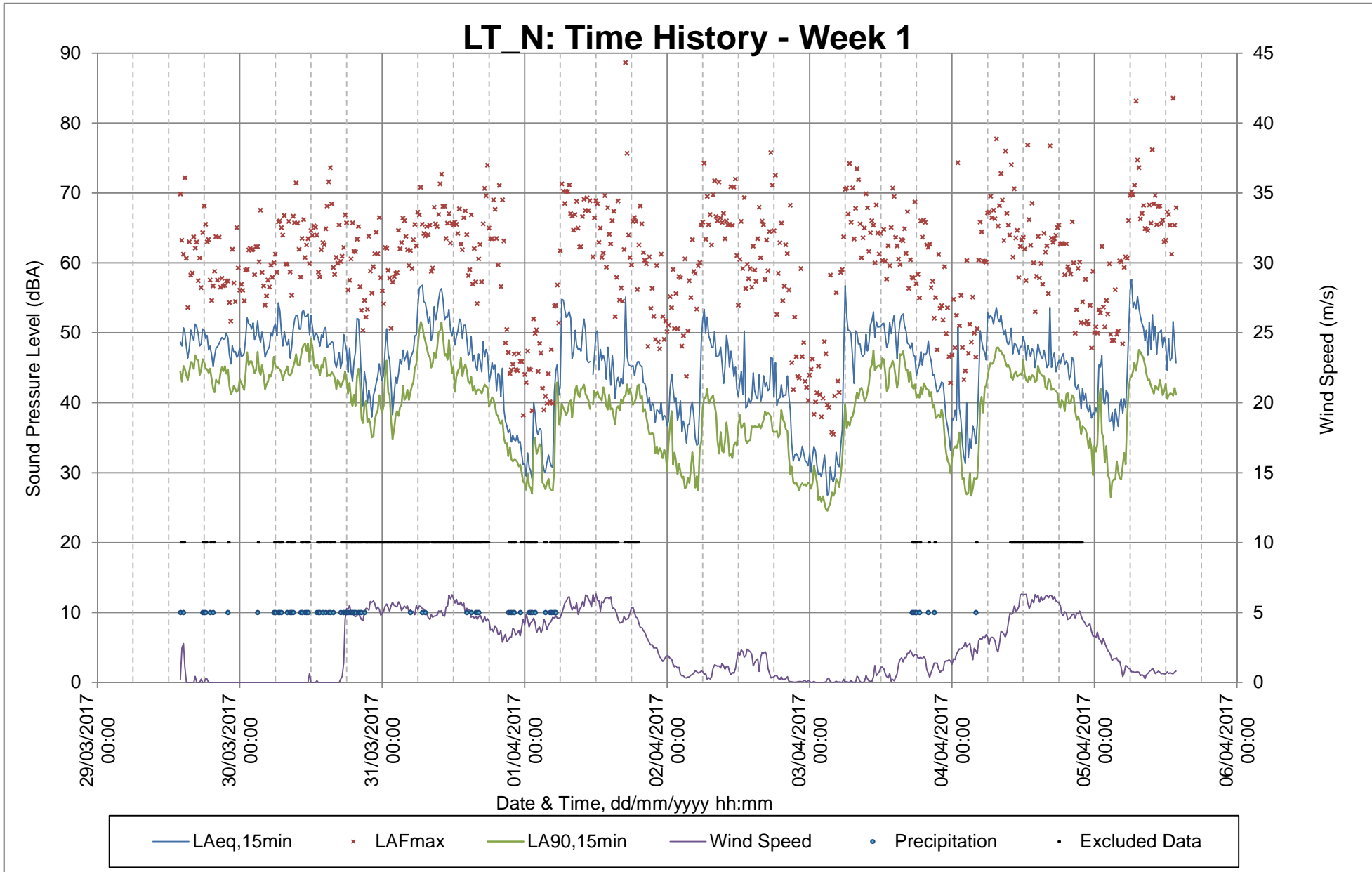
Associated Long Term Location	Location ID			Time		LAeq	LAFmax	LA90	LA10
		Period	Duration	Start	End				
LT_N	ST_N2	Day	15 minutes	11:55	12:10	67	86	60	70
		Day	15 minutes	14:18	14:33	65	84	57	68
		Day	15 minutes	18:11	18:26	66	82	62	69
		Evening	15 minutes	19:43	19:58	64	87	57	66
		Night	15 minutes	23:26	23:41	60	79	43	63

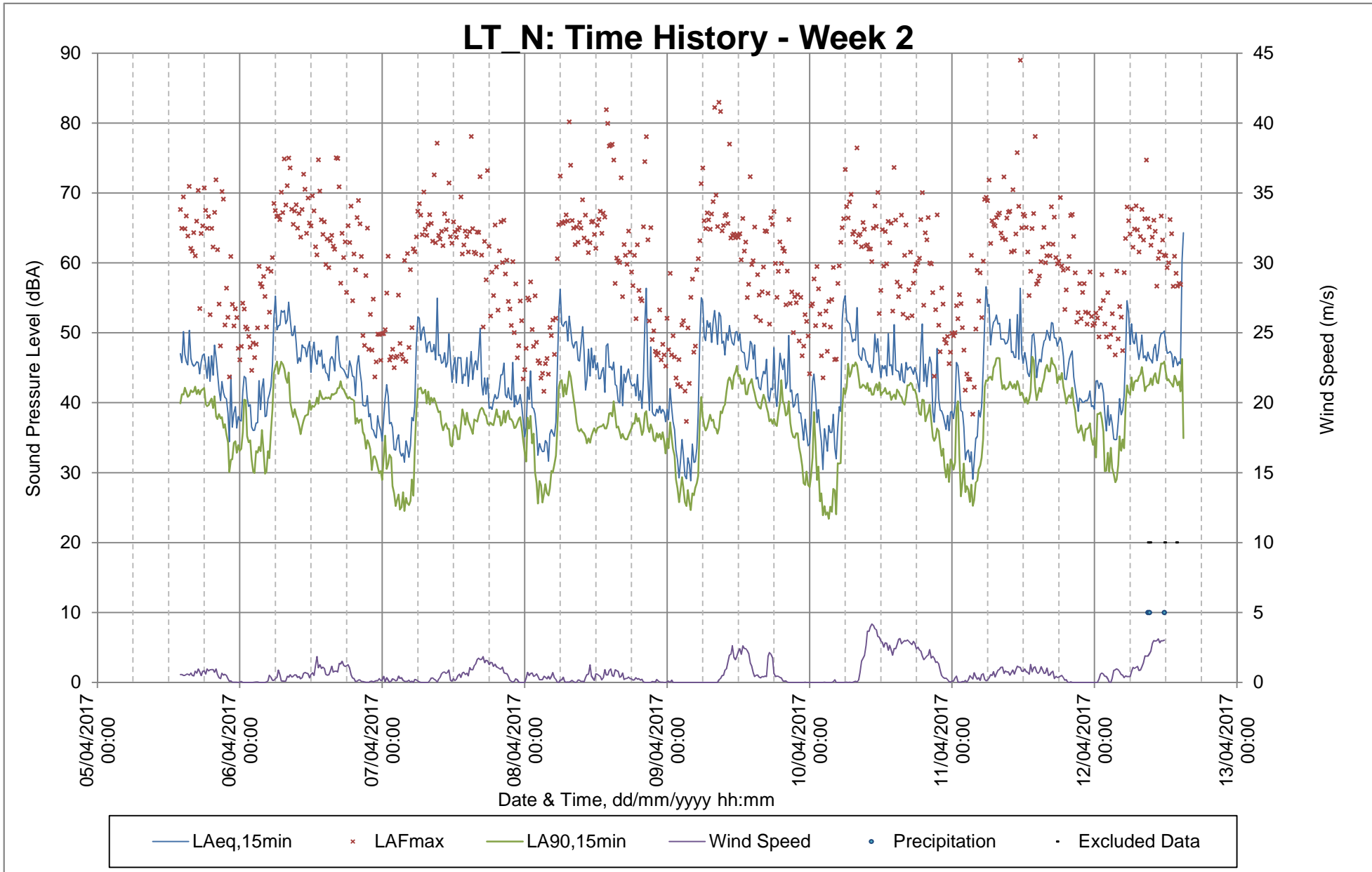
ST_N3

Associated Long Term Location	Location ID			Time		LAeq	LAFmax	LA90	LA10
		Period	Duration	Start	End				
LT_N	ST_N3	Day	15 minutes	15:41	15:56	69	95	52	66
		Day	15 minutes	16:58	17:13	65	93	51	64
		Day	15 minutes	18:44	18:59	67	97	49	62
		Evening	15 minutes	19:29	19:44	64	89	49	63
		Night	15 minutes	00:16	00:31	49	67	43	51

ST_N4

Associated Long Term Location	Location ID			Time		LAeq	LAFmax	LA90	LA10
		Period	Duration	Start	End				
LT_N	ST_N4	Day	15 minutes	16:04	16:19	58	84	51	58
		Day	15 minutes	17:19	17:34	60	81	51	60
		Day	15 minutes	11:10	11:25	55	79	49	56
		Evening	15 minutes	19:07	19:22	53	72	49	56
		Night	15 minutes	00:37	00:52	52	68	47	55





Appendix D – Results Summary Tables & Time History Plots

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LT_P

Long Term Global Data - Full Period				
LT Location	Start Date	End Date	Ambient, dB L _{Aeq, T}	Background, dB L _{A90, T}
LT_P	28/03/2017	29/03/2017	50	33
	29/03/2017	30/03/2017	58	45
	30/03/2017	31/03/2017	57	41
	31/03/2017	01/04/2017	51	29
	01/04/2017	02/04/2017	48	34
	02/04/2017	03/04/2017	49	29
	03/04/2017	04/04/2017	52	33
	04/04/2017	05/04/2017	48	39
	05/04/2017	06/04/2017	46	35
	06/04/2017	07/04/2017	44	31
	07/04/2017	08/04/2017	47	35
	08/04/2017	09/04/2017	44	27
	09/04/2017	10/04/2017	46	35
	10/04/2017	11/04/2017	47	35
	11/04/2017	12/04/2017	47	35

LT_Q

Long Term Global Data - Full Period				
LT Location	Start Date	End Date	Ambient, dB L _{Aeq, T}	Background, dB L _{A90, T}
LT_Q	28/03/2017	29/03/2017	50	33
	29/03/2017	30/03/2017	53	44
	30/03/2017	31/03/2017	53	43
	31/03/2017	01/04/2017	50	29
	01/04/2017	02/04/2017	43	31
	02/04/2017	03/04/2017	47	31
	03/04/2017	04/04/2017	48	29
	04/04/2017	05/04/2017	45	34
	05/04/2017	06/04/2017	44	31
	06/04/2017	07/04/2017	48	28
	07/04/2017	08/04/2017	44	32
	08/04/2017	09/04/2017	44	28
	09/04/2017	10/04/2017	45	30
	10/04/2017	11/04/2017	47	31
	11/04/2017	12/04/2017	46	29

LT_R

Long Term Global Data - Full Period				
LT Location	Start Date	End Date	Ambient, dB L _{Aeq, T}	Background, dB L _{A90, T}
LT_R	28/03/2017	29/03/2017	50	34
	29/03/2017	30/03/2017	56	46
	30/03/2017	31/03/2017	56	45
	31/03/2017	01/04/2017	49	33
	01/04/2017	02/04/2017	45	31
	02/04/2017	03/04/2017	47	32
	03/04/2017	04/04/2017	51	30
	04/04/2017	05/04/2017	46	33
	05/04/2017	06/04/2017	49	29
	06/04/2017	07/04/2017	46	29
	07/04/2017	08/04/2017	47	30
	08/04/2017	09/04/2017	49	28
	09/04/2017	10/04/2017	48	29
	10/04/2017	11/04/2017	51	30
	11/04/2017	12/04/2017	47	31

LT_S

Long Term Global Data - Full Period				
LT Location	Start Date	End Date	Ambient, dB L _{Aeq, T}	Background, dB L _{A90, T}
LT_S	28/03/2017	29/03/2017	48	33
	29/03/2017	30/03/2017	53	44
	30/03/2017	31/03/2017	52	43
	31/03/2017	01/04/2017	51	31
	01/04/2017	02/04/2017	46	34
	02/04/2017	03/04/2017	46	30
	03/04/2017	04/04/2017	49	32
	04/04/2017	05/04/2017	46	37
	05/04/2017	06/04/2017	45	34
	06/04/2017	07/04/2017	47	30
	07/04/2017	08/04/2017	47	32
	08/04/2017	09/04/2017	45	28
	09/04/2017	10/04/2017	46	33
	10/04/2017	11/04/2017	48	32
	11/04/2017	12/04/2017	47	32

LT_P

Operational Hours

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_P						
Range	35 - 65	30 - 49	32 - 62	28 - 45	26 - 64	23 - 51
Log Average	52	44	49	41	49	38
Average	48	42	45	40	41	34
St dev	6	4	5	3	8	6
25th percentile	45	40	42	38	35	29
50th percentile	47	43	44	40	39	33
75th percentile	52	45	47	42	45	39

Construction Hours

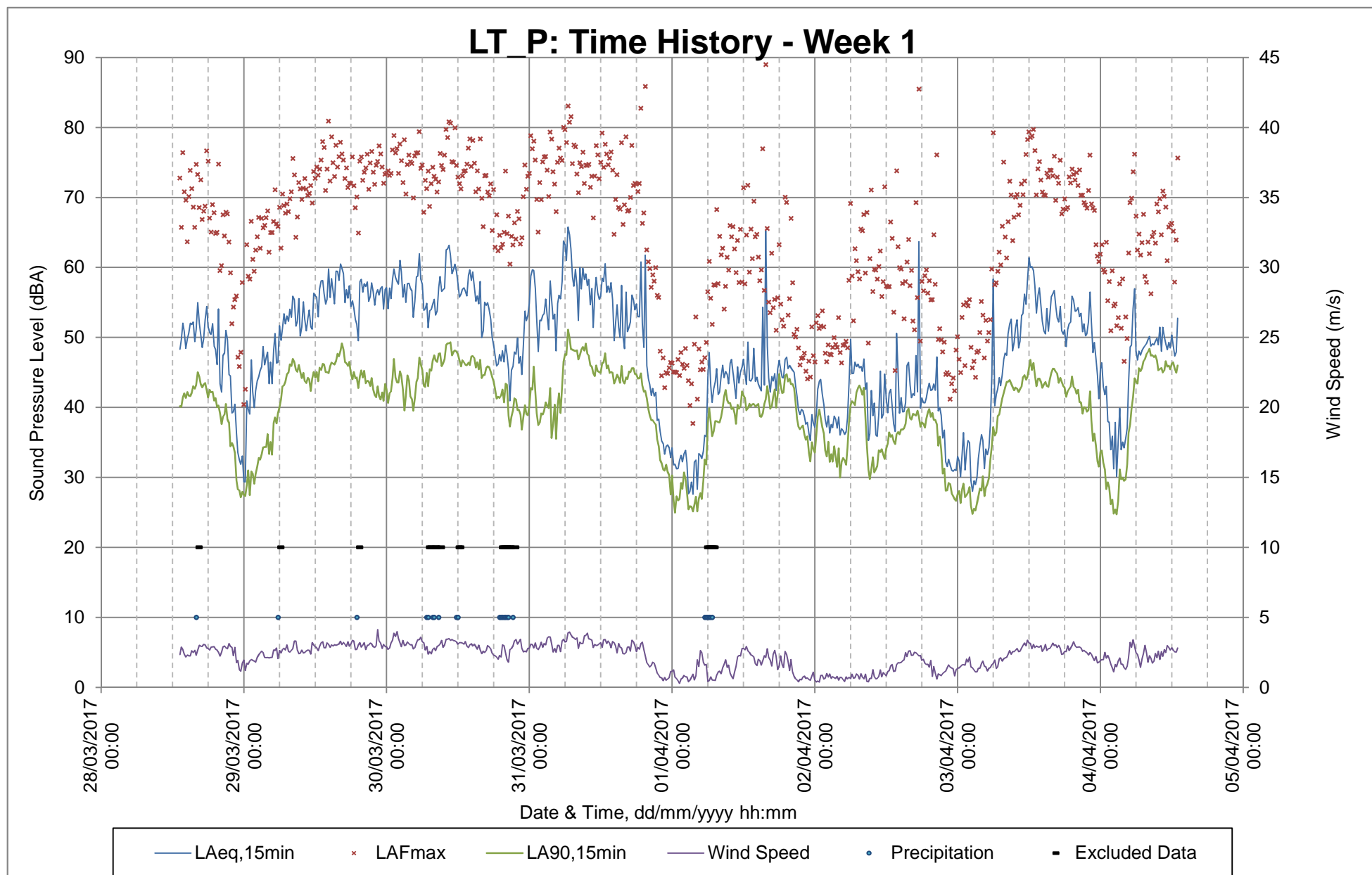
	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_P						
Range	37 - 63	32 - 49	32 - 65	28 - 45	26 - 64	23 - 51
Log Average	53	44	49	40	49	38
Average	49	43	45	39	41	34
St dev	5	3	5	3	8	6
25th percentile	46	42	42	38	35	29
50th percentile	49	44	44	40	39	33
75th percentile	53	46	47	42	45	39

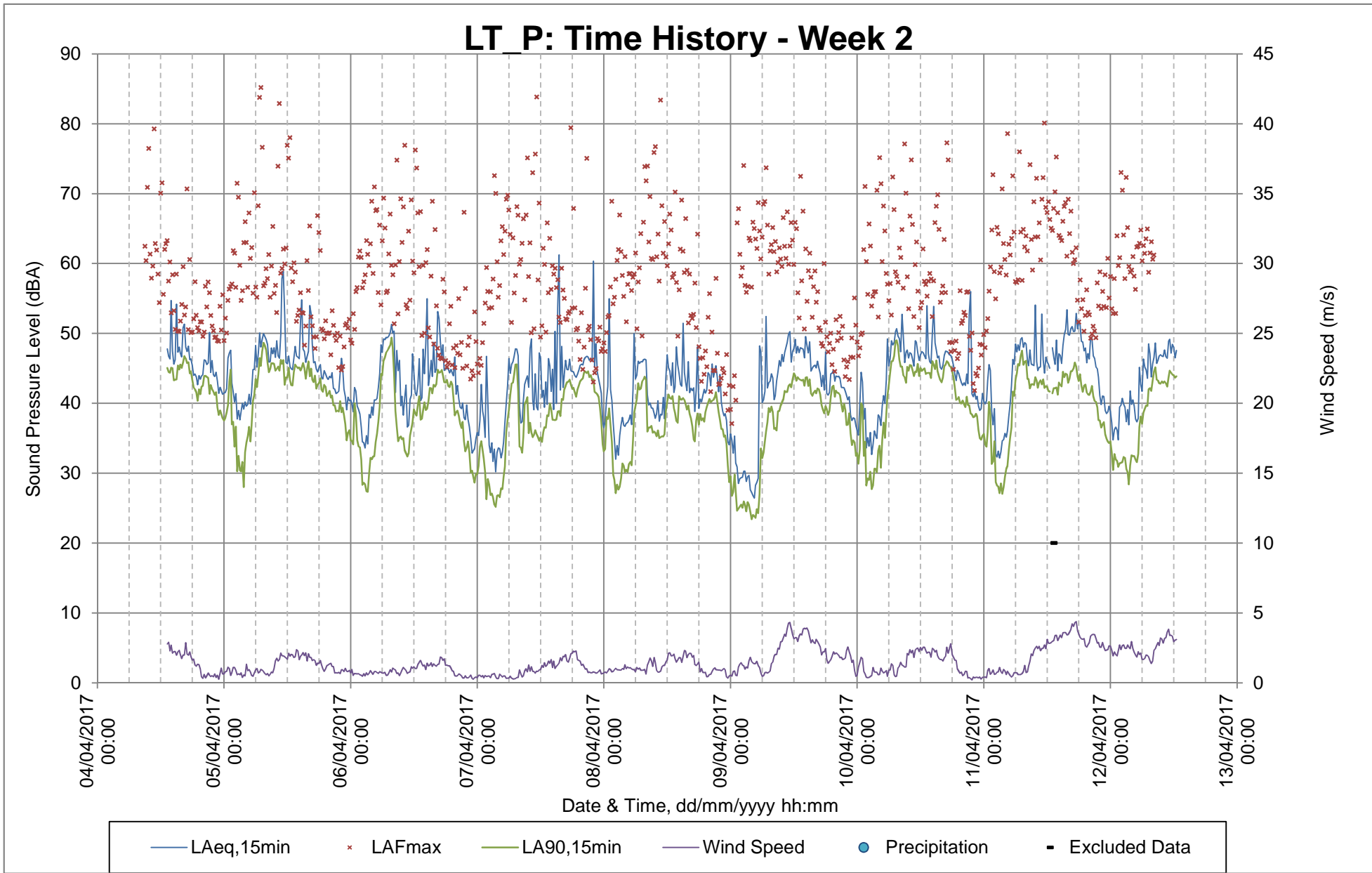
ST_P1

Associated Long Term Location	Location ID	Time							
		Period	Duration	Start	End	LAeq	LAFmax	LA90	LA10
LT_P	ST_P1	Day	15 minutes	13:43	13:58	49	61	47	51
		Day	15 minutes	17:48	18:04	40	61	36	42
		Day	15 minutes	18:36	18:52	46	66	39	48
		Evening	15 minutes	19:40	19:55	44	66	40	46
		Night	15 minutes	23:54	00:10	38	56	33	41

ST_P2

Associated Long Term Location	Location ID	Time							
		Period	Duration	Start	End	LAeq	LAFmax	LA90	LA10
LT_P	ST_P2	Day	15 minutes	12:59	13:14	57	78	51	58
		Day	15 minutes	18:14	18:29	40	67	31	38
		Day	15 minutes	18:02	18:18	40	66	32	39
		Evening	15 minutes	20:23	20:38	36	49	32	39
		Night	15 minutes	00:40	00:55	30	48	25	32





LT_Q

Operational Hours

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_Q						
Range	34 - 66	30 - 50	32 - 61	28 - 47	27 - 56	23 - 51
Log Average	50	41	48	38	45	37
Average	47	39	43	36	38	32
St dev	5	5	6	4	7	6
25th percentile	43	36	40	33	33	28
50th percentile	46	38	43	36	35	30
75th percentile	50	43	47	38	42	36

Construction Hours

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_Q						
Range	34 - 66	31 - 50	32 - 61	28 - 47	27 - 56	23 - 51
Log Average	50	42	47	38	45	37
Average	47	40	44	36	38	32
St dev	5	4	5	4	7	6
25th percentile	44	36	41	33	33	28
50th percentile	47	39	44	36	35	30
75th percentile	51	44	47	39	42	36

ST_Q1

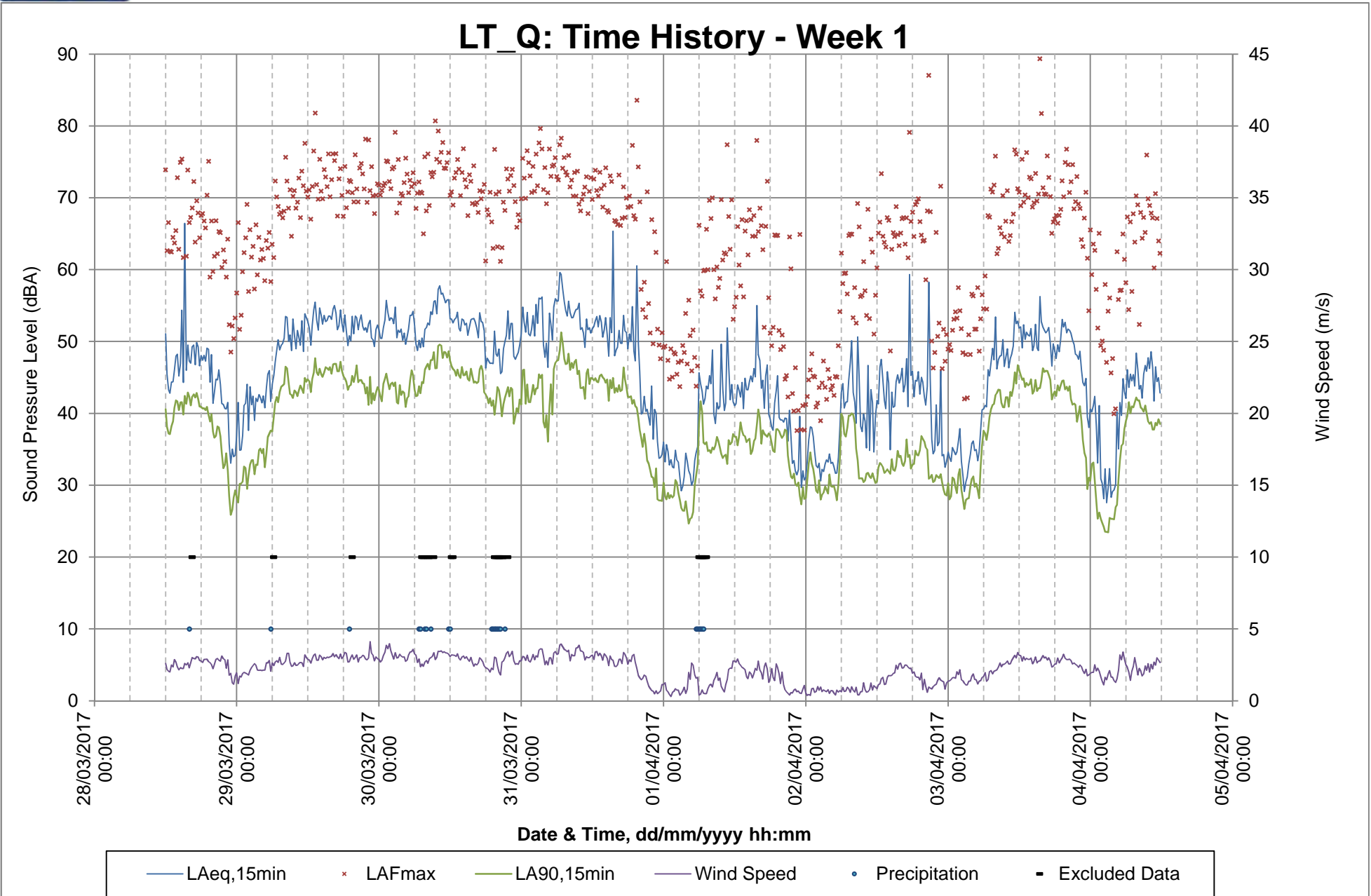
Associated Long Term Location	Location ID	Time							
		Period	Duration	Start	End	L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
LT_Q	ST_Q1	Day	15 minutes	12:04	12:19	68	92	44	73
		Day	15 minutes	16:04	16:19	70	86	48	75
		Day	15 minutes	17:02	17:18	73	86	55	78
		Evening	15 minutes	19:19	19:35	72	97	43	75
		Night	15 minutes	23:33	23:49	60	84	42	55

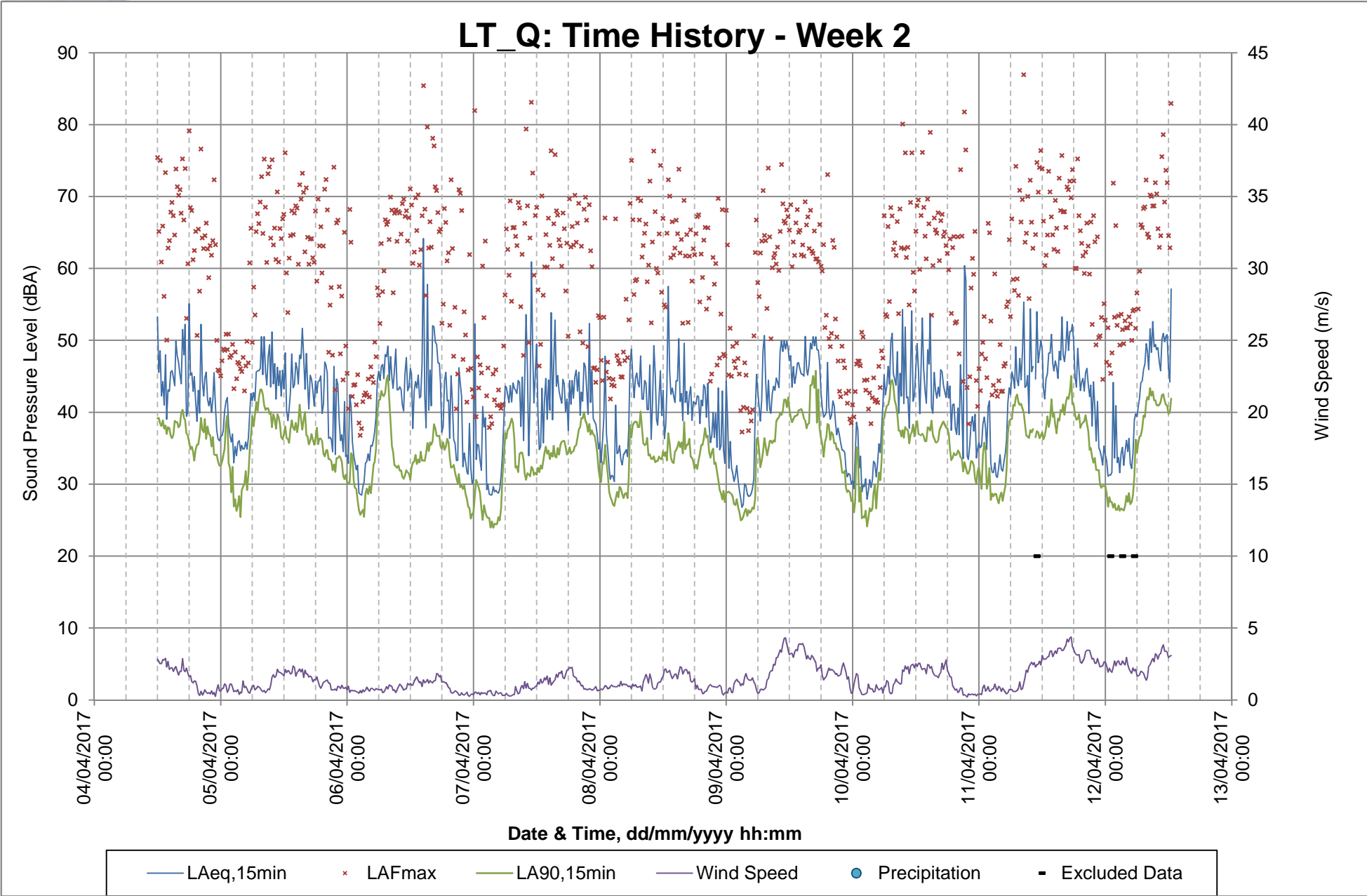
ST_Q2

Associated Long Term Location	Location ID	Time							
		Period	Duration	Start	End	L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
LT_Q	ST_Q2	Day	15 minutes	11:39	11:54	60	83	49	61
		Day	15 minutes	16:43	16:58	52	77	34	48
		Day	15 minutes	-	-	-	-	-	-
		Evening	15 minutes	19:01	19:16	45	70	28	42
		Night	15 minutes	23:14	23:30	33	58	24	32

ST_Q3

Associated Long Term Location	Location ID	Time							
		Period	Duration	Start	End	L _{Aeq}	L _{AFmax}	L _{A90}	L _{A10}
LT_Q	ST_Q3	Day	15 minutes	12:25	12:40	57	90	44	52
		Day	15 minutes	17:48	18:04	34	50	26	37
		Day	15 minutes	18:25	18:40	41	69	24	34
		Evening	15 minutes	20:01	20:16	32	60	26	35
		Night	15 minutes	00:15	00:32	28	54	22	30





LT_R

Operational Hours

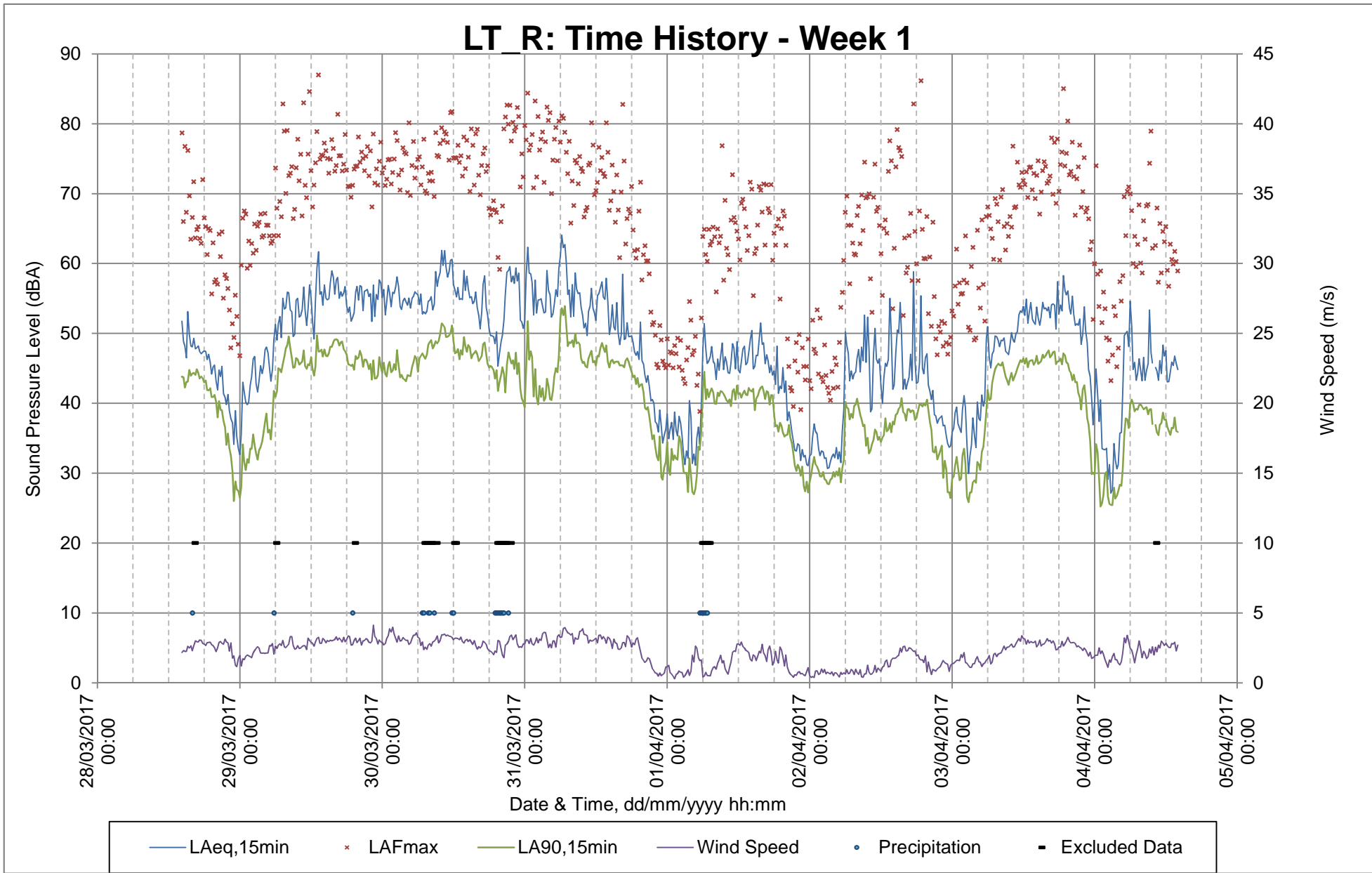
	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_R						
Range	34 - 66	30 - 51	31 - 67	28 - 48	26 - 64	23 - 54
Log Average	52	43	51	40	49	39
Average	48	41	44	37	39	33
St dev	5	5	7	5	9	7
25th percentile	44	37	39	33	33	28
50th percentile	47	41	43	36	36	31
75th percentile	52	45	49	40	45	38

Construction Hours

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_R						
Range	34 - 66	30 - 51	31 - 67	28 - 48	26 - 64	23 - 54
Log Average	52	44	50	40	49	39
Average	48	41	45	38	39	33
St dev	6	5	6	4	9	7
25th percentile	44	37	41	34	33	28
50th percentile	47	41	45	37	36	31
75th percentile	53	46	49	41	45	38

ST_R1 (Traffic)

Associated Long Term Location	Location ID	Period	Duration	Time		LAeq	LAFmax	LA90	LA10
				Start	End				
LT_R	ST_R1 (Traffic)	Day	15 minutes	11:14	11:29	73	93	45	77
		Day	15 minutes	14:27	14:42	72	87	47	77
		Day	15 minutes	16:04	16:19	71	88	48	76



LT_S

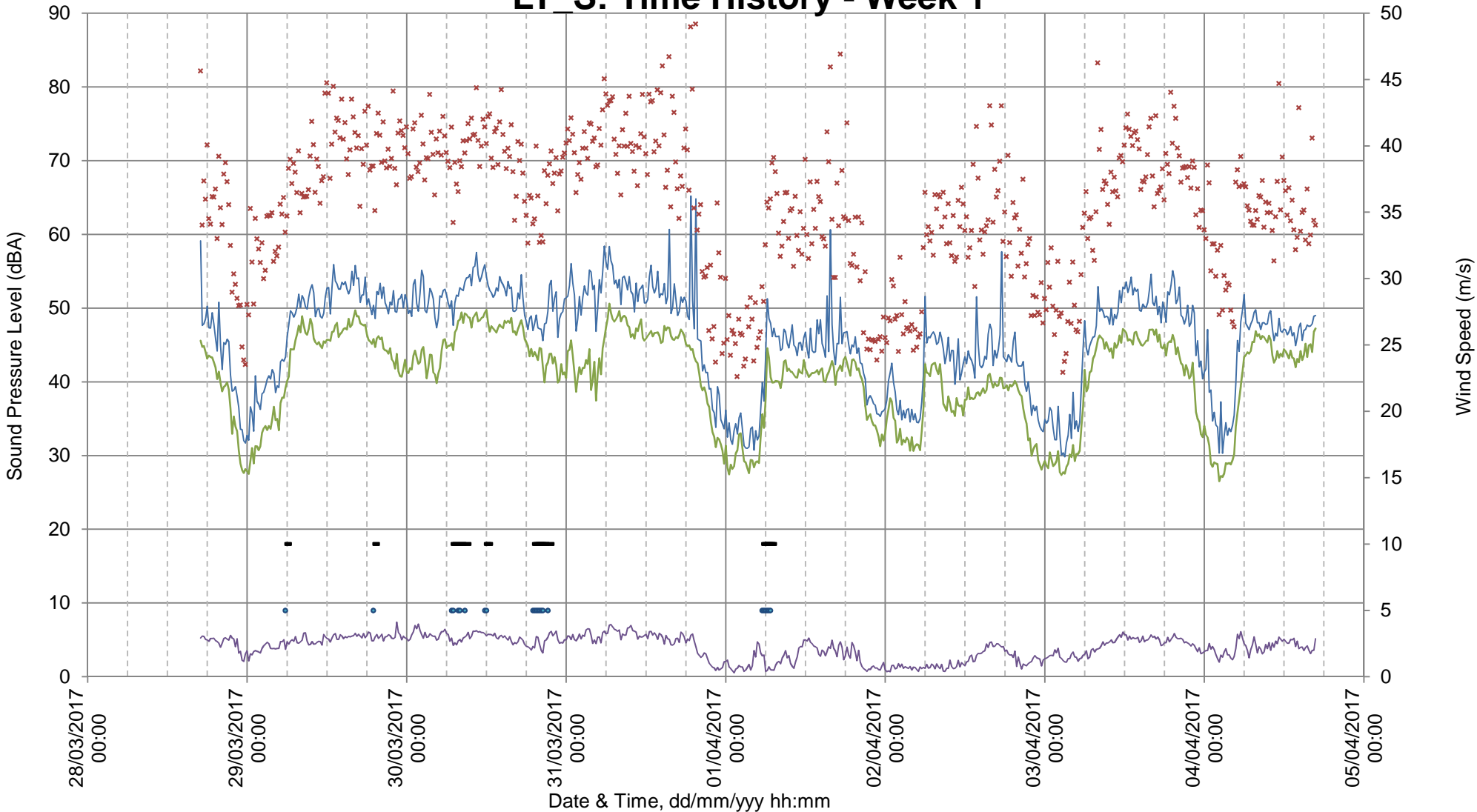
Operational Hours

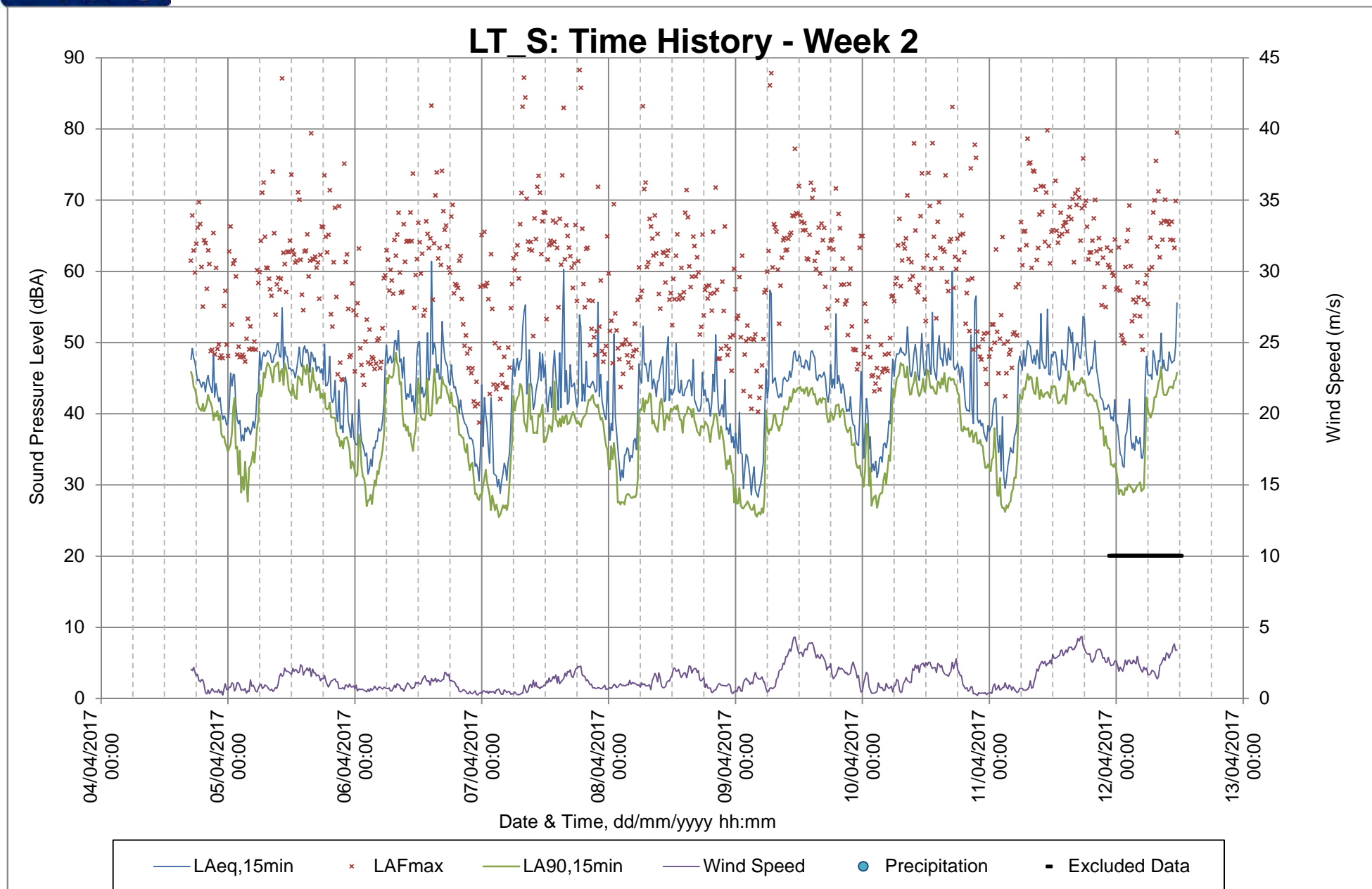
	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_S						
Range	40 - 65	35 - 50	35 - 65	29 - 46	28 - 58	25 - 51
Log Average	50	44	49	40	45	38
Average	48	43	44	39	39	34
St dev	4	3	5	4	7	6
25th percentile	45	41	41	36	34	29
50th percentile	48	44	44	39	37	32
75th percentile	50	46	47	41	44	39

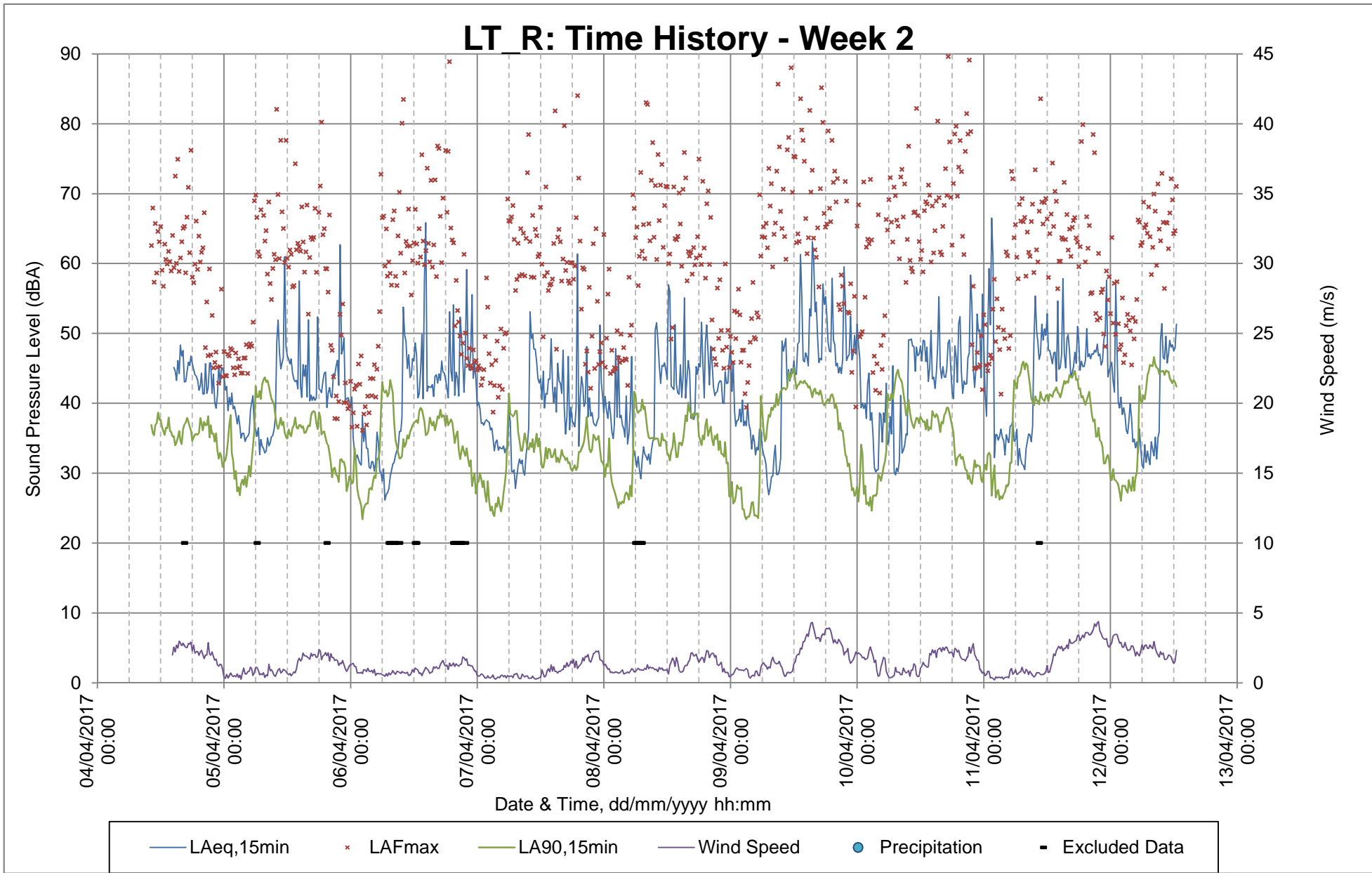
Construction Hours

	Day		Evening		Night	
	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}	Ambient, dB L _{Aeq}	Background, dB L _{A90}
LT_S						
Range	40 - 65	35 - 50	35 - 65	29 - 46	28 - 58	25 - 51
Log Average	51	45	48	40	45	38
Average	49	44	45	39	39	34
St dev	4	3	4	3	7	6
25th percentile	46	43	42	37	34	29
50th percentile	49	45	44	40	37	32
75th percentile	51	46	47	42	44	39

LT_S: Time History - Week 1







References

- 1 British Standards Institution. British Standard 4142:2014. Methods for rating and assessing industrial and commercial sound.
- 2 British Standards Institution. British Standard 7445-2:1991 Description and measurement of environmental noise - Part 2: Guide to the acquisition of data pertinent to land use.
- 3 British Standards Institution. British Standard 5228-1:2009+A1:2014. Code of practice for noise and vibration control on construction and open sites – Part 1: Noise.
- 4 Welsh Assembly Government. Minerals Technical Advice Note (MTAN) (Wales) 1: Aggregates. The National Assembly for Wales. 2004.