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London Luton Airport Expansion

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Volume 5 Environmental Statement and Related Documents
5.11 Ambient noise monitoring data and survey sheets

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The Planning Act 2008

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

London Luton Airport Expansion Development Consent Order 202[]

5.11 Ambient noise monitoring data and survey sheets

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1 INTRODUCTION

1.1.1 This document has been prepared in response to the following Rule 9 Request of 16 May 2023:

"To ensure clear understanding of the noise survey and data compilation approach, the ExA has made a procedural decision to request BS7445 survey datasheets/ monitoring reports (or equivalent) for each of the attended noise monitoring locations, showing full details of location and set up information. The information provided should include the meteorological data used to exclude adverse weather periods from the baseline datasets."

- 1.1.2 This document contains the following:
 - a. the purpose of noise monitoring (Section 2);
 - b. meteorological data (Section 3);
 - c. time-history plots with periods of adverse weather (Section 4)
 - d. noise monitoring set up information (Section 5);
 - e. ambient noise monitoring locations (Section 6); and
 - f. noise survey sheets (Section 7).

2 PURPOSE OF NOISE MONITORING

2.1.1 Two types of baseline noise monitoring have been undertaken to inform the noise assessment undertaken in **Chapter 16 of the ES [TR020001/APP/5.01]** as described in **Table 2.1.**

Table 2.1: Description and purpose of baseline noise monitoring

Noise monitoring	Description	Purpose
Aircraft noise monitoring	Measurement of individual aircraft noise events using LLAOL's permanent and temporary noise monitoring terminals.	Used to validate the aircraft noise model by comparing measured noise levels of individual aircraft types to those predicted by the aircraft noise model.
		See Appendix 16.1 of the ES [TR020001/APP/5.02] for full details of the aircraft noise model validation.
Ambient noise monitoring	Measurement of all sound sources (ambient noise) at community locations.	Used to spot-check and verify the baseline road traffic noise levels at key road links in the surface access study area 1.
	Noise monitoring was undertaken at locations agreed with the Noise Working Group (see Section 16.4 of Chapter 16 of the ES [TR020001/APP/5.01]) and at additional locations identified through 2019 statutory consultation (see Section 4 of Appendix 16.1 of the ES [TR020001/APP/5.02]).	Used to provide qualitative information about the character of the existing noise environment at an assessment location and hence provide context for the noise assessment.

- 2.1.2 Section 16.5 of Chapter 16 of the ES [TR020001/APP/5.01] sets out that the ambient noise monitoring data does not directly influence the identification of noise effects and instead has been used to either provide spot-checks for the calculated baselines or to provide qualitative information regarding the character of the existing noise environment.
- 2.1.3 The assessment of aircraft air noise, aircraft ground noise and surface access noise uses calculated (rather than measured) baselines. The baseline noise levels are calculated to firstly enable future baselines to be consistently established and also to ensure a consistent calculation of noise change between the Do-Minimum (future baseline) and Do-Something scenarios. As set out in **Chapter 16 of the ES [TR020001/APP/5.01]**, the assumptions used to calculate the baseline, future baseline and Do-Something scenarios have been chosen to provide a reasonable worst-case assessment of noise effects.
- 2.1.4 The assessment of construction noise effects uses evaluation criteria that assume low ambient noise levels at all receptors, even for receptors close to the airport or other existing noise sources such as main roads or the M1. The

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¹ The calculated road traffic noise baseline has not needed to have been adjusted as a result of the spot checks.

construction noise assessment is therefore a worst case. For the small number of receptors that are predicted to exceed the construction noise Lowest Observable Adverse Effect Level (LOAEL), the ambient noise level data from one monitoring location has been used to provide additional information about the character of the existing noise environment and hence provide context for the assessment to assist in identifying noise effects.

2.1.5 **Table 2.1** provides a summary of which ambient noise monitoring locations have been used for which purpose as described above.

Table 2.1: Summary of baseline noise data use

Location	Assessment	Use	Informs the identification of noise effects?
ML15	Construction noise	Used to provide qualitative information about the character of the existing noise environment at an assessment location and hence provide context for the noise assessment to assist in identifying noise effects.	Indirectly
ML23, ML24, ML25, ML26, ML27, Ml28, ML29, ML41, ML42, ML43 and ML44	Surface access noise	Validation of baseline surface access noise model	No
ML1, ML2, ML3, ML4, ML5, ML7, ML7, ML8, ML9, ML9, ML10, ML11, ML12, ML13, ML14, ML15, ML16, ML17, ML18, ML19, ML20, ML21, ML22, ML30, ML31 and ML37	Air noise	Used to provide qualitative information about the character of the existing noise environment at an assessment location and hence provide context for the noise assessment only.	No

3 METEOROLOGICAL DATA

3.1.1 Meteorological conditions recorded by the London Luton Airport weather station have been used to identify periods of adverse weather conditions over the unattended monitoring periods i.e. periods of rain and windspeeds greater than 5 m/s. These periods have been removed from the monitoring results as

- adverse weather conditions may result in measurements of increased noise levels that may not be representative of typical noise conditions. Removal of this measurement data is therefore a reasonable worst-case.
- This is typical for unattended noise surveys over a long period of time² to cover weekly periodicity of noise (with reference to BS 7445, Ref 1) and is not considered to be a material limitation in the ambient sound survey methodology.
- 3.1.3 Weather conditions for the following periods are provided:
 - a. August to November 2018 (Figure 7.1);
 - b. April to May 2019 (Figure 7.2);
 - c. February to March 2020 (Figure 7.3); and
 - d. July 2021 (Figure 7.4).

4 TIME-HISTORY PLOTS WITH PERIODS OF ADVERSE WEATHER

- 4.1.1 Time-history plots showing periods of adverse weather conditions for all monitoring locations are presented in **Figure 7.45** to **Figure 7.78**.
- 4.1.2 As identified in **Table 2.1**, unattended noise monitoring data from ML15 is the only data that has been (indirectly) used to assist in identifying construction noise effects. Even after removal of periods of adverse weather conditions, the remaining data from ML15 represents more than 8 days' worth of daytime and night-time data. This amount of noise data covers weekly noise periodicity and provides representative data of typical ambient noise conditions.

5 NOISE MONITORING SET UP INFORMATION

5.1.1 The monitoring equipment met the Class 1 standard and conform to BS EN 61672-2: 2003 (Ref 2). Monitoring equipment was set up at a height of approximately 1.5 m and located at least 3.5 m away from any reflecting structure. All monitoring equipment were fitted with wind shields to protect the microphone diaphragm from gusts of air.

6 AMBIENT NOISE MONITORING LOCATIONS

Baseline noise monitoring measurement of all sound sources (ambient noise) was undertaken at community locations. Noise monitoring locations were agreed with the Noise Working Group (see Section 16.4 of Chapter 16 of the ES [TR020001/APP/5.01]) and at additional locations identified through 2019 statutory consultation (Section 4 of Appendix 16.1 [TR020001/APP/5.02]). All ambient noise monitoring locations are presented in Table 6.1 and illustrated in Figure 16.3 of the ES [TR020001/APP/5.03].

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² the average measurement duration was 21 days

Table 6.1: Baseline sound monitoring locations

Location	Details	Primary Sound Sources	Secondary Sound Sources	Measurement Format
ML1	Someries Castle, Central Beds	Aircraft	Road traffic	Unattended
ML2	Diamond End, North Herts	Aircraft	Road traffic, dog barking	Unattended
ML3	Langley, North Herts	Aircraft	Road traffic	Unattended
ML4	Breachwood Green, North Herts	Birdcall	Aircraft and road traffic	Unattended
ML5	Bendish, North Herts	Aircraft	Birdcall	Unattended
ML7	Luton Hoo, Central Beds	Road traffic and aircraft	None noted	Unattended
ML8	Dagnall, Aylesbury Vale	Aircraft	Road traffic, occasional gardening activities	Unattended
ML9	Markyate, Dacorum	Aircraft	None noted	Unattended
ML10	Caddington, Central Beds	Road traffic	Aircraft, birdsong	Unattended
ML11	Woodside, Central Beds	Birdsong	Conversation, aircraft, road traffic	Unattended
ML12	Front Street, Slip End, Luton	Road traffic	Aircraft, processing plant at McClaid Screening	Unattended
ML13	Strathmore Avenue, Luton	Aircraft	Road traffic	Unattended
)ML14	Vauxhall Way, Luton	Road traffic	None noted	Unattended
ML15	Eaton Green Road, Luton	Road traffic	Aircraft	Unattended
ML16	Malthouse Green, Luton	Aircraft	Road traffic	Unattended
ML17	Kensworth, Central Beds	Road traffic	Aircraft	Unattended
ML18	Stevenage	Aircraft and road traffic	Occasional dog barking	Unattended

Location	Details	Primary Sound Sources	Secondary Sound Sources	Measurement Format
ML19	Flamstead, Dacorum	Aircraft	Road traffic, occasional gardening activities	Unattended
ML20	Jockey End, Dacorum	Aircraft	Occasional gardening activities	Unattended
ML21	Preston, North Herts	Road traffic	Aircraft	Unattended
ML22	Holywell, Central Beds	Aircraft	Occasional gardening activities	Unattended
ML23	A602 Stevenage Road, North Herts	Road traffic	Pedestrians	Attended
ML24	Hitchin Road, Luton	Road traffic	None	Attended
ML25	A505 Beech Hill, North Herts	Road traffic	Pedestrians	Attended
ML26	A1081 London Road, Central Beds	Road traffic	None	Attended
ML27	A505 Hatters Way, Luton	Road traffic	Pedestrians	Attended
ML28	A6 New Bedford Road, Luton	Road traffic	Birdcall	Attended
ML29	B653 Lower Harpenden Road, Central Beds	Road traffic	Occasional train passbys	Attended
ML30	Pitstone, Aylesbury Vale	Aircraft	Road traffic, occasional gardening activities	Unattended
ML31	St Pauls Walden, North Herts	Aircraft	Road traffic, occasional gardening activities	Unattended
ML37	Breachwood Green JMI School	Aircraft	Road traffic, birdsong, school activities	Unattended
ML41	Brick Kiln Lane, Luton	Road traffic	Road traffic, aircraft, birdsong	Unattended
ML42	Chalk Hill, Luton	Road traffic	Road traffic, aircraft, birdsong	Attended

Location	Details	Primary Sound Sources	Secondary Sound Sources	Measurement Format
ML43	Wandon End, Luton	Aircraft	Dog barking, road traffic, aircraft, birdsong	Attended
ML44	Stony Lane, Luton	Aircraft	Road traffic, aircraft, birdsong	Attended

- Monitoring location numbering aligns with assessment locations (see **Table 16.22** of **Chapter 16** of the ES **[TR020001/APP/5.01]**). Consequently, there is no ML32, ML33, ML34, ML35, ML36, ML38, ML39 or ML40, which are schools that were considered important to assess individually in the air noise assessment. Noise monitoring was undertaken at Breachwood Green JMI School (ML37) following a specific request from the school.
- 6.1.3 There is no ML6 monitoring location as the location that was originally identified at Rush Green was found to be industrial during site visits. Consequently, ML6 was removed, and the original monitoring location numbering was retained.

7 NOISE SURVEY SHEETS

Noise survey sheets that were completed at the start and end of unattended monitoring and during attended monitoring are presented in **Figure 7.5** to **Figure 7.44**. At some locations, meters were returned for a second period of monitoring after analysis showed that data had not been measured for a sufficient period of time. Consequently, there are two survey sheets at these locations.

GLOSSARY AND ABBREVIATIONS

Term	Definition
ES	Environmental Statement
LLAOL	London Luton Airport Operations Limited
LOAEL	Lowest Observed Adverse Effect Level
SEL	Sound Exposure Level

Figure 7.1: Weather Data from 23rd August to 2nd November 2018

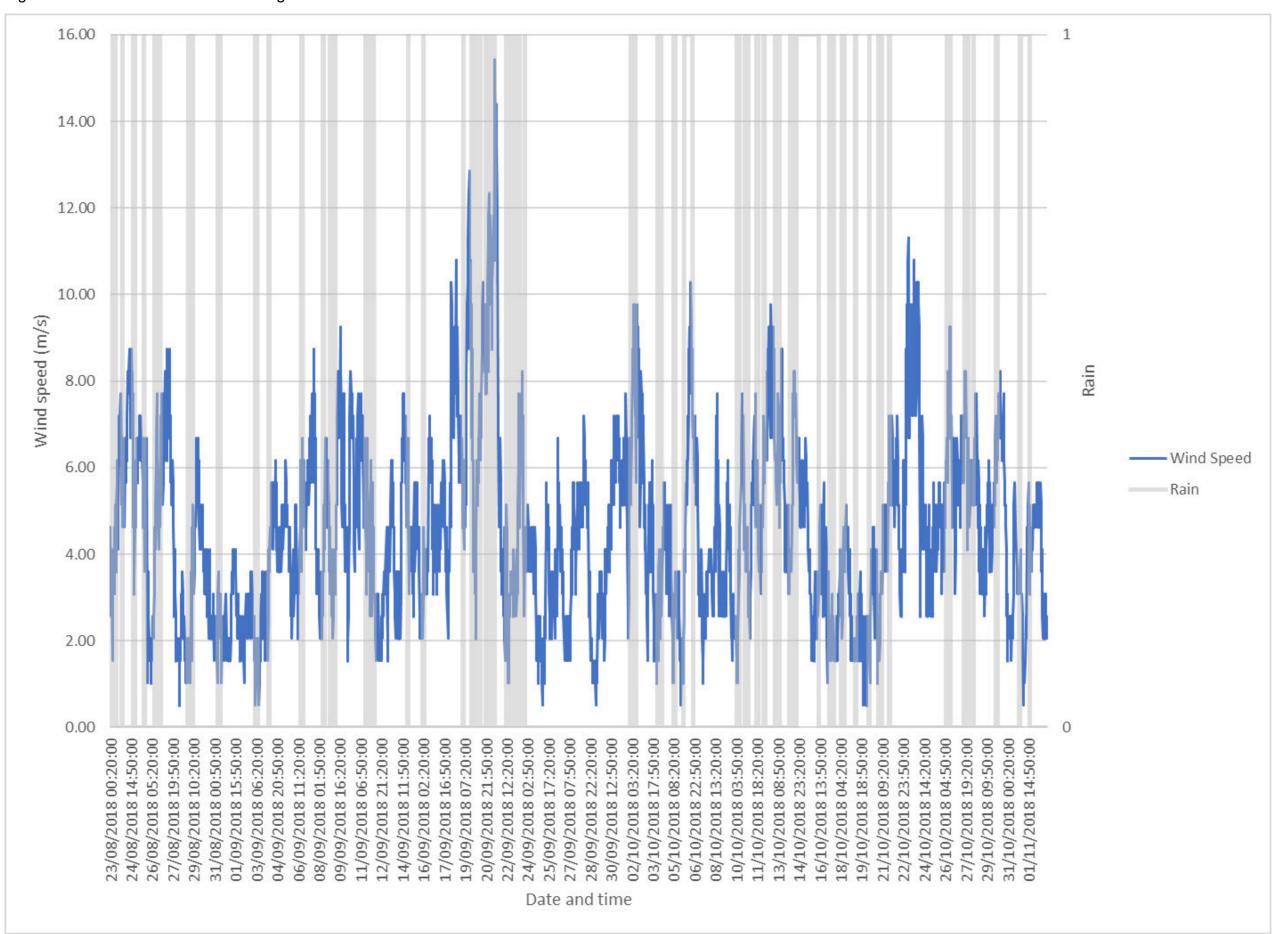


Figure 7.2: Weather Data from 16th April to 23rd May 2019

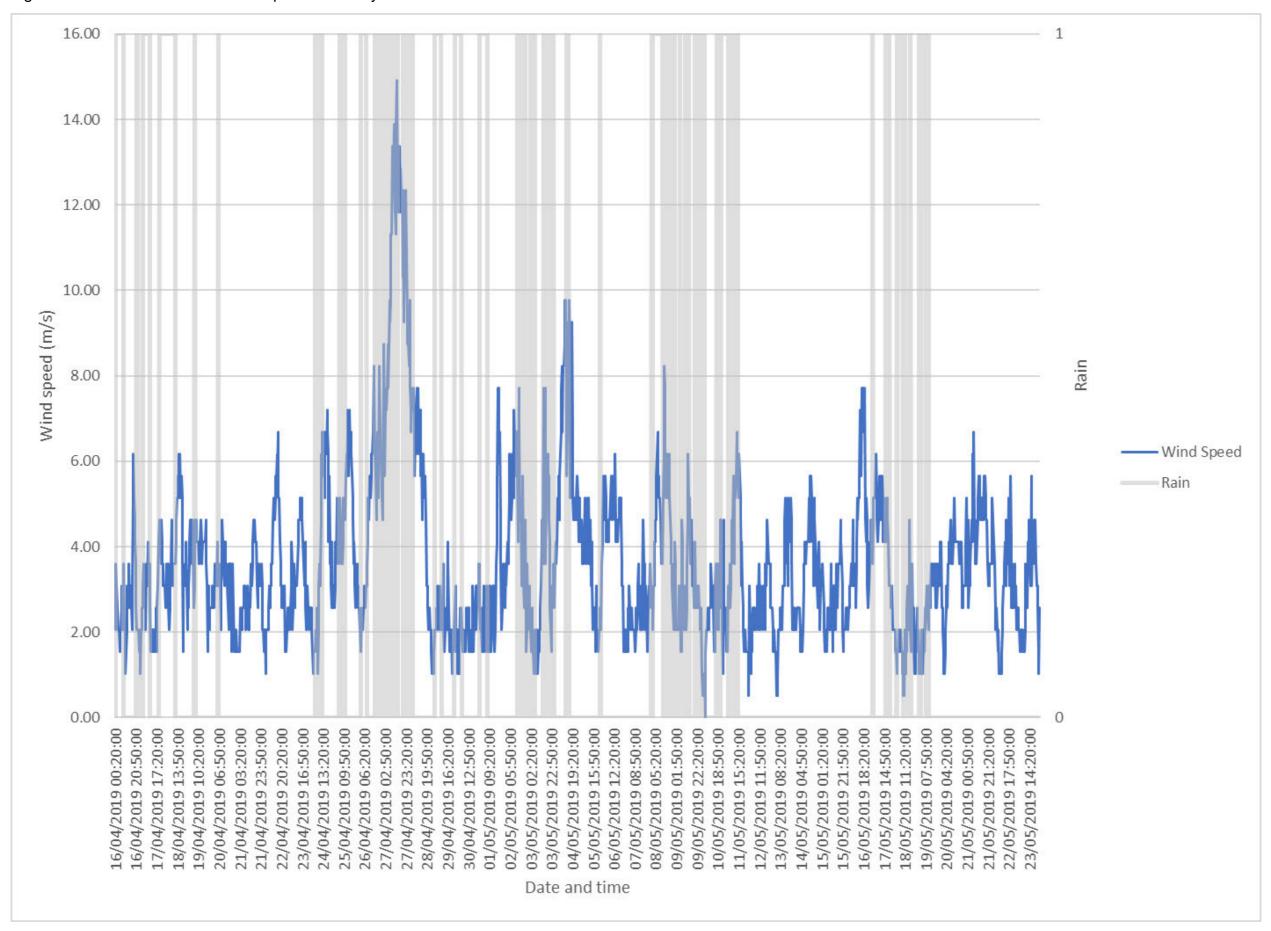


Figure 7.3: Weather Data from 1st February to 31st March 2020

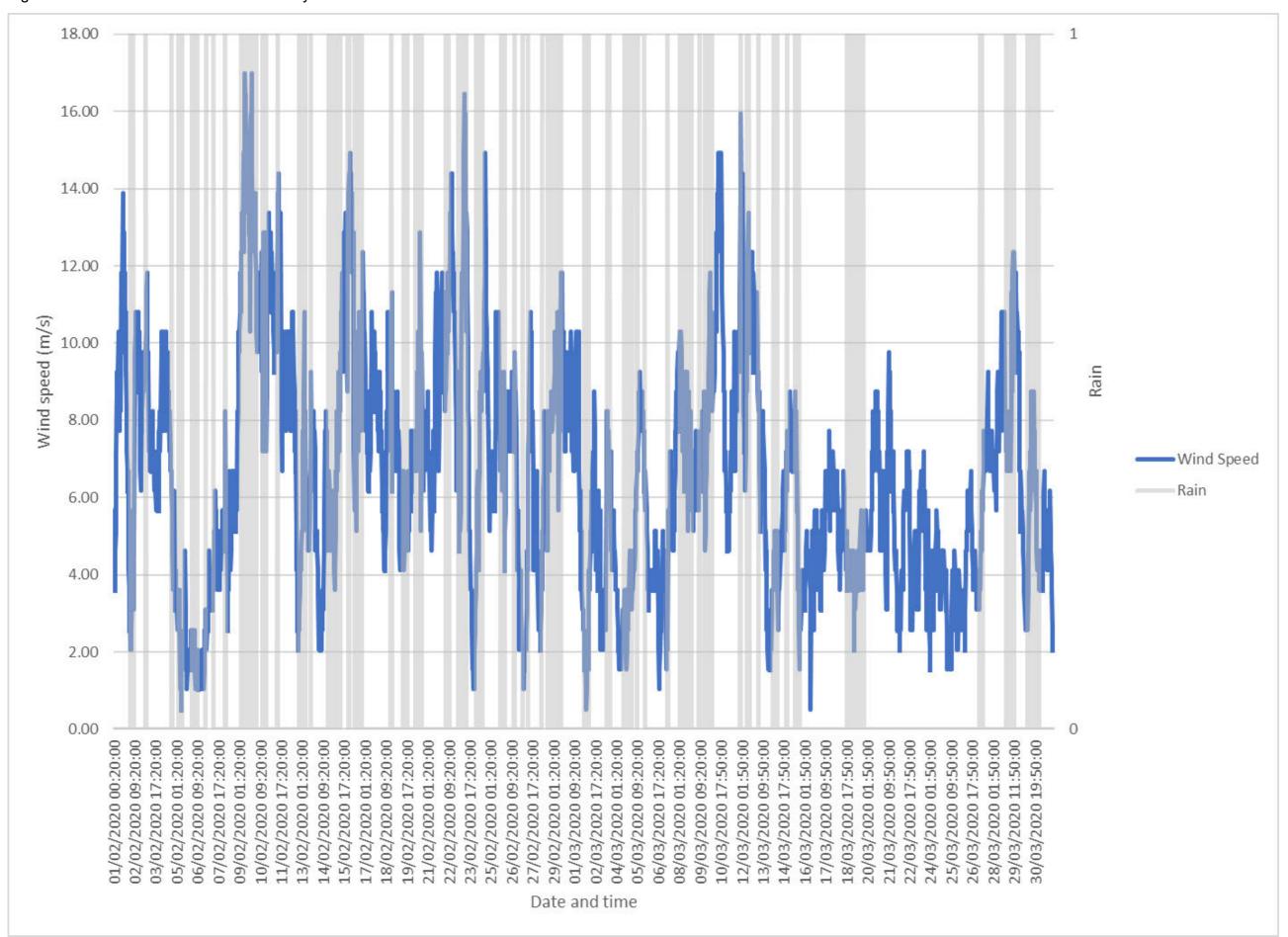


Figure 7.4: Weather Data from 13th July to 21st July 2021

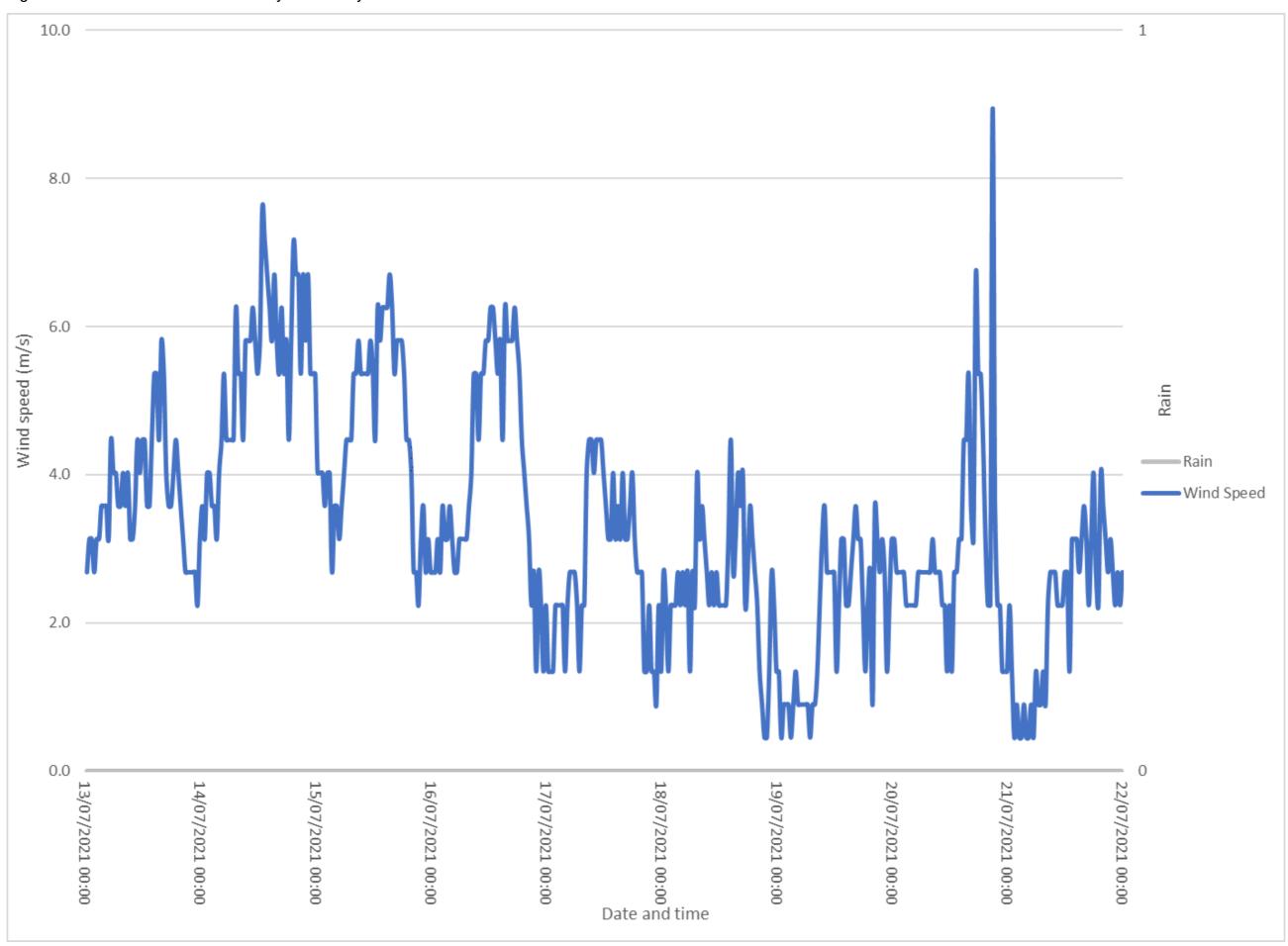
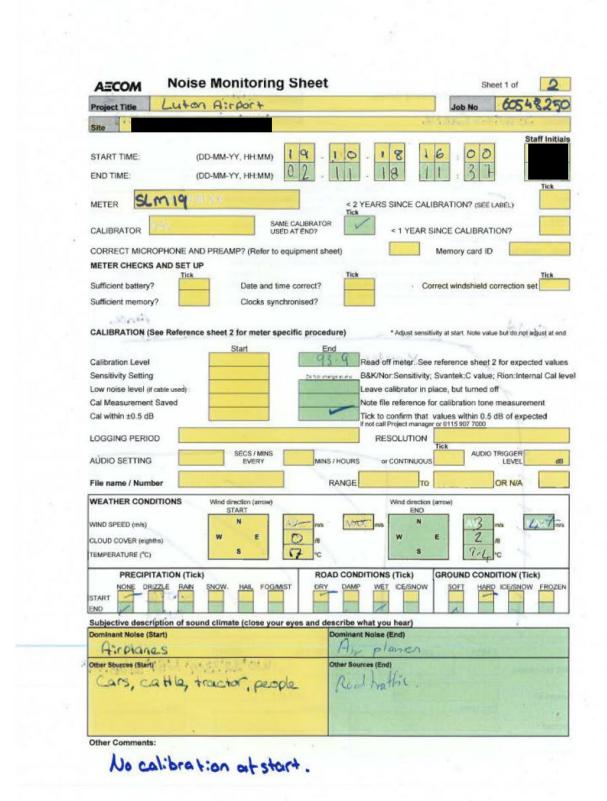
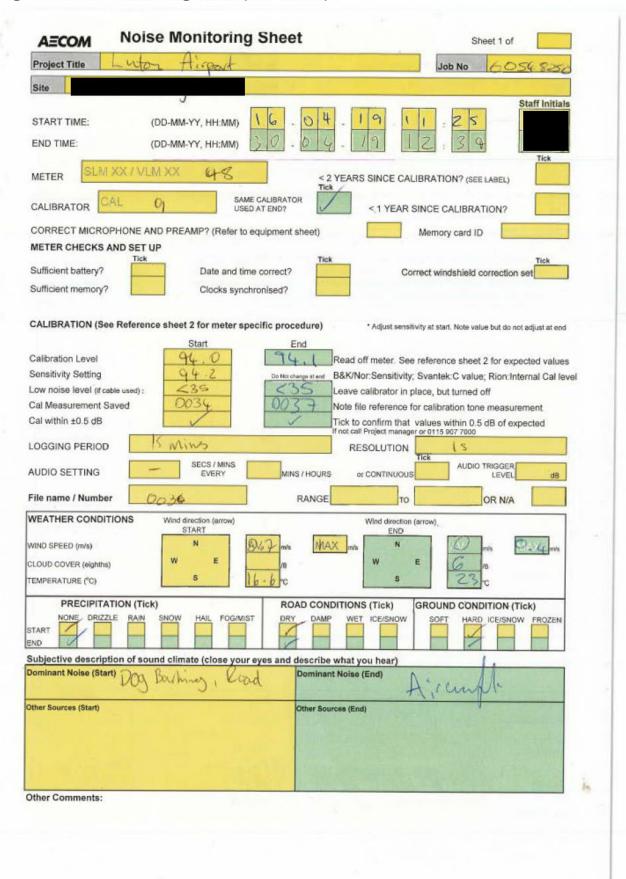


Figure 7.5: ML1 Monitoring Sheet (two sheets)



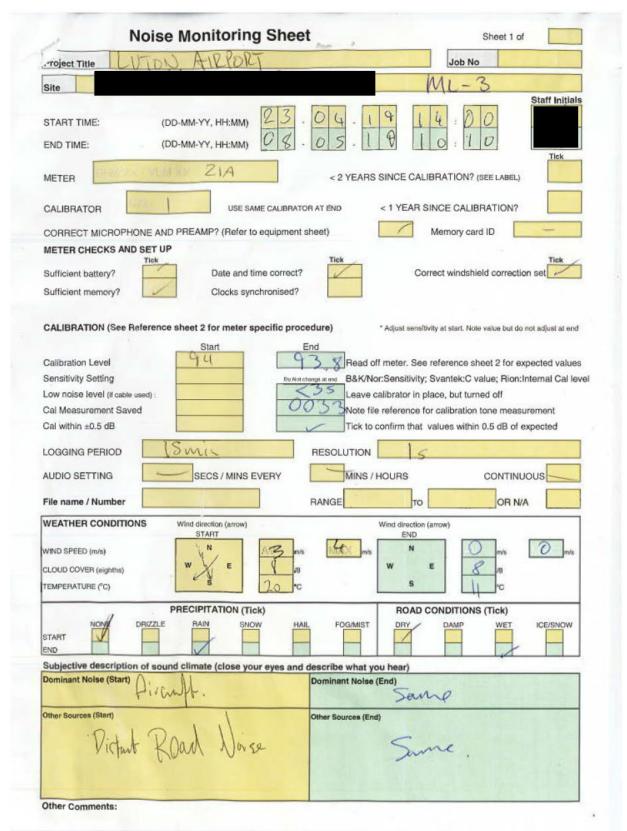
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GPS Coordinates Camera ID:	5 numbers	or WO '22'33	Date

Figure 7.6: ML2 Monitoring Sheet (two sheets)



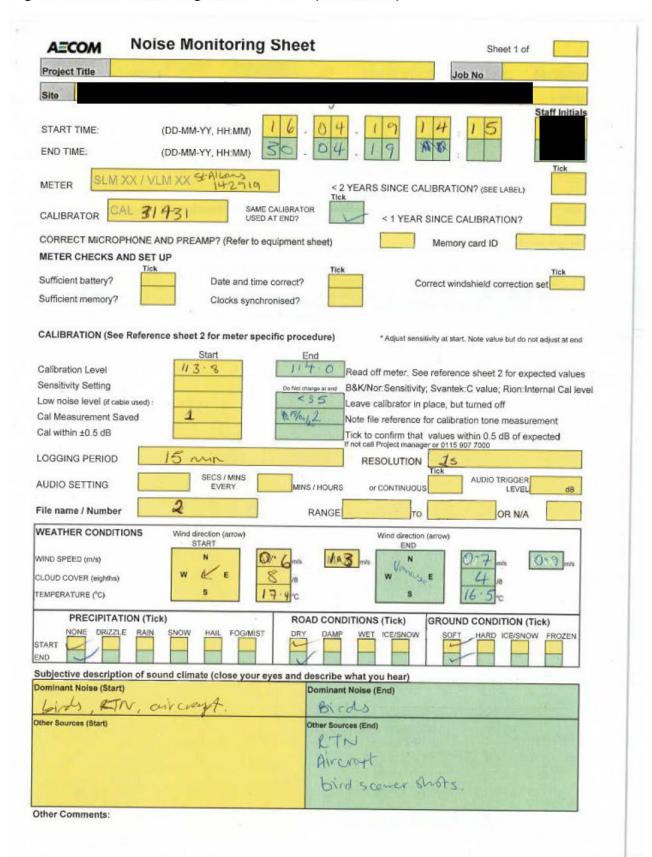
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Figure 7.7: ML3 Monitoring Sheet (two sheets)



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Figure 7.8: ML4 Monitoring Sheet – Part 1 (two sheets)



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ite		Date	Meter	
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Site staff				4110
QA checked				

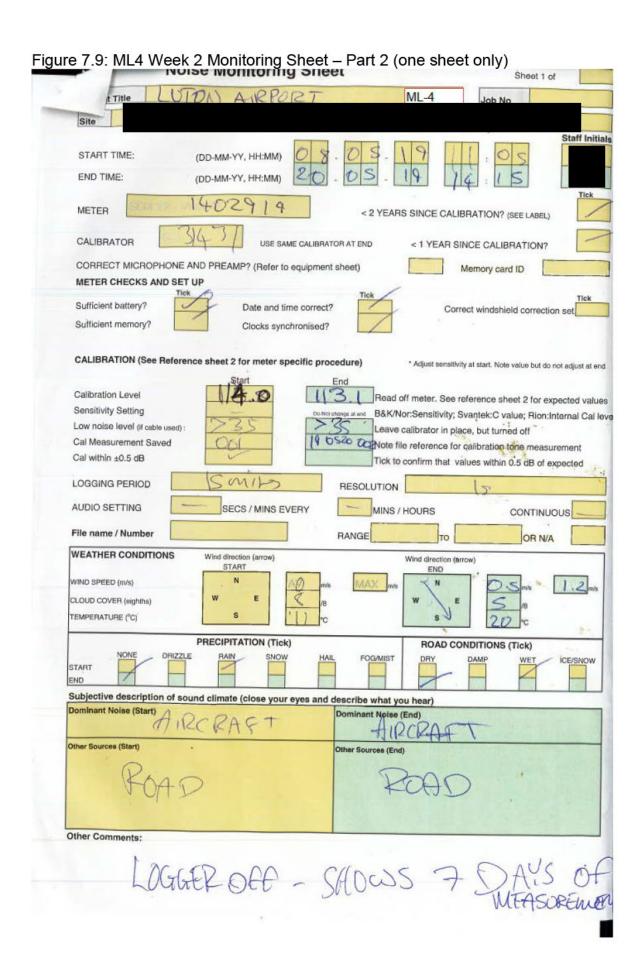
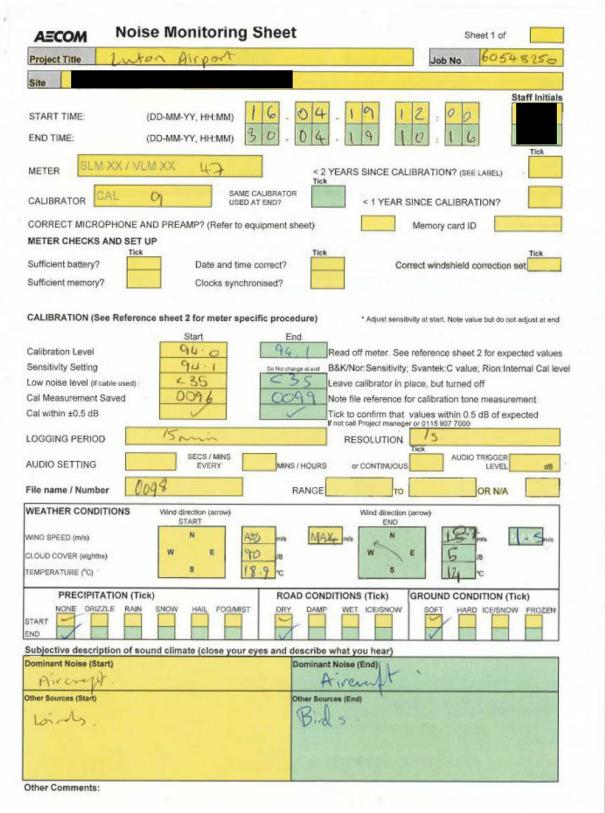


Figure 7.10: ML5 Monitoring Sheet (two sheets)



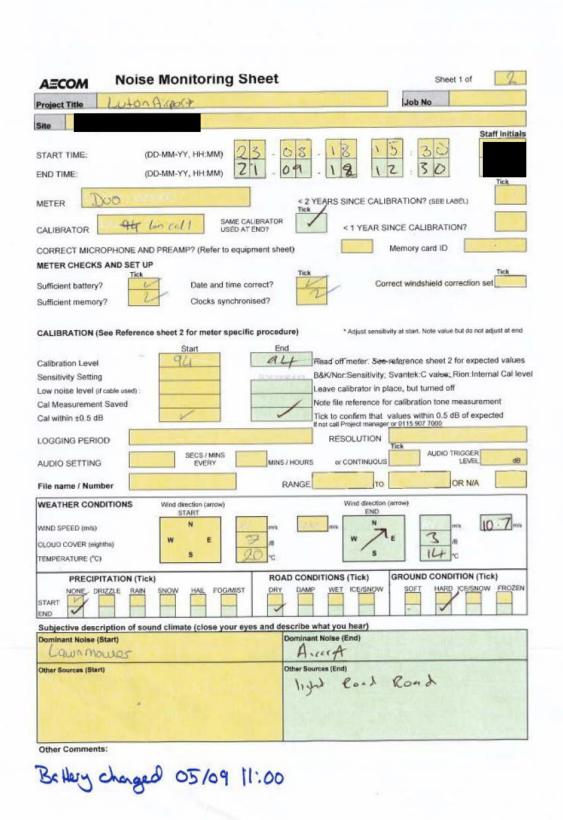
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MICROPHONE HEIGHT ABOVE GROUND MICROPHONE MOUNTED ON (TICK) MICROPA A FRAME AST FENCE JOHN BY JOHN	Site		Date	Meter
DISTANCE FROM VERTICAL SURFACE FAQADE (>3 SM OR +1W) 73. UNE OF SIGHT FROM SOUNCE TO RECEIVER? (YM) ACTUAL OR POTENTIAL NOISE SOUNCES NEARBRY? PENCE PENCE	EQUIPMENT LOCATION			
AFRAME PENCE ACTIVITIES OF SIGHT FROM SOURCE TO RECEIVER CYMP ACTUAL OR POTENTIAL NOISE SOURCES NEARBY? FENCE PENCE ACTUAL OR POTENTIAL NOISE SOURCES NEARBY? FENCE ACTUAL OR POTENTIA	MICROPHONE HEIGHT ABOVE GRO	UND 1.5	METRES	
ACTUAL OR POTENTIAL NOISE SOURCES NEARRY? FENCE ACTUAL OR POTENTIAL NOISE SOURCES NEARRY? FEG AHU / HVAC / SUBSTATION / CAT SCARCE RETO) North arrow Main audible and potential noise sources Photographic direction and positions (meter installed and all round view of surroundings) Distance to nearest roads and other noise sources (identify) Note position, height and construction material of barriers. Note position and type of ground cover (grass, stone, shrubs etc) Func Appular Fine Letters S numbers S numbers Camera ID: Site staff Signature Date Date To This name Signature Date				E (>3.5M OR =1M) 73.5
OTHER THER				
Plan view sketch with distances. Mark: Meter location North arrow Main audible and potential noise souces Photographic direction and positions (meter installed and all round view of surroundings) Distance to nearest roads and other noise sources (identify) Note position, height and construction material of barriers. Note position and type of ground cover (grass, stone, shrubs etc) Ferry GPS Coordinates 2 letters 5 numbers 5 numbers east/west north/south TL 164 219 or GPS ID Signature Date 16 4/17.	OTHER	(EG AHU / HVA	C / SUBSTATION / CAT SCARER E	TC)
Mark: Meter location North arrow Main audible and potential noise souces Photographic direction and positions (meter installed and all round view of surroundings) Distance to nearest roads and other noise sources (identify) Note position, height and construction material of barriers. Note position and type of ground cover (grass, stone, shrubs etc) Feure Funda field GPS Coordinates 2 letters 5 numbers 5 numbers east/west north/south TL 16 4 2 9 or Camera ID: Print name Date 16 4/17	W32			
GPS Coordinates TL 164 ZJ9 or GPS ID Signature Date 16 /4 / 17	Photographic direction and po- Distance to nearest roads and Note position, height and cons	sitions (meter installed and al other noise sources (identify truction material of barriers.	l round view of surroundings) estimate estimate	measured
Alpholo field. Alpholo field. GPS Coordinates TL 164 ZJ9 or GPS ID Signature Date 16/4/17		4.00	fe	uie
GPS Coordinates TL 164 Camera ID: Print name Site staff 2 letters 5 numbers 5 numbers east/west north/south GPS ID Signature Date 16 /4 /17		Ö	Alpurha	field.
GPS Coordinates TL 164 219 or Camera ID: GPS ID Signature Date 16 /4/17				
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GPS Coordinates TL 164 219 or Camera ID: GPS ID Signature Date 16 /4/17				
Camera ID: Print name Site staff GPS ID Signature Date 16 / 4 / 17	2 letters		THE RESERVE THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TRANSPORT NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TRANSPORT NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TRANSPORT NAMED IN COLUMN TWO IS NAMED IN COLUMN TRANSPORT NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN	t/west north/south
Print name Signature Date 16 /4/17	GPS Coordinates TU	64 21	Q or	
Print name Signature Date 16 /4/17	Company ID:		GPS ID	
Site start				Date
	Site staff			16/4/17
QA checked		7		

Noise Monitoring Sheet Sheet 1 of **AECOM Project Title** Staff Initials START TIME: (DD-MM-YY, HH:MM) END TIME: (DD-MM-YY, HH:MM) METER < 2 YEARS SINCE CALIBRATION? (SEE LABEL) SAME CALIBRATOR CALIBRATOR < 1 YEAR SINCE CALIBRATION? USED AT END? CORRECT MICROPHONE AND PREAMP? (Refer to equipment sheet) Memory card ID METER CHECKS AND SET UP Sufficient battery? Date and time correct? Correct windshield correction set Sufficient memory? Clocks synchronised? CALIBRATION (See Reference sheet 2 for meter specific procedure) * Adjust sensitivity at start. Note value but do not adjust at end Start Calibration Level Read off meter. See reference sheet 2 for expected values Sensitivity Setting B&K/Nor:Sensitivity; Svantek:C value; Rion:Internal Cal level Low noise level (if cable used) Leave calibrator in place, but turned off Cal Measurement Saved Note file reference for calibration tone measurement Tick to confirm that values within 0.5 dB of expected If not call Project manager or 0115 907 7000 Cal within ±0.5 dB LOGGING PERIOD RESOLUTION AUDIO TRIGGER SECS / MINS AUDIO SETTING MINS / HOURS or CONTINUOUS RANGE OR N/A File name / Number TO WEATHER CONDITIONS Wind direction (arrow) Wind direction (arrow) START END 16 WIND SPEED (m/s) CLOUD COVER (eighths) TEMPERATURE (°C) PRECIPITATION (Tick) ROAD CONDITIONS (Tick) **GROUND CONDITION (Tick)** NONE DRIZZLE RAIN FOG/MIST WET ICE/SNOW HARD ICE/SNOW START Subjective description of sound climate (close your eyes and describe what you hear) Dominant Noise (End) Dominant Noise (Start) Airplanes Road Traffic Other Sources (End) Other Sources (Start) 2-oad traffic Other Comments: Very close to Airport

Figure 7.11: ML7 Monitoring Sheet (two sheets)

AECOM	Noise Monitorin	ng Sheet	Project	Luten	Sheet 2 of
Site			Date	24/10/18	Meter &M19
QUIPMENT LOC	EATION	13.2	METRES		
		1			
RIPOD	A FRAME		T FROM SOURCE TO	ACE / FAÇADE (>3.5M O RECEIVER? (Y/N)	R =1M)
MAST	FENCE	ACTUAL OR F	OTENTIAL NOISE SO	URCES NEARBY?	PERMIT AND
OTHER		(EG AHU / HV	AC / SUBSTATION / C	AT SCARER ETC)	
Distance t Note posit		noise sources (identil on material of barriers.	all round view of s	Main audible and pote urroundings) estimate estimate	measured measured
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	/				
		Thee meter			
,				Thees	
	1			2	
	7				
		Path			
	2 letters 5 num	here	5 numbers	east/west	north/south
GPS Coordinates	z letters 5 hum	uera .		0°23'24.55"	51052'06.27
2			one in	100	
Camera ID:	Print name		GPS ID [Signature		Date
Nto stoff	- ANTENDARY				7-111
Site staff					

Figure 7.12: ML8 Monitoring Sheet (two sheets)



Site EQUIPMENT LOCATION	Date 23/08/18	Meter
and the second s		meter
MICROPHONE HEIGHT ABOVE GROUND	METRES	
MICROPHONE MOUNTED ON (TICK) DISTANCE FROM	M VERTICAL SURFACE / FAÇADE (>3.5M)	OR =1M)
TRIPOD A FRAME LINE OF SIGHT	FROM SOURCE TO RECEIVER? (Y/N)	
	TENTIAL NOISE SOURCES NEARBY?	
OTHER [EG AND / NVAC	C / SUBSTATION / CAT SCARER ETC)	
Plan view sketch with distances.		
Mark: Meter location North arrow	Main audible and po	tential noise souces
Photographic direction and positions (meter installed and all	round view of surroundings)	
Distance to nearest roads and other noise sources (identify) Note position, height and construction material of barriers.	estimate	measured
Note position and type of ground cover (grass, stone, shrubs	estimate etc)	measured
	- Continue	
	+1 2	2/1/50
		361678,
	-O.D.	594692
	-0.0	074012
2 letters 5 numbers 5	numbers east/west	north/south
	Cusywest	
PS Coordinates	or	15,
amera ID:	GPS ID	
Print name Sig	gnature	Date
te staff		

Noise Monitoring Sheet Sheet 1 of **AECOM Project Title** Luton Aigort Staff Initials START TIME: (DD-MM-YY, HH:MM) END TIME: (DD-MM-YY, HH:MM) 12081 METER < 2 YEARS SINCE CALIBRATION? (SEE LABEL) SAME CALIBRATOR CALL CALIBRATOR < 1 YEAR SINCE CALIBRATION? CORRECT MICROPHONE AND PREAMP? (Refer to equipment sheet) Memory card ID METER CHECKS AND SET UP Sufficient battery? Date and time correct? Correct windshield correction set Sufficient memory? Clocks synchronised? CALIBRATION (See Reference sheet 2 for meter specific procedure) * Adjust sensitivity at start. Note value but do not adjust at end Start 94 Calibration Level Read off meter. See reference sheet 2 for expected values Sensitivity Setting B&K/Nor:Sensitivity; Svantek:C value; Rion:Internal Cal level Low noise level (if cable used): Leave calibrator in place, but turned off Cal Measurement Saved Note file reference for calibration tone measurement Cal within ±0.5 dB Tick to confirm that values within 0.5 dB of expected not call Project manager or 0115 907 7000 LOGGING PERIOD RESOLUTION AUDIO TRIGGER SECS / MINS AUDIO SETTING MINS / HOURS or CONTINUOUS RANGE OR N/A File name / Number TO WEATHER CONDITIONS Wind direction (arrow) Wind direction (arrow) START END 10 WIND SPEED (m/s) -DE CLOUD COVER (eighths) S TEMPERATURE (°C) PRECIPITATION (Tick) ROAD CONDITIONS (Tick) GROUND CONDITION (Tick) FOG/MIST START Subjective description of sound climate (close your eyes and describe what you hear) Dominant Noise (Start) Dominant Noise (End) Accord arcasty Other Sources (End) Other Sources (Start) Plant noise? Other Comments: GPS Coordinate: N.51°50'37.74"

w. 0° 26' 55,08"

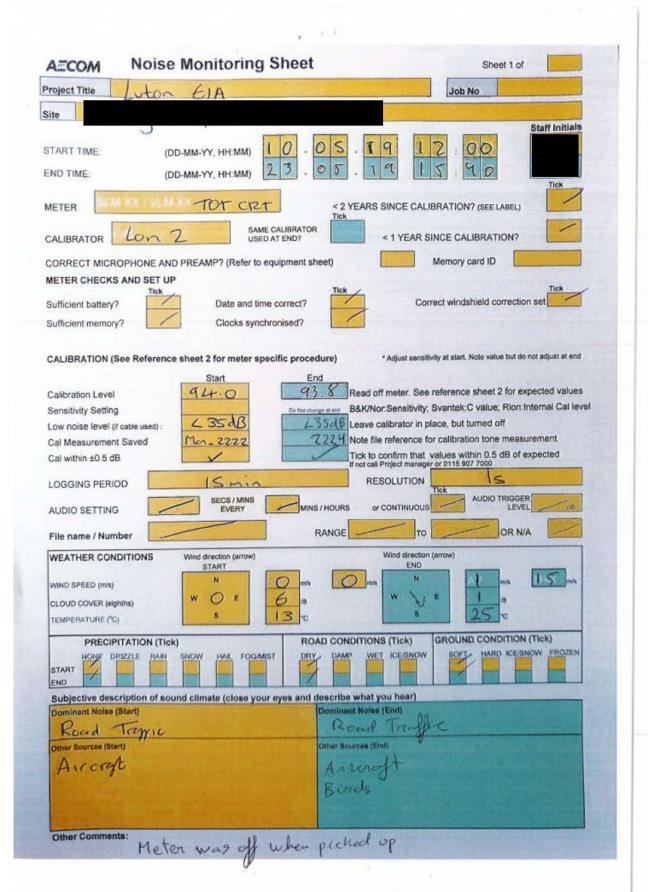
Figure 7.13: ML9 Monitoring Sheet (one sheet only)

Noise Monitoring Sheet Sheet 1 of UTON AIRPORT Project Title Job No Site Staff Initials (DD-MM-YY, HH:MM) START TIME: (DD-MM-YY, HH:MM) END TIME: TOT CRI METER < 2 YEARS SINCE CALIBRATION? (SEE LABEL) < 1 YEAR SINCE CALIBRATION? CALIBRATOR USE SAME CALIBRATOR AT END CORRECT MICROPHONE AND PREAMP? (Refer to equipment sheet) Memory card ID METER CHECKS AND SET UP Sufficient battery? Correct windshield correction set Date and time correct? Sufficient memory? Clocks synchronised? CALIBRATION (See Reference sheet 2 for meter specific procedure) * Adjust sensitivity at start. Note value but do not adjust at end Start Read off meter. See reference sheet 2 for expected values Calibration Level Sensitivity Setting B&K/Nor:Sensitivity; Svantek:C value; Rion:Internal Cal level Low noise level (it cable used): Leave calibrator in place, but turned off Note file reference for calibration tone measurement Cal Measurement Saved Cal within ±0.5 dB Tick to confirm that values within 0.5 dB of expected LOGGING PERIOD RESOLUTION CONTINUOUS AUDIO SETTING SECS / MINS EVERY MINS / HOURS File name / Number RANGE OR N/A WEATHER CONDITIONS Wind direction (arrow) Wind direction (arrow) START END 4 4 m/s WIND SPEED (m/s) CLOUD COVER (eighths) TEMPERATURE (°C) PRECIPITATION (Tick) ROAD CONDITIONS (Tick) DRIZZLE RAIN HAIL FOG/MIST ICE/SNOW START Subjective description of sound climate (close your eyes and describe what you hear) Dominant Noise (Start) Dominant Noise (End) V.040 Other Sources (Start) Other Sources (End) Unsure why, data collected until 05/05/19 at 14:37. Other Comments: METER NOT RUNNING OI)

Figure 7.14: ML10 Monitoring Sheet – Part 1 (two sheets)

lite			Date	Meter
	ENT LOCATION			
	HONE HEIGHT ABOVE GROUND	7.5	METRES	
			Maria I	1 1 2
MICROPHO TRIPOD	NE MOUNTED ON (TICK)		ERTICAL SURFACE / FAÇA OM SOURCE TO RECEIVER	
MAST	FENCE		ITIAL NOISE SOURCES NE	
OTHER		(EG AHU/HVAC/S	UBSTATION / CAT SCARE	R ETC)
OTHER				
	sketch with distances.	North commun	Maria accel	ible and askertist asias assess
	leter location hotographic direction and positions (me	North arrow eter installed and all rou		ible and potential noise souces gs)
D	istance to nearest roads and other nois	se sources (identify)	20 m estim	ate measured
N	ote position and height of acoustical ba	arriers.	* estim	
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	+ 1	1.		
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		220m		
		220m		
		CAO.	umbers ea	ust/west north/south
	2 letters 5 numbers	CAD		sst/west north/south
GPS Coon	2 letters 5 numbers	CAD		sst/west north/south
GPS Coon	dinates 2 letters 5 numbers 0 65 2 0	CAD	3 or	sst/west north/south
	dinates 2 letters 5 numbers 0 65 2 0	CAD		ist/west north/south
Camera ID	dinates IL 5 numbers 0 65 7 0	CAD	GPS ID	ast/west north/south
	dinates IL 5 numbers 0 65 7 0	CAD	GPS ID Date	

Figure 7.15: ML10 Monitoring Sheet – Part 2 (one sheet only)



Noise Monitoring Sheet Sheet 1 of UTON AIPPORT **Project Title** Site Staff Initials START TIME: (DD-MM-YY, HH:MM) END TIME: (DD-MM-YY, HH:MM) 20 A METER < 2 YEARS SINCE CALIBRATION? (SEE LABEL) CALIBRATOR USE SAME CALIBRATOR AT END < 1 YEAR SINCE CALIBRATION? CORRECT MICROPHONE AND PREAMP? (Refer to equipment sheet) Memory card ID METER CHECKS AND SET UP Sufficient battery? Date and time correct? Correct windshield correction set Sufficient memory? Clocks synchronised? CALIBRATION (See Reference sheet 2 for meter specific procedure) * Adjust sensitivity at start. Note value but do not adjust at end Calibration Level Read off meter. See reference sheet 2 for expected values Sensitivity Setting B&K/Nor:Sensitivity; Svantek:C value; Rion:Internal Cal level Low noise level (if cable used): Leave calibrator in place, but turned off Cal Measurement Saved Man 2001 Note file reference for calibration tone measurement Cal within ±0.5 dB Tick to confirm that values within 0.5 dB of expected LOGGING PERIOD DMIN RESOLUTION **AUDIO SETTING** SECS / MINS EVERY MINS / HOURS CONTINUOUS Seedate File name / Number RANGE OR N/A WEATHER CONDITIONS Wind direction (arrow) Wind direction (arrow) START 4.4 END WIND SPEED (m/s) MAD CLOUD COVER (eighths) TEMPERATURE (°C) PRECIPITATION (Tick) ROAD CONDITIONS (Tick) DRIZZLE FOG/MIST START ICE/SNOW Subjective description of sound climate (close your eyes and describe what you hear) Dominant Noise (End) Other Sources (Start) Other Sources (End) Other Comments: METER WAS OFF AF PLORUP, Ran out of Battery

Figure 7.16: ML11 Monitoring Sheet – Part 1 (two sheets)

	1						April 1	
ie l					Date		Meter	
UIPM	ENT LOCAT	ON						
	HONE HEIG		ROUND		METRES			
	ONE MOUNTED			DISTANCE FI	ROM VERTICAL SURFA	CE / FAÇADE (>3.5N	MOR=1M) 73	. 5
POD		A FRAME		LINE OF SIGH	T FROM SOURCE TO	RECEIVER? (Y/N)		
ST HER	/	FENCE		(EG AHU/H)	AC / SUBSTATION / CA	T SCARER ETC)		
HER								
	w sketch wi			Marth organi	,	Main audible and	potential noise souces	
ark:	Meter locatio	n direction ar	d positions (me	North arrow eter installed and	all round view of su	rroundings)		
	Distance to r	earest roads	and other nois	se sources (identi	fy) Din	estimate estimate	measured	
	Note position	and height	of acoustical ba	arriers.		0-	1	
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0 -				^				
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-	L hat let	2000	1	101	10	V		
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	Chen	zune.	1	710	-		Wood !	luce
	Cnen	zune.	1	710			Word!	luce
	Cneu	zune.	+	710			Word !	luce
	Chen	zune.	,	710			Word !	luce
	Chen	zune.	1	710			Word !	luie
	Chen	zune.		710			Word !	luie
	Chen	zune,	7	710			Word !	luce
	Chen	zune.	?	wh Ga		1	Word !	luce
	Chen	zune,	?	710			Word !	luce
	Chen	zune,	?	710			Word !	luce
	Chen	zune,	?	710			Word !	lline
	Chen	zune,	7	710			Word !	lline
	t neu	zune,	?	710			Word !	lline
	Chen	zune,	7	710			Word !!	lline
	t neu	zune,	?	710				
	Chen	2 letters	5 numbe	wh Go		east/wes		
Cha	Coordinates	2 letters		wh Go	der			
GPS (Coordinates	2 letters TL		wh Go	Jonan Source of	east/wes		
GPS (Came		TL		wh Go	der	east/wes		
		2 letters TL Signature		wh Go	Jonan Source of	east/wes		
	ra ID:	TL		wh Go	Jonan Source of	east/wes		

Figure 7.17: ML11 Monitoring Sheet – Part 2 (one sheet only)

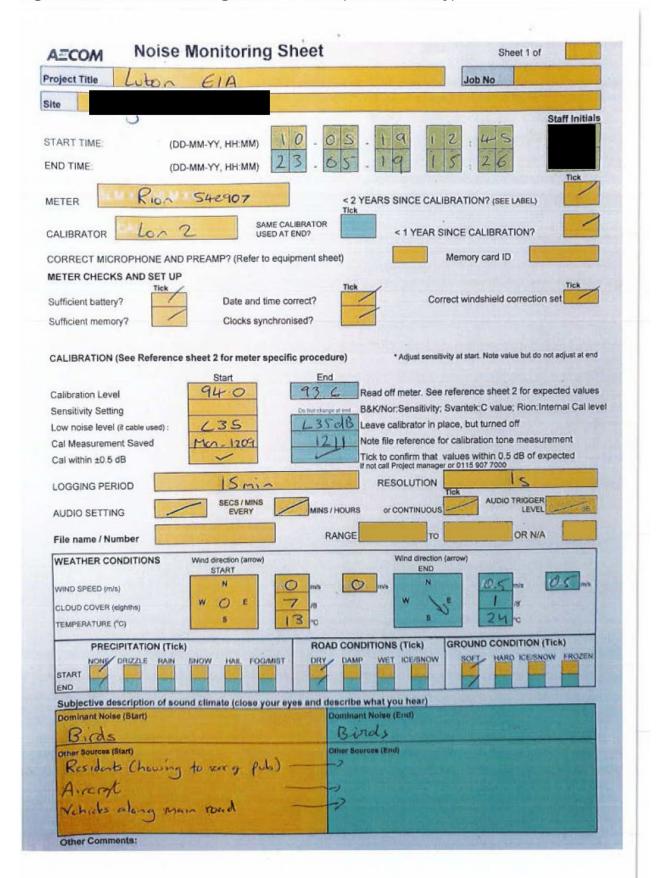


Figure 7.18: ML12 Monitoring Sheet – Part 1 (two sheets) **Noise Monitoring Sheet** Sheet 1 of MON ANRPORT **Project Title** Job No Site Staff Initials START TIME: (DD-MM-YY, HH:MM) END TIME: (DD-MM-YY, HH:MM) < 2 YEARS SINCE CALIBRATION? (SEE LABEL) METER < 1 YEAR SINCE CALIBRATION? CALIBRATOR USE SAME CALIBRATOR AT END CORRECT MICROPHONE AND PREAMP? (Refer to equipment sheet) Memory card ID METER CHECKS AND SET UP Sufficient battery? Date and time correct? Correct windshield correction set Sufficient memory? Clocks synchronised? CALIBRATION (See Reference sheet 2 for meter specific procedure) * Adjust sensitivity at start. Note value but do not adjust at end Calibration Level Read off meter. See reference sheet 2 for expected values Sensitivity Setting B&K/Nor:Sensitivity; Svantek:C value; Rion:Internal Cal level Low noise level (If cable used); Leave calibrator in place, but turned off Man 1209 Cal Measurement Saved Note file reference for calibration tone measurement Cal within ±0.5 dB Tick to confirm that values within 0.5 dB of expected LOGGING PERIOD RESOLUTION SECS / MINS EVERY MINS / HOURS CONTINUOUS AUDIO SETTING RANGE File name / Number TO OR N/A WEATHER CONDITIONS Wind direction (arrow) Wind direction (arrow) START END WIND SPEED (m/s) CLOUD COVER (eighths) TEMPERATURE (°C) PRECIPITATION (Tick) ROAD CONDITIONS (Tick) FOGMIST DAIZZLE RAIN SNOW HAIL DRY ICE/SNOW START Subjective description of sound climate (close your eyes and describe what you hear) Dominant Noise (End) Other Sources (End) Other Comments: had Stopped your Richard Unsure why, data collected until 03/05/19

Cito			Date		Meter	
Site			Date		netel	
EQUIPMENT L						
MICROPHONE	HEIGHT ABOVE GROUND		METRES			
	UNTED ON (TICK)		ERTICAL SURFACE / FAÇA) >	3.5m
TRIPOD MAST	A FRAME FENCE		M SOURCE TO RECEIVER TIAL NOISE SOURCES NE		4	
OTHER			UBSTATION / CAT SCARE			
OTHER						
	ch with distances.	orth arrow	Main aud	ible and potential	noise souce	as
Mark: Meter lo Photog	raphic direction and positions (meter	installed and all rou	nd view of surroundin	gs)	Tiolae added	,,
Distanc	e to nearest roads and other noise so	ources (identify)	4 _m estim	ate	70000	sured
Note po	osition and height of acoustical barrier	rs.	esuii	late	mea	sured
					-	
					-7	ees
					14	ees
		0				
		785-401				
		7	6			
		ay in			-	
		hy m				
		hy m				
		Pay m				
		Pry m				
		hy m				
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		Pay m				
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		They m				
		Try m				
		They m				
		Try m				
		They m				
	O letters	V	Imhere	asthwast	north	South
	2 letters 5 numbers	5 m		ast/west	north	/south
GPS Coordinate	1 00386	V		ast/west	north	/south
	1 00386	5 m	3 or	ast/west	north	/south
GPS Coordinate	1 00386	5 m	13	ast/west	north	/south
	TL 08388	5 m	GPS ID	ast/west	north	/south

OR N/A

GROUND CONDITION (Tick)

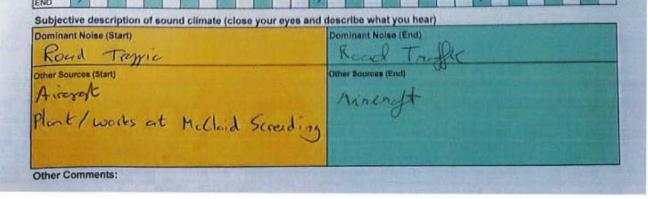
Noise Monitoring Sheet A=COM Sheet 1 of Project Title EIA Job No Site Staff Initials START TIME: (DD-MM-YY, HH:MM) END TIME (DD-MM-YY, HH:MM) SLM 19 METER < 2 YEARS SINCE CALIBRATION? (SEE LABEL) SAME CALIBRATOR CALIBRATOR USED AT END? < 1 YEAR SINCE CALIBRATION? CORRECT MICROPHONE AND PREAMP? (Refer to equipment sheet) Memory card ID METER CHECKS AND SET UP Sufficient battery? Date and time correct? Correct windshield correction set Sufficient memory? Clocks synchronised? CALIBRATION (See Reference sheet 2 for meter specific procedure) * Adjust sensitivity at start. Note value but do not adjust at end Start 94.0 Calibration Level Read off meter. See reference sheet 2 for expected values Sensitivity Setting B&K/Nor:Sensitivity; Svantek:C value; Rion:Internal Cal level Low noise level (if cable used) 135 dB Leave calibrator in place, but turned off Cal Measurement Saved 104 Note file reference for calibration tone measurement Tick to confirm that values within 0.5 dB of expected if not call Project manager or 0115 907 7000 Cal within ±0.5 dB 15 LOGGING PERIOD RESOLUTION SECS / MINS MINS / HOURS or CONTINUOUS **AUDIO SETTING EVERY** LEVEL

Figure 7.19: ML12 Monitoring Sheet – Part 2 (one sheet only)

Wind direction (arrow) START

0

FOG/MIST



RANGE

0

ROAD CONDITIONS (Tick)

TO

Wind direction (arrow)

END

8

File name / Number

WIND SPEED (m/s)

TEMPERATURE (°C)

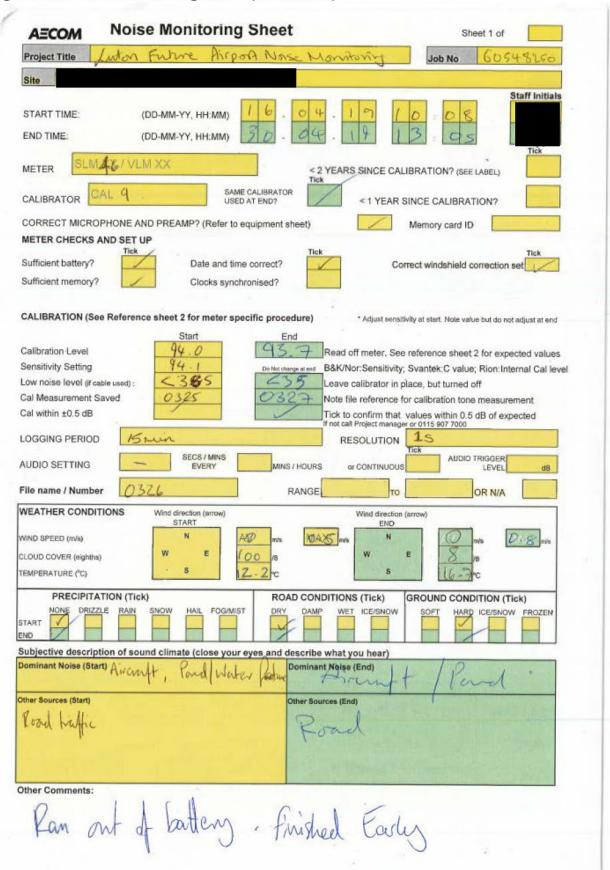
START

CLOUD COVER (eighths)

PRECIPITATION (Tick)

WEATHER CONDITIONS

Figure 7.20: ML13 Monitoring Sheet (two sheets)



AECOM	Noise Monitoring Sh	leet [Project	
Site			Date	Meter
EQUIPMENT LO	CATION			
MICROPHONE H	EIGHT ABOVE GROUND	S METE	RES	
MICROPHONE MOUN		DISTANCE FROM VERTIC		
TRIPOD .	A FRAME FENCE	LINE OF SIGHT FROM SO ACTUAL OR POTENTIAL		
OTHER	70.00	(EG AHU / HVAC / SUBST		Lacarol C. 100
OTHER				
Distance Note posi Note posi	phic direction and positions (meter to nearest roads and other noise ston, height and construction mater tion, and type of ground cover (gra	sources (identify) erial of barriers. Clay	Som estimate estimate	measured measured
Coeso (Small fish	3m	Tm	
GPS Coordinates	Small fish Pond 1	0	i,h	/west north/south
	Small fish Pond 1x	3m Water forth	ers east	/west north/south
GPS Coordinates	Small fish Pond 1x	3m Water forth	ers east	/west north/south Date

Figure 7.21: ML14 Monitoring Sheet (two sheets)

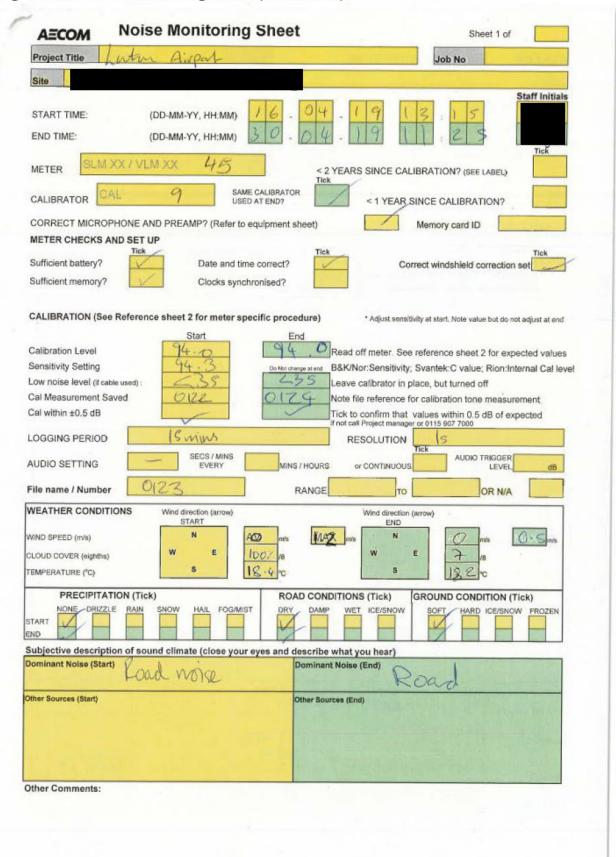
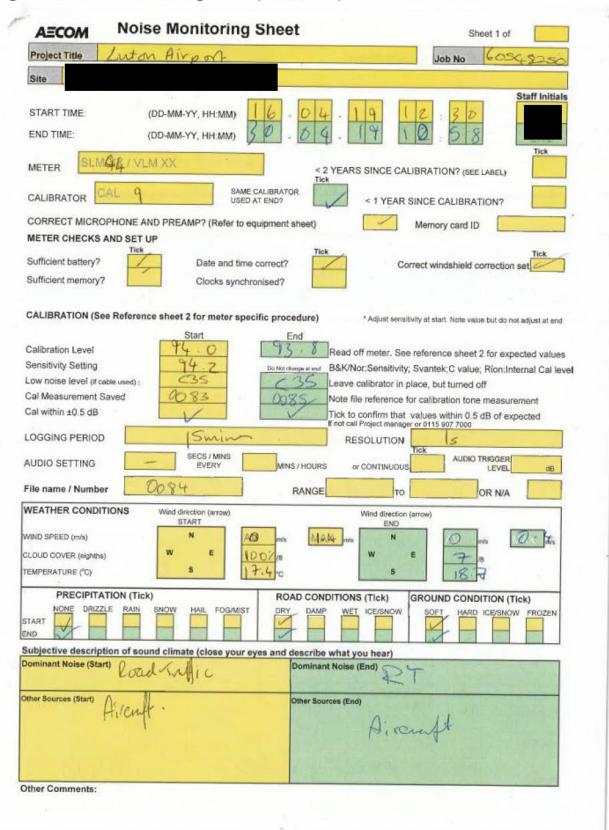


Figure 7.22: ML15 Monitoring Sheet (two sheets)



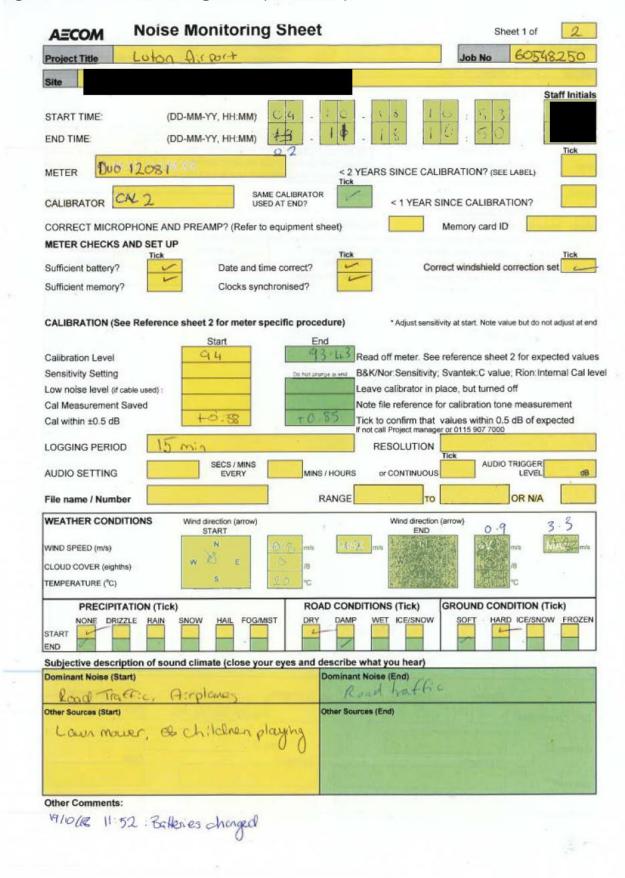
AEC	MO	Noise Monitor	ing Sheet	Project		Sheet 2 of
ite				Date		Meter
QUIPN	MENT LOCA	ATION				
MICROF	PHONE HEI	GHT ABOVE GROUN	ID [1-5	METRES		
MICROPH	HONE MOUNTE	71		OM VERTICAL SURFACE / F		1M) lus
TRIPOD	/	A FRAME FENCE		FROM SOURCE TO RECEI OTENTIAL NOISE SOURCES		N
OTHER		,		AC / SUBSTATION / CAT SCA		
OTHER						
	Meter locati Photograph Distance to Note position	nic direction and position nearest roads and other on, height and construct	North arrow ons (meter installed and a ner noise sources (identif ction material of barriers. cover (grass, stone, shru	all round view of surrour y) Over es	audible and poten ndings) stimate stimate	measured
				Trees/Br	thes	RM
	fort	ı				
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			00	0	->	1
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				P	1	
			numbers	5 numbers	east/west	north/sout
GPS C	Coordinates	TL 118	3 27	O or		
Come	ra ID:			GPS ID		
Camer	TA IU.	Print name		Signature		Date /
Site st	taff					16/4/19
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QA ch	necked					

Figure 7.23: ML16 Monitoring Sheet (two sheets) **Noise Monitoring Sheet** Sheet 1 of UTON AIRPORT Job No **Project Title** Site Staff Initials (DD-MM-YY, HH:MM) START TIME: (DD-MM-YY, HH:MM) END TIME: Tick < 2 YEARS SINCE CALIBRATION? (SEE LABEL) METER < 1 YEAR SINCE CALIBRATION? CALIBRATOR USE SAME CALIBRATOR AT END CORRECT MICROPHONE AND PREAMP? (Refer to equipment sheet) Memory card ID METER CHECKS AND SET UP Sufficient battery? Date and time correct? Correct windshield correction set Sufficient memory? Clocks synchronised? CALIBRATION (See Reference sheet 2 for meter specific procedure) * Adjust sensitivity at start. Note value but do not adjust at end Start Calibration Level Read off meter. See reference sheet 2 for expected values Sensitivity Setting B&K/Nor:Sensitivity; Svantek:C value; Rion:Internal Cal level Leave calibrator in place, but turned off Low noise level (if cable used) : Cal Measurement Saved Note file reference for calibration tone measurement Cal within ±0.5 dB Tick to confirm that values within 0.5 dB of expected RESOLUTION LOGGING PERIOD AUDIO SETTING SECS / MINS EVERY MINS / HOURS CONTINUOUS RANGE File name / Number OR N/A WEATHER CONDITIONS Wind direction (arrow) Wind direction (arrow) START WIND SPEED (m/s) CLOUD COVER (eighths) S TEMPERATURE (°C) PRECIPITATION (Tick) **ROAD CONDITIONS (Tick)** DRIZZLE **FOG/MIST** ICE/SNOW WET START Subjective description of sound climate (close your eyes and describe what you hear) Dominant Noise (Start) Aucres Soure soul Dominant Noise (End) Other Sources (Start) Other Sources (End)

Other Comments:

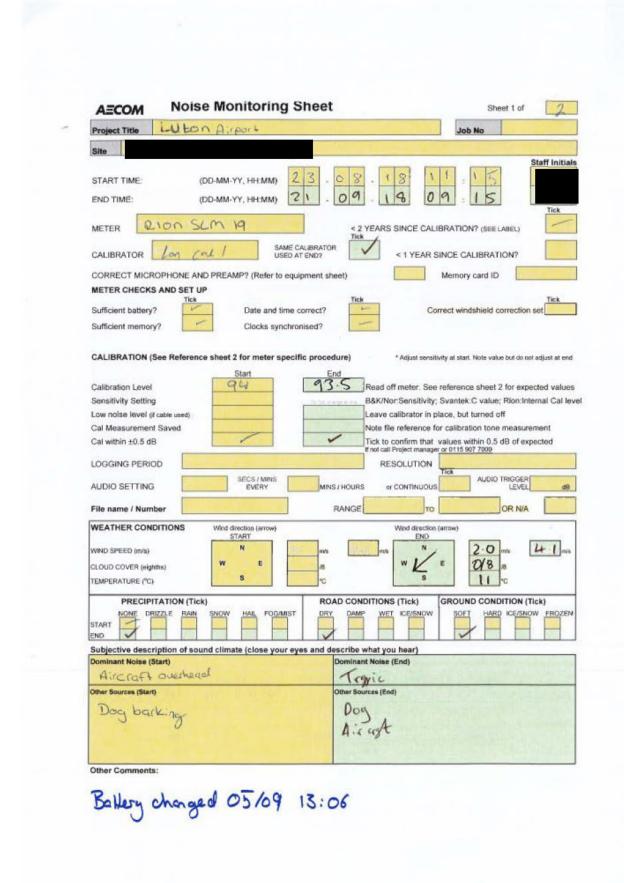
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lan view sketch with distances. lark: Meter location Photographic direction and positions (no Distance to nearest roads and other no Note position and height of acoustical learning to the control of t	oise sources (identify)	Main audible and poten surroundings) estimate estimate	measured measured
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amera ID: Signature ,	GPS ID	Date	
ite staff		23/4/19	

Figure 7.24: ML17 Monitoring Sheet (two sheets)



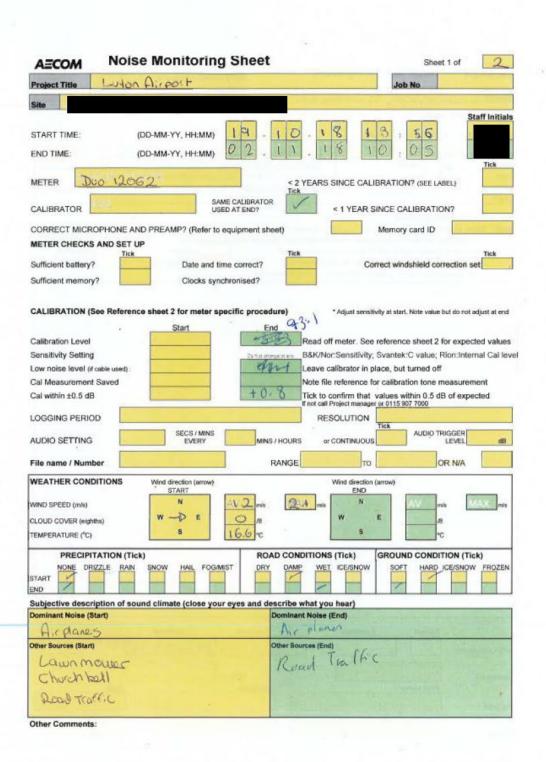
Cite				Date	04/101	18	Meter	201208
Site						-	-	
EQUIPMENT LO								
MICROPHONE	HEIGHT ABOVE O	ROUND	1. 4					
MICROPHONE MOI					SURFACE / FAÇADÊ		=1M)	
TRIPOD MAST	A FRAME FENCE				SE SOURCES NEAR			
OTHER			(EG AHU / H\	VAC / SUBSTATIO	ON / CAT SCARER E	TC)		
OTHER			- 1					
Mark: Meter lo Photogr Distano Note po	ch with distances, position and applied direction and to nearest roads sistion, height and distinguished and type of great and type of gre	d positions (mete and other noise construction mate	sources (ident erial of barriers	tify) s.	Main audible v of surroundings estimate estimate)	n	neasured neasured
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GPS Coordinat				GPS Signature		0. 12	Date	3

Figure 7.25: ML18 Monitoring Sheet (two sheets)



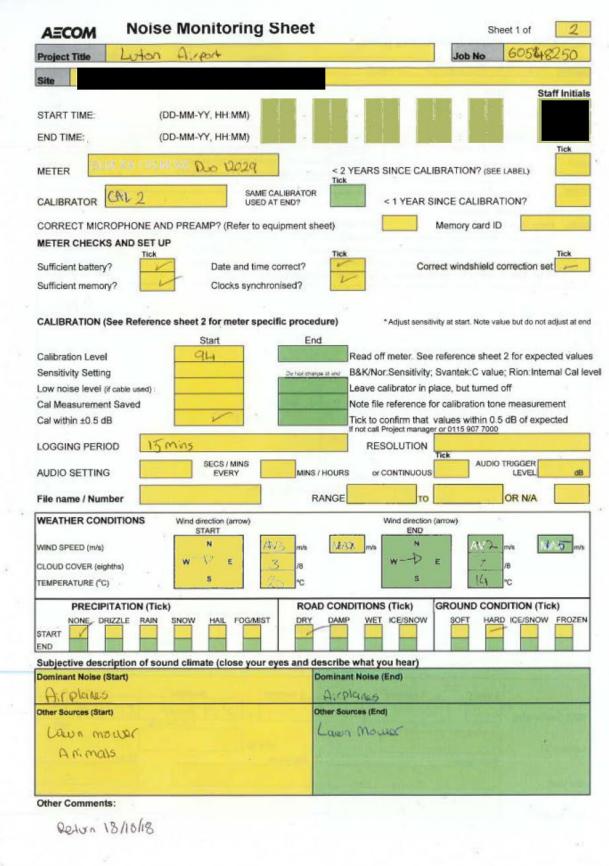
A=COM	Noise Mo	nitoring Sheet		Project		Sheet 2 of
ito				Date 2	3/08/18	Meter SLM19
QUIPMENT LOC	ATION					
ICROPHONE HE	EIGHT ABOVE GI	ROUND	MET	RES		
CROPHONE MOUN	ITED ON (TICK)	D	ISTANCE FROM VERT	CAL SURFACE	/ FAÇADE (>3.5M OF	R=1M) In
RIPOD	A FRAME	u	NE OF SIGHT FROM S	OURCE TO RE	CEIVER? (Y/N)	
THER	FENCE		CTUAL OR POTENTIAL G AHU / HVAC / SUBS			
THER		1 1/5	G AND THVACT SOBS	IATIONTONES	CAREREIO	
lan view sketch	with distances					
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		ind other noise sourc			estimate	measured
		onstruction material or ound cover (grass, s			estimate	measured
	2 letters	5 numbers	5 numb	ers	east/west	north/south
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	Print name		Signatur	е		Date
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e staff						
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Figure 7.26: ML19 Monitoring Sheet (two sheets)



MICROPHONE HEIGHT ABOVE GROUND AFRAME AST FENCE Plan view sketch with distances. Mark: Meter location Photographic direction and positions (meter installed and all round view of surroundings) Distance to nearest roads and other noise sources (identify) Note position and type of ground cover (grass, stone, shrubs etc) METAGE PROM VERTICAL SURFACE (FAÇADE (>3.5M OR = 1M) LINE OF SIGHT FROM SOURCE TO RECEIVER? (Y/RI) ACTUAL OR POTENTIAL NOISE SOURCES NEARBY? DITHER Main audible and potential noise sources (identify) Distance to nearest roads and other noise sources (identify) Note position, height and construction material of barriers. Note position and type of ground cover (grass, stone, shrubs etc)	P.16							19/10/18	Meter	Du
AFRAME Plan View sketch with distances. Mark: Meter location Photographic direction and positions (meter installed and all round view of surroundings) Distance to nearest roads and other noise sources (identify) Note position and type of ground cover (grass, stone, shrubs etc) SPS Coordinates PSS Coordinates Distance In Interes Signature Date Distance PROVERTICAL SURFACE (FACADE (>3.5M OR =1M) UNE OF SIGHT FROM SOURCE TO RECEIVER? (VM) ACTUAL OR POTENTIAL NOISE SOURCES NEARBY? (IEG AND /INVAC / SURSTATION / CAT SCARER ETC) DISTANCE FROM VERTICAL SURFACE (FACADE (>3.5M OR =1M) UNE OF SIGHT FROM SOURCE TO RECEIVER? (VM) ACTUAL OR POTENTIAL NOISE SOURCES NEARBY? (IEG AND /INVAC / SURSTATION / CAT SCARER ETC) THERE Plan View sketch with distances. Main audible and potential noise sources (identify) estimate met Note position and open one of the roise sources (identify) estimate met Note position and type of ground cover (grass, stone, shrubs etc) SIGNATURE SIGNATURE Date Date	Site	L				D	ate	1/10110	aneter	
DISTANCE FROM VERTICAL SURFACE / FACADE (>3 5M OR = 1M) UNE OF SIGHT FROM SOURCE TO RECEIVER? (VM) ACTUAL OR POTENTIAL NOISE SOURCES NEARBY? THERE Visit View sketch with distances. Mark: Meter location Photographic direction and positions (meter installed and all round view of surroundings) Distance to nearest roads and other noise sources (identify) Note position and type of ground cover (grass, stone, shrubs etc) SPS Coordinates SPS Coordinates OSTANCE FROM VERTICAL SURFACE / FACADE (>3 5M OR = 1M) UNE OF SIGHT FROM SOURCE TO RECEIVER? (VM) ACTUAL OR POTENTIAL NOISE SOURCES NEARBY? (IEG AND / INVAC / SUBSTATION / CAT SCARER ETC) THERE Visit View sketch with distances. Mark: Meter location North arrow Main auditie and potential noise sources (identify) estimate meter on the surroundings Main auditie and potential noise sources (identify) estimate meter on the surroundings Main auditie and potential noise sources (identify) estimate meter on the surroundings Main auditie and potential noise sources (identify) estimate meter on the surroundings Main auditie and potential noise sources (identify) estimate meter on the surroundings Main view sketch with distances. Mark: Meter location North arrow Main auditie and potential noise sources (identify) estimate meter on the surroundings Main view sketch with distances. Mark: Meter location North arrow Main auditie and potential noise sources (identify) estimate meter location Main view sketch with distances. Mark: Meter location North arrow Main auditie and potential noise sources (identify) estimate meter location Main view sketch with distances. Mark: Meter location Main view sketch with distances. Mark: Meter location North arrow Main auditie and potential noise sources (identify) estimate meter location Main view sketch with distances. Mark: Meter location North arrow Main auditie and potential noise sources Mark: Meter location North arrow Main view sketch with arrow Main view sketch with arrow Main view sketch with arrow Main view sk	EQUIP	MENT LOCAT	ION							
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ACTUAL OR POTENTIAL NOISE SOURCES NEARBY? (BEG AND ITWAC / SUBSTATION / CAT SCARER ETC) TOTHER Plan view sketch with distances. Mark: Meter location North arrow Main audible and potential noise sources (identify) Photographic direction and positions (meter installed and all round view of surroundings) Distance to nearest roads and other noise sources (identify) Note position, height and construction material of barriers. Note position and type of ground cover (grass, stone, shrubs etc) PS Coordinates SPS Coordinates S numbers S numbers S numbers S numbers S numbers Signature Date	MICROP	HONE MOUNTED	ON (TICK)		DISTANC	E FROM VERTICA	L SURFA	CE / FAÇADE (>3.5	M OR =1M)	
THERE Beg ANU / HAVAC / SUBSTATION / CAT SCARER ETC) Plan view sketch with distances. Mark: Meter location	TRIPOD	N			-					
Plan view sketch with distances. Mark: Meter location North arrow Main audible and potential noise source properties direction and positions (meter installed and all round view of surroundings) Distance to nearest roads and other noise sources (identify) estimate Note position, height and construction material of barriers. Note position and type of ground cover (grass, stone, shrubs etc) Seps Coordinates 2 letters 5 numbers 5 numbers east/west north Signature Date Print name Signature Date	OTHER		PENCE		100000000000000000000000000000000000000					
Meter location Photographic direction and positions (meter installed and all round view of surroundings) Distance to nearest roads and other noise sources (identify) Note position, height and construction material of barriers. Note position and type of ground cover (grass, stone, shrubs etc) SPS Coordinates 2 letters 5 numbers 5 numbers 6 surroundings) estimate meterial estimate estimate print name 2 letters 5 numbers 5 numbers 6 cordinates GPS ID Print name Date	OTHER								1	
Camera ID: GPS ID Print name Date	Mark:	Photographic Distance to no Note position	direction and earest roads a , height and co	positions (mete and other noise onstruction mat	er installed ar sources (ide erial of barrie	ntify) ers.		oundings) estimate	potential noise	meas meas
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site staff		F	Print name			Signature			Date	
		er .								
	Site sta									

Figure 7.27: ML20 Monitoring Sheet (two sheets)



Site				Date	04/10/16	Meter Duopo
EQUIPMENT LO	CATION					
MICROPHONE	HEIGHT ABOVE GF	ROUND	1.9	METRES		
MICROPHONE MOL	UNTED ON (TICK)		DISTANCE FROM	VERTICAL SURF	ACE / FAÇADE (>3.5M	I OR =1M)
TRIPOD -	A FRAME	4			RECEIVER? (Y/N)	
MAST OTHER	FENCE		The state of the s		OURCES NEARBY? AT SCARER ETC)	
OTHER					The second second	
Mark: Meter loo Photogra Distance Note pos	th with distances. cation aphic direction and p to nearest roads ar sition, height and con sition and type of gro	ositions (meter nd other noise s nstruction mate	sources (identify) rial of barriers.	ound view of s	Main audible and pour urroundings) estimate estimate	measured measured
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			Toea	to post		
	2 letters	5 numbers	meter attached	to post	east/west	north/south
PS Coordinates	2 letters	5 numbers	meter attached	to post		north/south 51 °48134 . 22"
	2 letters Print name	5 numbers	There of the check	to post	east/west	51°48'39.98"
GPS Coordinates Camera ID:		5 numbers	There of the check	to post	east/west	

Figure 7.28: ML21 Monitoring Sheet (two sheets) Noise Monitoring Sheet Sheet 1 of UTON AIRPORT **Project Title** Site Staff Initials START TIME: (DD-MM-YY, HH:MM) END TIME: (DD-MM-YY, HH:MM). METER < 2 YEARS SINCE CALIBRATION? (SEE LABEL) CALIBRATOR USE SAME CALIBRATOR AT END < 1 YEAR SINCE CALIBRATION? CORRECT MICROPHONE AND PREAMP? (Refer to equipment sheet) Memory card ID METER CHECKS AND SET UP Sufficient battery? Date and time correct? Correct windshield correction se Sufficient memory? Clocks synchronised? CALIBRATION (See Reference sheet 2 for meter specific procedure) * Adjust sensitivity at start. Note value but do not adjust at end Calibration Level Read off meter. See reference sheet 2 for expected values Sensitivity Setting B&K/Nor:Sensitivity; Svantek:C value; Rion:Internal Cal level Low noise level (if cable used) : Leave calibrator in place, but turned off Cal Measurement Saved Note file reference for calibration tone measurement Cal within ±0.5 dB Tick to confirm that values within 0.5 dB of expected LOGGING PERIOD RESOLUTION AUDIO SETTING SECS / MINS EVERY MINS / HOURS CONTINUOUS File name / Number RANGE OR N/A WEATHER CONDITIONS Wind direction (arrow) Wind direction (arrow) START END WIND SPEED (m/s) CLOUD COVER (eighths) TEMPERATURE (°C) S PRECIPITATION (Tick) **ROAD CONDITIONS (Tick)** DRIZZLE SNOW RAIN FOG/MIST ICE/SNOW START Subjective description of sound climate (close your eyes and describe what you hear) Other Comments:

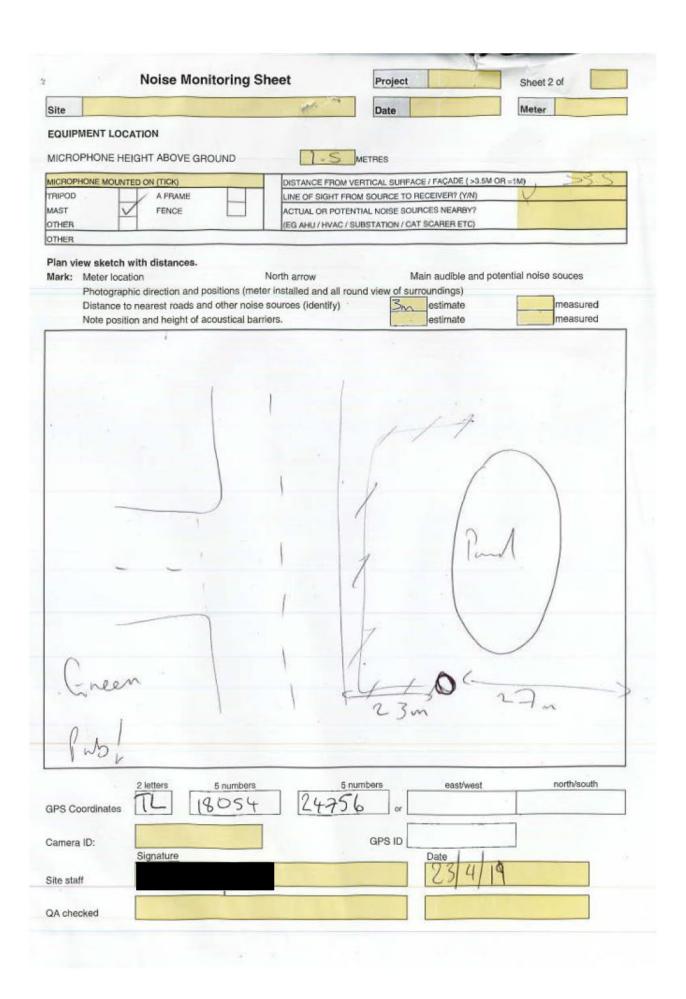


Figure 7.29: ML22 Monitoring Sheet (one sheet only)

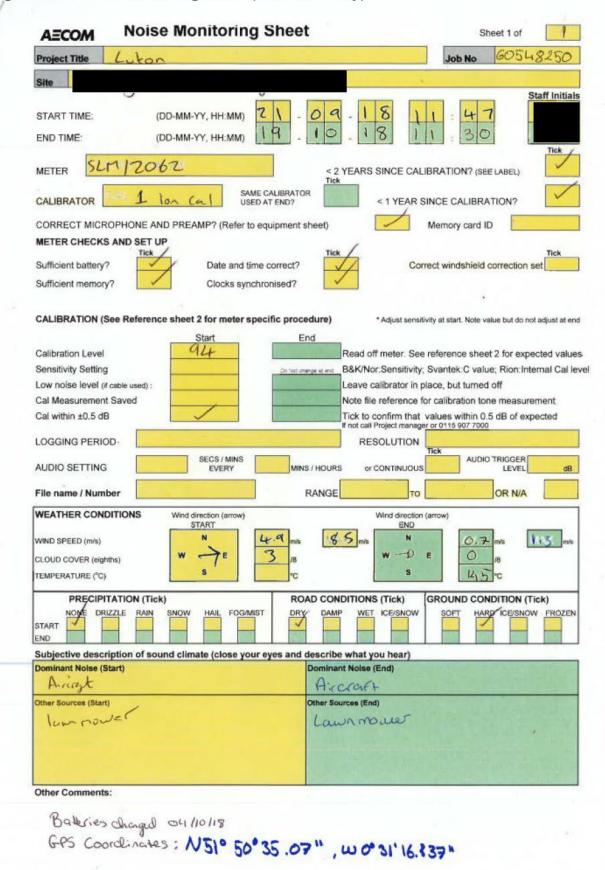
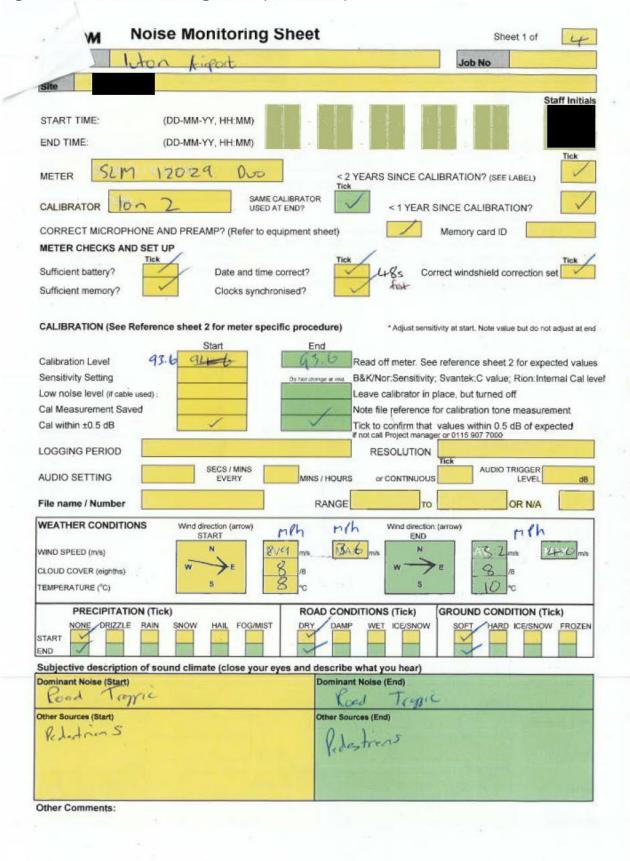


Figure 7.30: ML23 Monitoring Sheet (two sheets)



AECOM Noise Monito	ring Sheet	Project		Sheet 2 of
Site		Date O	2/10/18	Meter 12024
EQUIPMENT LOCATION				
MICROPHONE HEIGHT ABOVE GROU	ND 1.	+ METRES		
MICROPHONE MOUNTED ON (TICK) TRIPOD A FRAME MAST FENCE OTHER OTHER	LINE OF SK ACTUAL OF	FROM VERTICAL SURFACE GHT FROM SOURCE TO RE R POTENTIAL NOISE SOUR HVAC / SUBSTATION / CAT	CEIVER? (Y/N) CES NEARBY?	NO >3.5c
Plan view sketch with distances. Mark: Meter location Photographic direction and posit Distance to nearest roads and of Note position, height and constru Note position and type of ground	ther noise sources (ider uction material of barrier	d all round view of surrontify)		measured measured
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lat 51.94	053 101	7 - 0.27126		
GPS Coordinates	numbers	5 numbers	east/west	north/south
Camera ID: Print name		GPS ID Signature		Date
Site staff				02/11/18
QA checked				

Noise Monitoring Sheet AECOM Sheet 1 of Luten CRTW **Project Title** Job No Staff Initials START TIME: (DD-MM-YY, HH:MM) END TIME: (DD-MM-YY, HH:MM) 12029 METER < 2 YEARS SINCE CALIBRATION? (SEE LABEL) Tick SAME CALIBRATOR London CALIBRATOR < 1 YEAR SINCE CALIBRATION? BL 173455 379Z CORRECT MICROPHONE AND PREAMP? (Refer to equipment sheet) Memory card ID METER CHECKS AND SET UP Sufficient battery? Date and time correct? Correct windshield correction set Sufficient memory? Clocks synchronised? CALIBRATION (See Reference sheet 2 for meter specific procedure) * Adjust sensitivity at start. Note value but do not adjust at end Start End Calibration Level 93.6 Read off meter. See reference sheet 2 for expected values Sensitivity Setting B&K/Nor:Sensitivity; Svantek:C value; Rion:Internal Cal level Low noise level (if cable used): Leave calibrator in place, but turned off Cal Measurement Saved Note file reference for calibration tone measurement Cal within ±0.5 dB Tick to confirm that values within 0.5 dB of expected f not call Project manager or 0115 907 7000 LOGGING PERIOD RESOLUTION SECS / MINS EVERY AUDIO TRIGGER AUDIO SETTING MINS / HOURS or CONTINUOUS LEVEL File name / Number RANGE OR N/A WEATHER CONDITIONS Wind direction (arrow) Wind direction (arrow) START END 13.8 WIND SPEED (m/s) CLOUD COVER (eighths) S TEMPERATURE (°C) PRECIPITATION (Tick) ROAD CONDITIONS (Tick) GROUND CONDITION (Tick) DRIZZLE RAIN HAIL FOG/MIST DRY DAMP WET ICE/SNOW HARD ICE/SNOW FROZEN START Subjective description of sound climate (close your eyes and describe what you hear) Dominant Noise (Start) Dominant Noise (End) Irathic Truffic Other Sources (End) Other Sources (Start) wind Wind Other Comments:

Figure 7.31: ML24 Monitoring Sheet (two sheets)

ite					Date		Meter
	ENT LOCA	ATION					
		IGHT ABOVE GR	OUND		METRES		
100000	000000000000000000000000000000000000000	TED ON (TICK)		DISTANCE FRO	OM VERTICAL SURFACE	/ FAÇADE (>3.5M OF	R =1M) > 3·
RIPOD	1	A FRAME		LINE OF SIGHT	FROM SOURCE TO RE	CÉIVÉR? (Y/N)	Y
AST THER		FENCE		The second of th	C / SUBSTATION / CAT S		No
THER							
ark: N	Meter local Photograph Distance to Note positi		ositions (meter d other noise s astruction mate	sources (identify rial of barriers.	ll round view of surro		measured measured
							1
					κ.		
		2 letters	5 numbers		5 numbers	east/west	north/south
PS Coo	ordinates				or		
amera l	D;	Print name			GPS ID Signature		Date
		Tillitidille			org. idialic	- 19	29/11/18
te staff							- 11 11 110
						11	

Noise Monitoring Sheet Sheet 1 of A=COM Amount Job No **Project Title** Staff Initials (DD-MM-YY, HH:MM) START TIME: (DD-MM-YY, HH:MM) END TIME: Tick 17079 < 2 YEARS SINCE CALIBRATION? (SEE LABEL) METER SAME CALIBRATOR < 1 YEAR SINCE CALIBRATION? CALIBRATOR USED AT END? CORRECT MICROPHONE AND PREAMP? (Refer to equipment sheet) Memory card ID METER CHECKS AND SET UP Correct windshield correction set Sufficient battery? Date and time correct? Clocks synchronised? Sufficient memory? * Adjust sensitivity at start. Note value but do not adjust at end CALIBRATION (See Reference sheet 2 for meter specific procedure) End Start Read off meter. See reference sheet 2 for expected values Calibration Level B&K/Nor:Sensitivity; Svantek:C value; Rion:Internal Cal level Sensitivity Setting Leave calibrator in place, but turned off Low noise level (if cable used): Note file reference for calibration tone measurement Cal Measurement Saved Tick to confirm that values within 0.5 dB of expected if not call Project manager or 0115 907 7000 Cal within ±0.5 dB LOGGING PERIOD RESOLUTION Tick AUDIO TRIGGER SECS / MINS MINS / HOURS or CONTINUOUS LEVEL AUDIO SETTING EVERY OR N/A RANGE File name / Number TO WEATHER CONDITIONS Wind direction (arrow) Wind direction (arrow) START END OA8 WIND SPEED (m/s) CLOUD COVER (eighths) TEMPERATURE (°C) GROUND CONDITION (Tick) ROAD CONDITIONS (Tick) PRECIPITATION (Tick) HARD ICE/SNOW WET ICE/SNOW DRIZZLE HAIL FOG/MIST START Subjective description of sound climate (close your eyes and describe what you hear) Dominant Noise (End) Dominant Noise (Start) Other Comments:

Figure 7.32: ML25 Monitoring Sheet (two sheets)

AECOM Noise Mo	onitoring Sheet	Project	Whon	Sheet 2 of
Site		Date		Meter
EQUIPMENT LOCATION				
MICROPHONE HEIGHT ABOVE O	GROUND	METRES		
TRIPOD A FRAME MAST FENCE OTHER	LINE	OF SIGHT FROM SOURCE TO R AL OR POTENTIAL NOISE SOU HU/HVAC/SUBSTATION/CA	RECEIVER? (Y/N) RCES NEARBY?	OR = 1M) > 3 · 3
OTHER	10000	(EG AHU / HVAC / SUBSTATION / CAT SCARER ETC)		
Plan view sketch with distances. Mark: Meter location Photographic direction and Distance to nearest roads Note position, height and o Note position and type of g	North are positions (meter installe and other noise sources construction material of bo	d and all round view of sur (identify) 3 marriers.	ain audible and pote roundings) estimate estimate	measured measured
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lak	51.9065	long -0.	38864	
2 letters	5 numbers	5 numbers	east/west	north/south
SPS Coordinates		or		
amera ID:		GPS ID		
Print name		Signature		Date 82/11/1
				D 1 1 1 1 1 1
A checked		All the second		

Figure 7.33: ML26 Monitoring Sheet (two sheets)

AECOM Noise Monitoring Sheet Sheet 1 of
Project Title Job No Job No
Site
START TIME: (DD-MM-YY, HH:MM) 2 3 . 0 1 . 1 9 1 0 . 0 C
METER 12052 <2 YEARS SINCE CALIBRATION? (SEE LABEL)
CALIBRATOR USED AT END? SAME CALIBRATOR USED AT END? 1 YEAR SINCE CALIBRATION?
CORRECT MICROPHONE AND PREAMP? (Refer to equipment sheet) Memory card ID
METER CHECKS AND SET UP
Sufficient battery? Date and time correct? Clocks synchron(sed?
CALIBRATION (See Reference sheet 2 for meter specific procedure) *Adjust sensitivity at start. Note value but do not adjust at end
StartEnd
Calibration Level 938 Read off meter. See reference sheet 2 for expected values
Sensitivity Setting B&K/Nor:Sensitivity; Svantek:C value; Rion:Internal Cal lev
Low noise level (if cable used):
Cal Measurement Saved Note file reference for calibration tone measurement
Cal within ±0.5 dB
LOGGING PERIOD RESOLUTION RESOLUTION
AUDIO SETTING SECS/MINS SECS/MINS OF CONTINUOUS AUDIO TRIGGER LEVEL dB
File name / Number RANGE TO OR N/A
WEATHER CONDITIONS Wind direction (arrow) Wind direction (arrow)
WIND SPEED (m/s)
WIND SPEED (m/s) N AV S m/s MAG m/s N O 7 m/s Mag m/s
CLOUD COVER (eighths)
TEMPERATURE (°C) S 1 1 °C
PRECIPITATION (Tick) ROAD CONDITIONS (Tick) GROUND CONDITION (Tick)
START END START END START STAR
Subjective description of sound climate (close your eyes and describe what you hear)
Dominant Noise (Start) Dominant Noise (End)
Tyric Kaye
Other Sources (Start) Other Sources (End)
[
[- [- [- [- [- [- [- [- [- [-
Other Comments:

AECOM	Noise Monitoring Sheet	Project Wen	Sheet 2 of
Site		Date 23/01/18	Meter 12051
EQUIPMENT LOCA	ATION		
MICROPHONE HEI	GHT ABOVE GROUND [1.5]	METRES	
MICROPHONE MOUNT TRIPOD MAST OTHER OTHER	A FRAME LINE OF SIGHT FRO	ERTICAL SURFACE / FAÇADE (>3.5M OF OM SOURCE TO RECEIVER? (Y/N) NTIAL NOISE SOURCES NEARBY? SUBSTATION / CAT SCARER ETC)	R=1M) Im
Distance to Note position		estimate estimate	measured measured
GPS Coordinates	2 letters 5 numbers 5 n	or east/west	north/south
Camera ID:	Print name Sign	GPS ID	Date 23/01/18
Site staff			20101110

Figure 7.34: ML27 Monitoring Sheet (two sheets)

AECOM Noise Monitoring Sheet	Sheet 1 of
Project Title Wan Amport	Job No
Site	
	Staff I
START TIME: (DD-MM-YY, HH:MM) 2 3 - 0 1 . 1 9	13 42
END TIME: (DD-MM-YY, HH:MM)	16 42
METER 120S1 DVO <2 YEARS SINCE (Tick	CALIBRATION? (SEE LABEL)
SAME CALIBRATOR	AR SINCE CALIBRATION?
CORRECT MICROPHONE AND PREAMP? (Refer to equipment sheet)	Memory card ID
METER CHECKS AND SET UP	
Sufficient battery? Date and time correct?	Correct windshield correction set
Sufficient memory? Clocks synchronised?	· · · ·
CALIBRATION (See Reference sheet 2 for meter specific procedure) *Adjust s	ensitivity at start. Note value but do not adjus
StartEnd	
Calibration Level 93-7 Read off meter.	See reference sheet 2 for expected
Sensitivity Setting Do Not change at and B&K/Nor: Sensiti	ivity; Svantek:C value; Rion:Internal
Low noise level (if cable used) : Leave calibrator	in place, but turned off
Cal Measurement Saved Note file referen	ice for calibration tone measurement
	that values within 0.5 dB of expected
	anager or 0115 907 7000
LOGGING PERIOD RESOLUTION	ON Tick
AUDIO SETTING SECS/MINS WINS/HOURS OF CONTINU	OUS AUDIO TRIGGER LEVEL
File name / Number RANGE	TO OR N/A
WEATHER CONDITIONS Wind direction (arrow) Wind direction	ection (arrow)
START	1 -
WIND SPEED (m/s) N N MAS m/s MAS m/s	N
CLOUD COVER (eighths) W E 2 /8	/ E O /B
TEMPERATURE (°C)	\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
PRECIPITATION (Tick) ROAD CONDITIONS (Tick)	CROLING CONDITION (Ti-1)
NONE / DRIZZLE RAIN SNOW HAIL FOG/MIST DRY/ DAMP WET ICE/SN	OW SOFT A HARD ICE/SNOW FE
START	
Subjective description of sound climate (close your eyes and describe what you hear)
Dominant Noise (Start) Dominant Noise (End)	
Trapic Trapic	불빛 모임 분빛하는 경우하는
Other Services (Start)	
Pedistrians (court) Pedistrians ((ork)
I make the property of the	化乳基二氯化 海巴拉萨德勒 电电流 自然 经工作工程

AECOM	Noise Monitoring Shee	et Proje	ce Iston Ainst	Sheet 2 of
Site		Date	23/01/19	Meter 17051
QUIPMENT L	OCATION			
MICROPHONE	HEIGHT ABOVE GROUND	METRES	· .	
RIPOD MAST	A FRAME	DISTANCE FROM VERTICAL SI INE OF SIGHT FROM SOURCE ACTUAL OR POTENTIAL NOISE	TO RECEIVER? (Y/N)	1=1M) >3:Sm
OTHER OTHER		EG AHU / HVAC / SUBSTATION		NO
Plan view sket Mark: Meter k Photog Distand Note po	ocation North raphic direction and positions (meter inside to nearest roads and other noise soul osition, height and construction material osition and type of ground cover (grass;	rces (identify) of barriers.	Main audible and poter of surroundings) estimate estimate	measured measured
GPS Coordinat	2 letters 5 numbers	5 numbers	east/west	north/south
Camera ID: Site staff	Print name	GPS I Signature	D	23/01/19
QA checked				

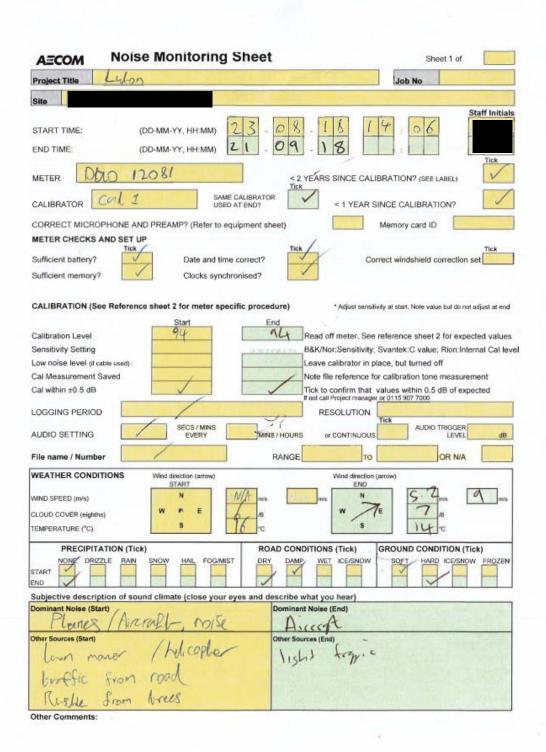
Noise Monitoring Sheet Sheet 1 of CRIN Luten **Project Title** Job No Staff Initials START TIME: (DD-MM-YY, HH:MM) END TIME: (DD-MM-YY, HH:MM) METER < 2 YEARS SINCE CALIBRATION? (SEE LABEL) SAME CALIBRATOR < 1 YEAR SINCE CALIBRATION? CALIBRATOR USED AT END? 173455 3792 CORRECT MICROPHONE AND PREAMP? (Refer to equipment sheet) Memory card ID METER CHECKS AND SET UP Sufficient battery? Date and time correct? Correct windshield correction set Sufficient memory? Clocks synchronised? CALIBRATION (See Reference sheet 2 for meter specific procedure) * Adjust sensitivity at start. Note value but do not adjust at end Start 43-8 93-5 Calibration Level Read off meter. See reference sheet 2 for expected values B&K/Nor:Sensitivity; Svantek; C value; Rion:Internal Cal level Sensitivity Setting Leave calibrator in place, but turned off Low noise level (if cable used): Cal Measurement Saved Note file reference for calibration tone measurement Cal within ±0.5 dB Tick to confirm that values within 0.5 dB of expected not call Project manager or 0115 907 7000 LOGGING PERIOD RESOLUTION AUDIO TRIGGER SECS / MINS AUDIO SETTING MINS / HOURS or CONTINUOUS dB RANGE OR N/A File name / Number TO WEATHER CONDITIONS Wind direction (arrow) Wind direction (arrow) START END 28 7.4 WIND SPEED (m/s) CLOUD COVER (eighths) TEMPERATURE (°C) PRECIPITATION (Tick) ROAD CONDITIONS (Tick) GROUND CONDITION (Tick) DRIZZLE SNOW HAIL FOG/MIST DRY WET ICE/SNOW ICE/SNOW FROZEN RAIN START Subjective description of sound climate (close your eyes and describe what you hear) Dominant Noise (Start) Dominant Noise (End) Treffic Traffic Other Sources (End) Other Sources (Start) Birds Wind Other Comments:

Figure 7.35: ML28 Monitoring Sheet (one sheet only)

Noise Monitoring Sheet Sheet 1 of CRTN **Project Title** Job No Staff Initials START TIME: (DD-MM-YY, HH:MM) 8 END TIME: (DD-MM-YY, HH:MM) Duo 12029 METER < 2 YEARS SINCE CALIBRATION? (SEE LABEL) SAME CALIBRATOR London Cal CALIBRATOR < 1 YEAR SINCE CALIBRATION? CORRECT MICROPHONE AND PREAMP? (Refer to equipment sheet) BL 173455137 Memory card ID 92 METER CHECKS AND SET UP Sufficient battery? Date and time correct? Correct windshield correction set Sufficient memory? Clocks synchronised? CALIBRATION (See Reference sheet 2 for meter specific procedure) * Adjust sensitivity at start. Note value but do not adjust at end Start End 93 93.5 Calibration Level Read off meter. See reference sheet 2 for expected values Sensitivity Setting B&K/Nor:Sensitivity; Svantek:C value; Rion:Internal Cal level Low noise level (if cable used): Leave calibrator in place, but turned off Cal Measurement Saved Note file reference for calibration tone measurement Cal within ±0.5 dB Tick to confirm that values within 0.5 dB of expected If not call Project manager or 0115 907 7000 LOGGING PERIOD RESOLUTION AUDIO TRIGGER LEVEL SECS / MINS AUDIO SETTING MINS / HOURS or CONTINUOUS File name / Number RANGE TO OR N/A WEATHER CONDITIONS Wind direction (arrow) Wind direction (arrow) START END 5.8 1.0 WIND SPEED (m/s) CLOUD COVER (eighths) TEMPERATURE (°C) GROUND CONDITION (Tick) PRECIPITATION (Tick) ROAD CONDITIONS (Tick) WET ICE/SNOW ICE/SNOW DRIZZLE FOG/MIST DRY RAIN SNOW HAIL FROZEN START Subjective description of sound climate (close your eyes and describe what you hear) Dominant Noise (End) **Dominant Noise (Start)** Trathic Trathic Other Sources (End) Other Sources (Start) Tain Other Comments:

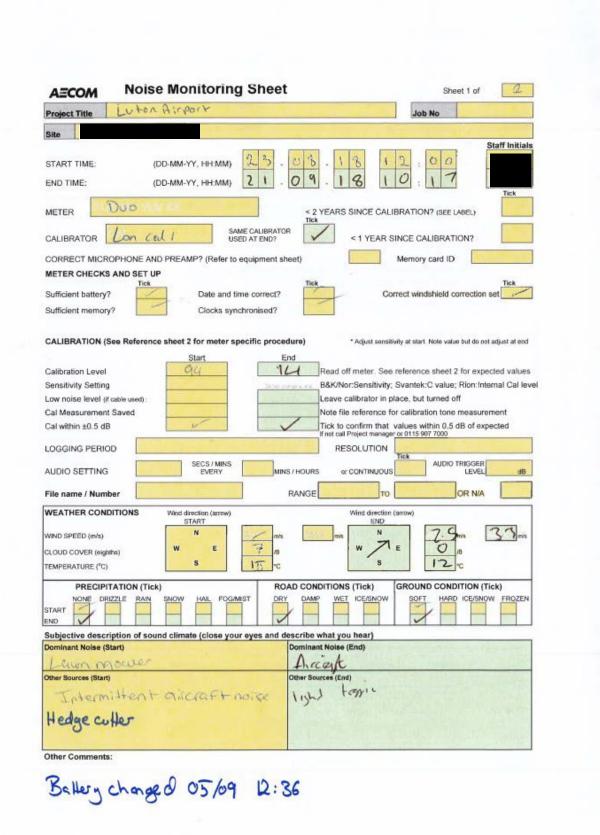
Figure 7.36: ML29 Monitoring Sheet (one sheet only)

Figure 7.37: ML30 Monitoring Sheet (two sheets)



A=	COM	Noise Monit	toring Sne	eet	Projec		Snee	t 2 of
Site					Date		Mete	12031
EQUIP	MENT LOCAT	ION						
MICDO	PHONE HEIO	HT ABOVE GRO	LIND		METRES			
MICKC	PHONE HEIG	HI ABOVE GRO	UND	-				
MICROP TRIPOD	HONE MOUNTED	A FRAME			ROM VERTICAL SUR HT FROM SOURCE 1			V
MAST		FENCE			POTENTIAL NOISE S			
OTHER		1670 PATES	-		VAC / SUBSTATION /			
OTHER								
Plan vi	iew sketch wit	h distances.						
Mark:	Meter location			orth arrow	281 000 94		and potential nois	se souces
					all round view of s	estimate		measured
		earest roads and , height and cons			550	estimate		measured
		and type of groun						
	7	1						
	1	1						
	1							
	1							
	1							
		1						
		~			1			
				1	~	-		1
	- 7							
	1							
						1		
)
			-					
	1	4	- tree					
		r	arden					
	14	1 0	0	a SLM				
	1	1	1				"	
	1				1 (1 69 18	" No	101/15
					1 -2	1 11 15	1. ~	יי ליוטל
	2	letters	5 numbers		5 numbers	east/w	est	north/south
								activide section
	pordinates				ar			
GPS C	- T							
	a ID:	Oriet name			GPS ID			
	-	Print name			Signature		Date	
	-			L.				
Camera	F							
Camera	F							
GPS Concerning Concern	et E			Ē,				

Figure 7.38: ML31 Monitoring Sheet (two sheets)



MODEA	Noise Mo	nitoring Sne	et	Projec		She	et 2 of
te				Date	23/08/	Met	er
UIPMENT LO	ATION						
CROPHONE H	EIGHT ABOVE G	ROUND		METRES			
CROPHONE MOUNT POD ST HER	AFRAME FENCE	H	LINE OF SIGN ACTUAL OR I	IT FROM SOURCE 1	FACE / FAÇADE (>3 O RECEIVER? (VIN) OURCES NEARBY? CAT SCARER ETC)		4
Photograp Distance Note posi	hic direction and o nearest roads a lon, height and c	No positions (meter in and other noise sou onstruction materia ound cover (grass	urces (identiful of barriers.	y)	Main audible and urroundings) estimate estimate	d potential noi	rneasured measured
S Coordinates	2 letters	5 numbers		5 numbers	east/wes		north/south
S Coordinates	2 letters	5 numbers					north/south

Figure 7.39: ML37 Monitoring Sheet – Part 1 (one sheet only)

Noise Monitoring Sheet		Sheet 1 of	
Project Title L. tox A.port 614		Job No	f (2)
Site		1.1.1.1.1.1	7
START TIME: (DD-MM-YY, HH:MM) 2 6 - [END TIME: (DD-MM-YY, HH:MM) 0 - [02-20 11	St. 30	ff Initials
METER 9000X / 12062	< 2 YEARS SINCE CALIB	RATION? (SEE LABEL)	
CALIBRATOR CALIBRATOR	RATEND <1 YEAR SIN	ICE CALIBRATION?	
CORRECT MICROPHONE AND PREAMP? (Refer to equipment s	heet) N	lemory card ID	
Sufficient memory? Date and time correct? Clocks synchronised?	Tick	ct windshield correction se	Tick t
CALIBRATION (See Reference sheet 2 for meter specific proce	edure) * Adjust sensitivit	y at start. Note value but do not a	adjust at end
Sensitivity Setting Low noise level (if cable used): Cal Measurement Saved Cal within ±0.5 dB LOGGING PERIOD N/A AUDIO SETTING Do Not che	Read off meter. See no B&K/Nor:Sensitivity; S Leave calibrator in pla Note file reference for	countek:C value; Rion:Intellice, but turned off calibration tone measure alues within 0.5 dB of expendicular continuou OR N/A	ment ected
PRECIPITATION (Tick) NONE DRIZZLE RAIN SNOW HAIL START	FOGMIST DRY	DAMP WET I	CE/SNOW
Subjective description of sound climate (close your eyes and Dominant Noise (Start)	describe what you hear) Dominant Noise (End)		
School Childre dems School hours	¥		
Other Sources (Start) Road trappic oxtender school hours Arrant also dedy audible	Other Sources (End)		
Mark		1	

S1.865297, -0.326421

Figure 7.40: ML37 Monitoring Sheet – Part 2 (one sheet only)

Noise Monitoring Sheet	Sheet 1 of
Project Title 1 year August 614	Job No
Site	Chaff initial
START TIME: (DD-MM-YY, HH:MM) 13 - (DD-MM-YY, HH:MM) 23 - (DD-MM-YY, HH:MM)	0 3 20 10 15 0 3 20 09 15 Belfor change
METER 966 / 17662	< 2 YEARS SINCE CALIBRATION? (SEE LABEL)
CALIBRATOR USE SAME CALIBRATOR	
CORRECT MICROPHONE AND PREAMP? (Refer to equipment shape and any are UP	heet) Memory card ID
Sufficient battery? Sufficient memory? Date and time correct? Clocks synchronised?	Tick Correct windshield correction set
CALIBRATION (See Reference sheet 2 for meter specific proce	*Adjust sensitivity at start. Note value but do not adjust at end
Sensitivity Setting Low noise level (if cable used): Cal Measurement Saved Cal within ±0.5 dB	Read off meter. See reference sheet 2 for expected values B&K/Nor:Sensitivity; Svantek:C value; Rion:Internal Cal levi Leave calibrator in place, but turned off Note file reference for calibration tone measurement Tick to confirm that values within 0.5 dB of expected
COGGING FEIROD	RESOLUTION
AUDIO SETTING SECS / MINS EVERY File name / Number	MINS / HOURS CONTINUOUS OR N/A
WEATHER CONDITIONS Wind direction (arrow)	Wind direction (arrow)
WIND SPEED (m/s) CLOUD COVER (eighths) TEMPERATURE (°C) START N W	14AXO _{m/s} N 3/5 m/s 4/4 m/s 5 1/6 1/6 1/6 1/6 1/6 1/6 1/6 1/6 1/6 1/6
PRECIPITATION (Tick)	ROAD CONDITIONS (Tick)
NONE DRIZZLE RAIN SNOW HAIL START END	
Subjective description of sound climate (close your eyes and Dominant Noise (Start)	describe what you hear) Dominant Noise (End)
School Children	**************************************
Other Sources (Start) Road Trwic Aircraft	Other Sources (End)
Aicak	

Figure 7.41: ML41 Monitoring Sheet (two sheets)

A=COM Noise Monitoring Sheet	Sheet 1 of 2
Project Title Luton Airport	Job No
Site	
	0 7 2 1 13 3 0 Staff Initials 0 7 2 1 0 9 1 5
METER SUM SO	< 2 YEARS SINCE CALIBRATION? (SEE LABEL)
CALIBRATOR CALIBRATOR USED AT END?	<1 YEAR SINCE CALIBRATION?
CORRECT MICROPHONE AND PREAMP? (Refer to equipment she	eet) Memory card ID
METER CHECKS AND SET UP	
Sufficient battery? Date and time correct? Sufficient memory? Clocks synchronised?	Correct windshield correction set
CALIBRATION (See Reference sheet 2 for meter specific procedure)	lure) * Adjust sensitivity at start. Note value but do not adjust at end
Start Er	
Calibration Level	
Sensitivity Setting	,,
Low noise level (if cable used):	Leave calibrator in place, but turned off
Cal Measurement Saved Cal within ±0.5 dB	Note file reference for calibration tone measurement
Cal Within ±0.5 0B	Tick to confirm that values within 0.5 dB of expected if not call Project manager or 0115 907 7000
LOGGING PERIOD	RESOLUTION Tick
AUDIO SETTING SECS/MINS EVERY	HOURS or CONTINUOUS AUDIO TRIGGER LEVEL dB
File name / Number	RANGE TO OR N/A
WEATHER CONDITIONS Wind direction (arrow)	Wind direction (arrow)
WIND SPEED (m/s) CLOUD COVER (eighths) TEMPERATURE (°C) START M E B /B /B C	m/s N E 2/ 18 -c
PRECIPITATION (Tick) ROA	AD CONDITIONS (Tick) GROUND CONDITION (Tick)
NONE DRIZZLE RAIN SNOW HAIL FOGMIST DRY START DEND	DAMP WET ICE/SNOW SOFT HARD ICE/SNOW FROZEN
Subjective description of sound climate (close your eyes and de	escribe what you hear)
Birds tweeting	Dominant Noise (End)
Other Sources (Start) Leaves in the Wind	Other Sources (End) Traffic on Vocal
Traffic on road	Arcraft noise
Notes:	Notes:
Other Comments:	

A ECOM	Noise Monitoring Sheet	Project 0	Sheet 2 of 2
Site		Date 13/07/21	Meter 0
EQUIPMENT LOC	CATION		
MICROPHONE HE	EIGHT ABOVE GROUND	METRES	
MICROPHONE MOUNTRIPOD MAST OTHER OTHER	A FRAME LINE OF SIGHT FROM ACTUAL OR POTENT	RTICAL SURFACE / FAÇADE (>3.5M OR M SOURCE TO RECEIVER? (Y/N) FIAL NOISE SOURCES NEARBY? JUSTATION / CAT SCARER ETC)	R=1M) 279
Distance Note posi		3 estimate estimate	measured measured
		Foregre Brick kiln Lone Forest	Resident LTI
	51°53	147"N 0°21	'25"W
GPS Coordinates		umbers east/west	north/south
		GPS ID	
Camera ID:	Print name Sign	gPS ID	Date
Site staff			21/0771
OA checked			

Figure 7.42: ML42 Monitoring Sheet (two sheets)

	Noise Monitoring S		Sheet 1 of
Project Title	LUTON AIRPORT		Job No
Site			
START TIME: END TIME:	(DD-MM-YY, HH:MM)	1 - 0P - 21 1 - 0P - 21	
METER	SLMSO	Tick	ALIBRATION? (SEE LABEL)
CALIBRATOR	(ALB USED A	ALIBRATOR TEND? <1 YEAR	SINCE CALIBRATION?
CORRECT MICR	OPHONE AND PREAMP? (Refer to equ	uipment sheet)	Memory card ID
METER CHECKS	AND SET UP		
Sufficient battery? Sufficient memory			orrect windshield correction set
CALIBRATION (S	See Reference sheet 2 for meter speci		silivity at start. Note value but do not adjust at er
Onlikestic - 1 1	Start 24	Pend Read off meter. Se	
Calibration Level Sensitivity Setting			ee reference sheet 2 for expected valu ty; Svantek:C value; Rion:Internal Cal
ow noise level (if	Swag-power 1		ry, svantek:C value; Rion.internal Cal i place, but turned off
Cal Measurement			for calibration tone measurement
Cal within ±0.5 dB			at values within 0.5 dB of expected
Jan 1110 El 20.0 GC		Thou to commit un	Turbes minimi old do or expected
		If not call Project mana	ger or 0115 907 7000
LOGGING PERIO	00	RESOLUTION	1
	SECS NUNS EVERY		Tick AUDIO TRIGGER OF
AUDIO SETTING	SECS MINS EVER	RESOLUTION	Tick AUDIO TRIGGER LEVEL 85 dB
AUDIO SETTING	SECS MINS EVERO DITIONS Wind direction (arrow)	RESOLUTION MINS / HOURS or CONTINUOU RANGE TO Wind direction	Tick AUDIO TRIGGER 8.5 dB
AUDIO SETTING File name / Numb	SECS MINS EVERY	RESOLUTION MINS / HOURS or CONTINUOR RANGE To Wind directs	Tick AUDIO TRIGGER 85 dB O OR N/A On (arrow)
AUDIO SETTING File name / Numb WEATHER COND WIND SPEED (m/s)	SECS MINS EVER DITIONS Wind direction (arrow) START N	RESOLUTION MINS / HOURS or CONTINUOU RANGE TO Wind directs END 1 5 m/s N	Tick AUDIO TRIGGER US OR N/A OR (ARTOW)
AUDIO SETTING File name / Numb WEATHER COND WIND SPEED (m/s) CLOUD COVER (eight	SECS MINS EVER DITIONS Wind direction (arrow) START N	RESOLUTION MINS / HOURS or CONTINUOR RANGE To Wind directs	Tick AUDIO TRIGGER 85 dB O OR N/A On (arrow)
LOGGING PERIO AUDIO SETTING File name / Numb WEATHER COND WIND SPEED (m/s) CLOUD COVER (eight TEMPERATURE (*C) PRECIPIT	SECS MINS EVERY DITIONS Wind direction (arrow) START N W E	RESOLUTION MINS / HOURS or CONTINUOU RANGE Wind directi END 1.5 m/s N W	Tick AUDIO TRIGGER US OR N/A OR (AUTOW)
AUDIO SETTING File name / Numb WEATHER COND WIND SPEED (m/s) CLOUD COVER (eigh TEMPERATURE (°C) PRECIPIT	SECS MINS EVERO DITIONS Wind direction (arrow) START N W E S	RESOLUTION MINS / HOURS or CONTINUOU RANGE Wind directs END 1 m/s 1.5 m/s N 2 /8 2 / 1°C S	Tick AUDIO TRIGGER B5 dB OR N/A On (arrow) E
AUDIO SETTING File name / Numb WEATHER COND WIND SPEED (m/s) CLOUD COVER (eight TEMPERATURE (*C) PRECIPIT NONE DRI START END Subjective descri	SECS MINS EVERY DITIONS Wind direction (arrow) START N W E Z TATION (Tick) IZZLE RAIN SNOW HAIL FOGMIST ription of sound climate (close your eye	RESOLUTION MINS / HOURS or CONTINUOR RANGE Wind directs END / I m/s	Tick AUDIO TRIGGER B5 dB OR N/A On (arrow) E
AUDIO SETTING File name / Numb WEATHER CONE WIND SPEED (m/s) CLOUD COVER (eight TEMPERATURE (°C) PRECIPIT NONE DRI START END Subjective descr	SECS MINS EVERO DITIONS Wind direction (arrow) START N W E S TATION (Tick) IZZLE RAIN SNOW HAIL FOGMIST Implication of sound climate (close your extent)	RESOLUTION MINS / HOURS or CONTINUOR RANGE Wind directs END / I m/s	Tick AUDIO TRIGGER B5 dB OR N/A On (arrow) E
AUDIO SETTING File name / Numb WEATHER CONE WIND SPEED (m/s) CLOUD COVER (eight TEMPERATURE (°C) PRECIPIT NONE DRI START END Subjective descr	SECSTMINS EVERO DITIONS Wind direction (arrow) START N W E TATION (Tick) NZZLE RAIN SNOW HAIL FOGMIST ription of sound climate (close your egitart)	RESOLUTION MINS / HOURS or CONTINUOR RANGE Wind directs END / S ROAD CONDITIONS (Tick) DRY DAMP WET ICE/SNOW yes and describe what you hear) Dominagt Noise (End)	AUDIO TRIGGER 85 de

AECOM	Noise Monitorin	g Sheet	Project		Sheet 2 of
Site			Date 2	1/01/21	Meter SLM So
QUIPMENT LOC	CATION				
MICROPHONE HE	EIGHT ABOVE GROUND		METRES		
h	A FRAME FENCE	LINE OF SIGHT ACTUAL OR PO	M VERTICAL SURFACE FROM SOURCE TO RE TENTIAL NOISE SOURCE SUBSTATION / CAT	CEIVER? (Y/N) CES NEARBY?	R=1M) > 3·5
Plan view sketch Mark: Meter loca Photograp Distance t Note posit		noise sources (identify) n material of barriers.	round view of surro	n audible and pote oundings) estimate estimate	measured measured
Troffic	- C Comb	Y		Feether Styles	7.
	2 letters 5 numb	oers .	5 numbers	east/west	north/south
SPS Coordinates			or		
amera ID:	Print name		GPS ID ignature		Date
ite staff					2/107/4
A checked					

Figure 7.43: ML43 Monitoring Sheet (two sheets)

CORRECT MICROPHONE AND PREAMP? (Refer to equipment sheet) METER CHECKS AND SET UP Tick	Job No Staff Initials D
START TIME: (DD-MM-YY, HH:MM) 2 1 0 7 2 1 1 1 0 7 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	RATION? (SEE LABEL) CE CALIBRATION? emory card ID
START TIME: (DD-MM-YY, HH:MM) 21 - 07 - 21 10 10 11 10 10	RATION? (SEE LABEL) CE CALIBRATION? emory card ID
CALIBRATOR CALIBRATOR USED AT END? CORRECT MICROPHONE AND PREAMP? (Refer to equipment sheet) METER CHECKS AND SET UP Sufficient battery? Date and time correct? Tick Correct Correct	CE CALIBRATION? cemory card ID Tick
CALIBRATOR USED AT END? <1 YEAR SING CORRECT MICROPHONE AND PREAMP? (Refer to equipment sheet) METER CHECKS AND SET UP Sufficient battery? Date and time correct? Correct	emory card ID
METER CHECKS AND SET UP Tick Date and time correct? Correct	Tick
Sufficient battery? Tick Date and time correct? Correct	
46	
CALIBRATION (See Reference sheet 2 for meter specific procedure) *Adjust sensitivity	at start. Note value but do not adjust at end
Calibration Level Start End Read off meter. See ref	ference sheet 2 for expected value
Sensitivity Setting B&K/Nor:Sensitivity; Sv	vantek:C value; Rion:Internal Cal le
Low noise level (if cable used):	e, but turned off
Cal Measurement Saved Note file reference for c	calibration tone measurement
Cal within ±0.5 dB	lues within 0.5 dB of expected
LOGGING PERIOD RESOLUTION Tic	
AUDIO SETTING SESS/MINS MINS/HOURS or CONTINUOUS	AUDIO TRIGGER 85 dB
File name / Number RANGE TO	OR N/A
WEATHER CONDITIONS Wind direction (arrow) Wind direction (arrow)	Ow)
START END N	
WIND SPEED (m/s) W P E 7	m/sm/s
CLOUD COVER (eighths)	/8
TEMPERATURE (°C)	°C
PRECIPITATION (Tick) ROAD CONDITIONS (Tick) GI	ROUND CONDITION (Tick)
NONE DRIZZLE RAIN SNOW HAIL FOGMIST DRY DAMP WET ICE/SNOW START DRY DAMP WET ICE/SNOW	SOFT HARD ICE/SNOW FROZEN
Subjective description of sound climate (close your eyes and describe what you hear)	
Dominant Noise (Start) Dominant Noise (End)	
Road Kaffic Dog Borking on Jam Dog Borking	on torm
Other Sources (Start) Other Sources (End)	
consequent Traffic on road Traffic on 1	road
Birds Meeting Aircraft Birdsonel	
Notes: Bird Song Rooders Notes: Other Comments: Programs	
Notes: Notes: Notes:	

A=COM	Noise Monit	oring Sheet	Project	Sheet 2 of
ite			Date 21/07/4	Meter SLAG
QUIPMENT LOC	ATION			
IICROPHONE H	EIGHT ABOVE GRO	UND /- 2	METRES	
ICROPHONE MOUN			M VERTICAL SURFACE / FAÇADE (>3.5M O	R=1M)
AST	A FRAME FENCE		FROM SOURCE TO RECEIVER? (Y/N) TENTIAL NOISE SOURCES NEARBY?	
THER	7		/ SUBSTATION / CAT SCARER ETC)	
THER PO	de			
Photograp Distance t Note positi	phic direction and pos to nearest roads and tion, height and cons	North arrow sitions (meter installed and all other noise sources (identify) truction material of barriers. nd cover (grass, stone, shrubs	7M estimate estimate	measured measured
7023			Call ST	1/1
1210 mary 60 mar to	- c Count		Golf course STI	- tul
T. 00.	(-1		course	(
1 Vals	c count		///	
			///-	
			/ Farm	
			Can	
			2 R	
			W.C.	
				0.2
				1
	2 letters	5 numbers 5	5 numbers east/west	north/south
PS Coordinates	2 letters	5 numbers 5	5 numbers east/west	north/south
PS Coordinates	2 letters	5 numbers 5	or	north/south
			GPS ID	Date
amera ID:	2 letters Print name		or	Date
amera ID:			GPS ID	
PS Coordinates amera ID: te staff A checked			GPS ID	Date

Figure 7.44: ML43 Monitoring Sheet (two sheets)

A=COM N	Noise Monitoring Sheet	Sheet 1 of 2
Project Title	UTON AIRPORT	Job No
Site		
START TIME: END TIME:	(DD-MM-YY, HH:MM) 13 . 07 . 2 (DD-MM-YY, HH:MM) 13 . 07 . 2	1 1 0 0 0 Staff Initials 1 1 3 0 0
	Tick	INCE CALIBRATION? (SEE LABEL)
CALIBRATOR C	SAME CALIBRATOR USED AT END?	1 YEAR SINCE CALIBRATION?
CORRECT MICROPHO	ONE AND PREAMP? (Refer to equipment sheet)	Memory card ID
METER CHECKS AND	SET UP	
Sufficient battery? Sufficient memory?	Date and time correct? Clocks synchronised?	Correct windshield correction set
,	oference sheet 2 for meter specific procedure)	Adjust sensiëvity at start. Note value but do not adjust at end
Calibration Level	Start End 94 Read off r	neter. See reference sheet 2 for expected values
Sensitivity Setting	Do Not change at end B&K/Nor.	Sensitivity; Svantek:C value; Rion:Internal Cal level
Low noise level (if cable us	leave cali	ibrator in place, but turned off
Cal Measurement Saved	Note file re	eference for calibration tone measurement
Cal within ±0.5 dB	Tick to col	nfirm that values within 0.5 dB of expected
LOGGING PERIOD		DLUTION Tick
AUDIO SETTING	SECS / MINS EVERY MINS LHOURS or CO	ONTINUOUS AUDIO TRIGGER LEVEL dB
File name / Number	RANGE	TO OR N/A
WEATHER CONDITION		find direction (arrow) END
	START 7.)	N / // I C
WIND SPEED (m/s)	/ / / ms	w E 7 m/s 1.5 m/s
CLOUD COVER (eighths)	1" 5 10 10	5 19 8
TEMPERATURE (°C)		3 17 °C
PRECIPITATION	N (Tick) ROAD CONDITIONS (Tick) GROUND CONDITION (Tick)
START START	RAIN SNOW HAIL FOGANIST DRY DAMP WET	CE/SNOW SOFT HARD ICE/SNOW FROZEN
	of sound climate (close your eyes and describe what you	
Dominant Noise (Start)	Dominant Noise (En	id)
13jrds the	ibling Birds U	weeling
Birds tree	Other Sources (End)	J .
Traffic on 10	good 1 Not BRice 1	on road
Aircraft distant fam	nevation	
00 300W) W M	DPS - SA	and the same and the same and the same and
Notes:	Notes:	
Other Comments:		

A=COM	Noise Monitoring She	eet	Project	0	Sheet 2 of	2
Site			Date 13/0	7/21	Meter 0	
EQUIPMENT LOC	ATION					
MICROPHONE HE	EIGHT ABOVE GROUND	1 2 ME	TRES			
MICROPHONE MOUN		DISTANCE FROM VERT			=1M) >3	S
TRIPOD MAST	A FRAME FENCE	LINE OF SIGHT FROM S ACTUAL OR POTENTIA			~	
OTHER Pale		(EG AHU / HVAC / SUBS	STATION / CAT SCA	RER ETC)		_
Plan view sketch Mark: Meter loca Photograp	ation No phic direction and positions (meter in		view of surroundi	ings)	ntial noise souces	
Note posit	o nearest roads and other noise so tion, height and construction materi tion and type of ground cover (grass	al of barriers.	5A est	timate timate	measured measured	
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	2 letters 5 numbers	5 num		east/west	north/south	
GPS Coordinates			or		7	
Camera ID:	Print name	Signati	GPS ID		Date	
Site staff					1317/2	
QA checked						

Figure 7.45: Measured Baseline Sound Levels – ML1

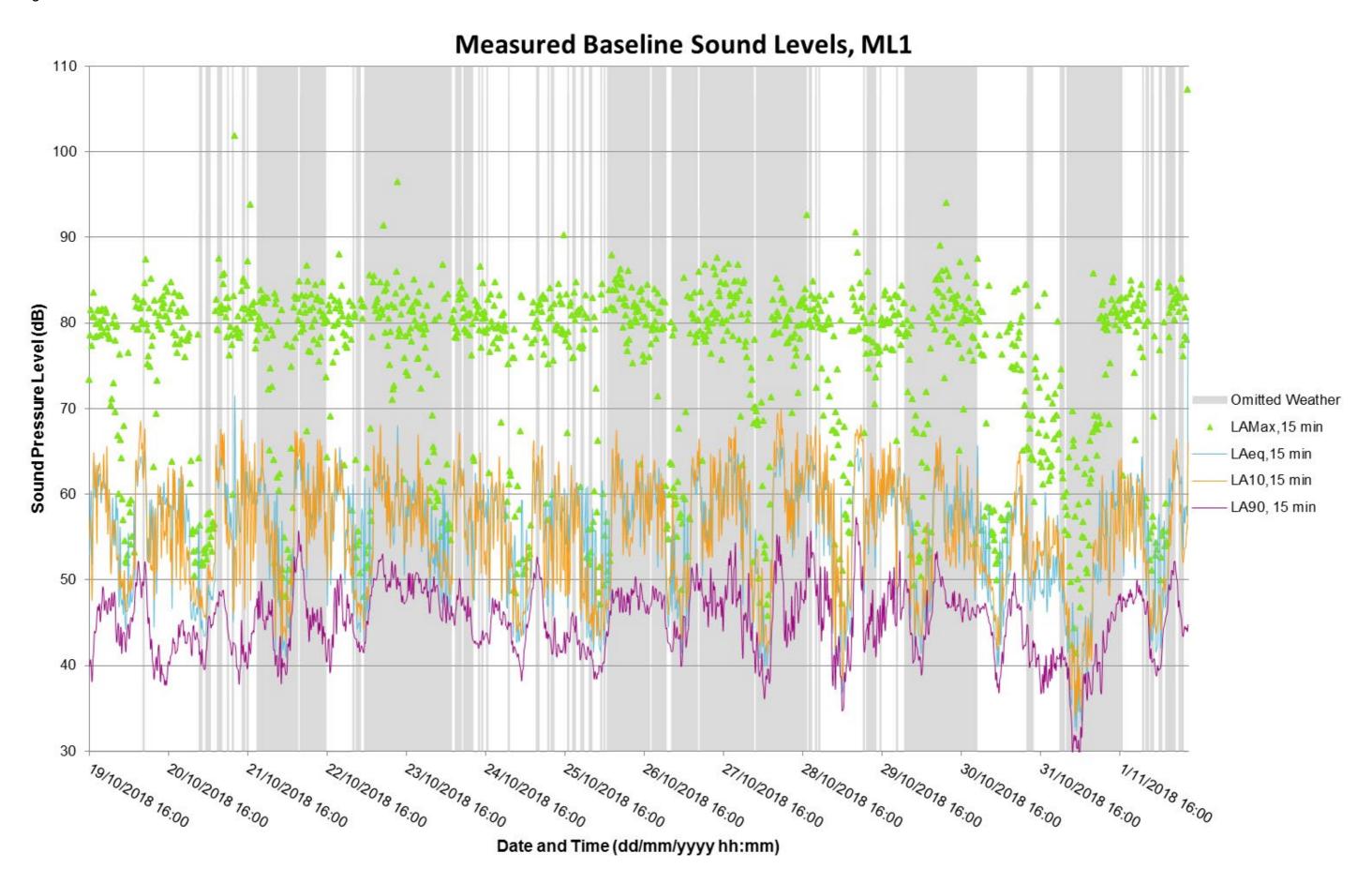
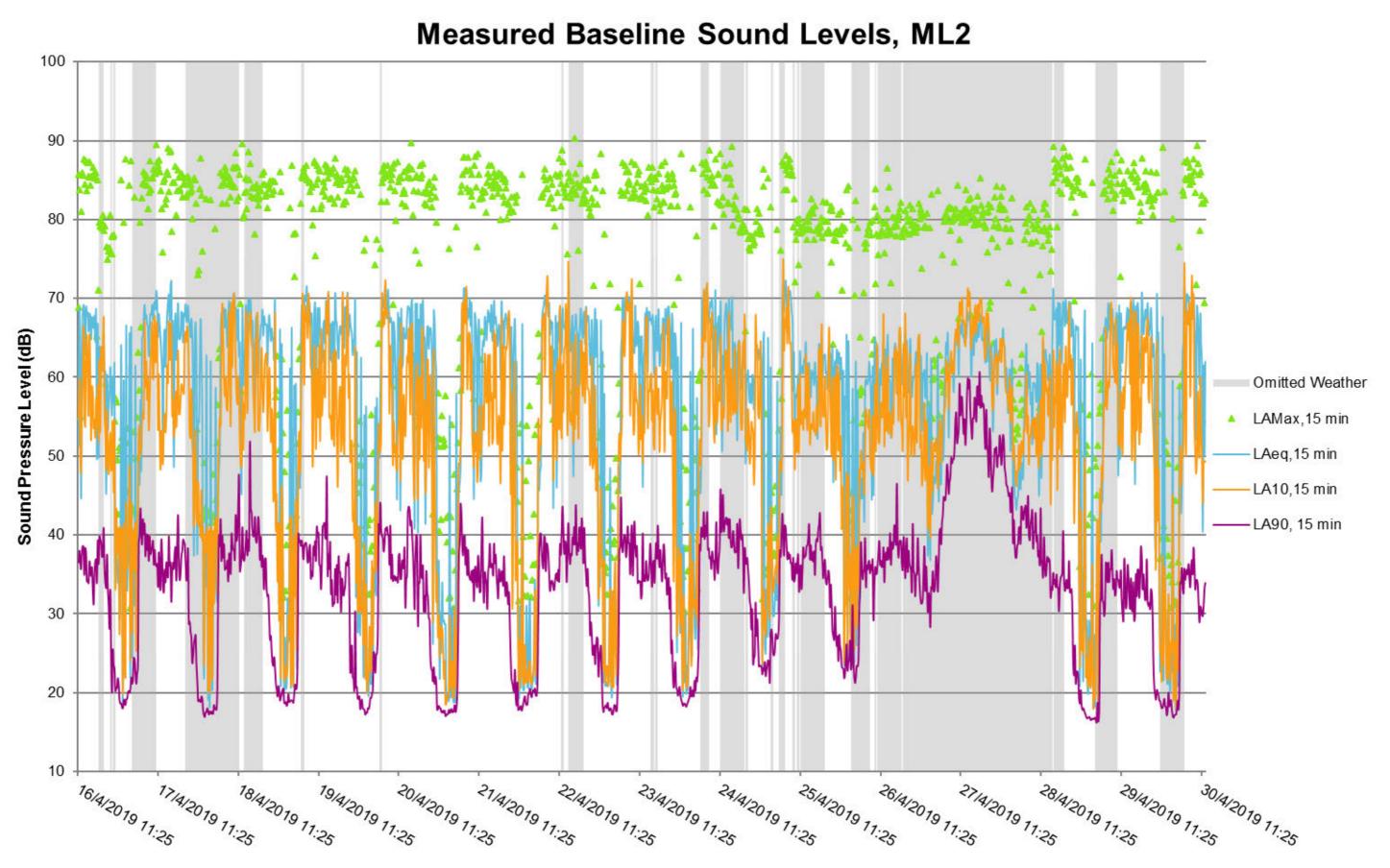


Figure 7.46: Measured Baseline Sound Levels – ML2



Date & Time (dd/mm/yy hh:mm)

Figure 7.47: Measured Baseline Sound Levels – ML3

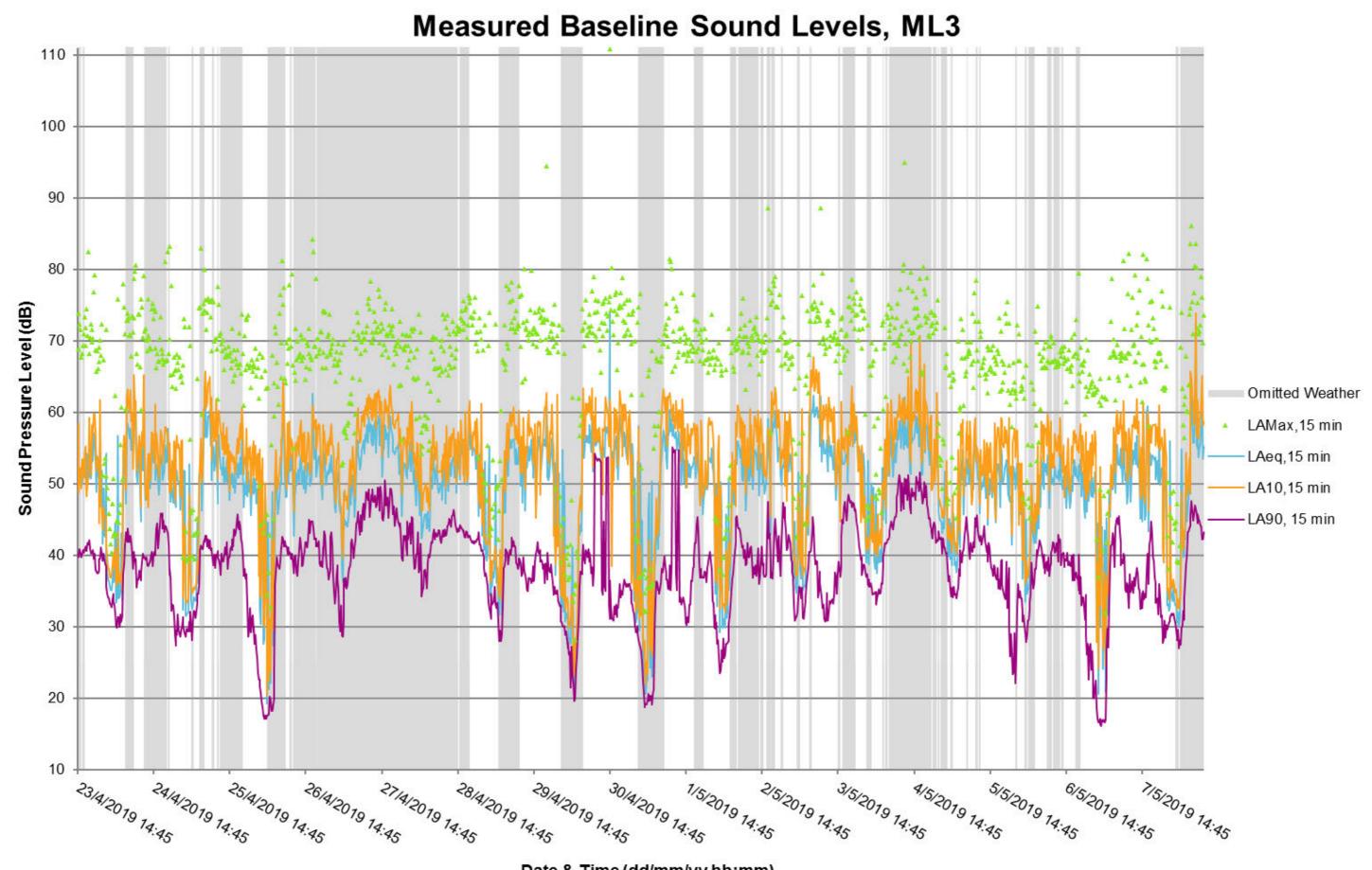


Figure 7.48: Measured Baseline Sound Levels - ML4

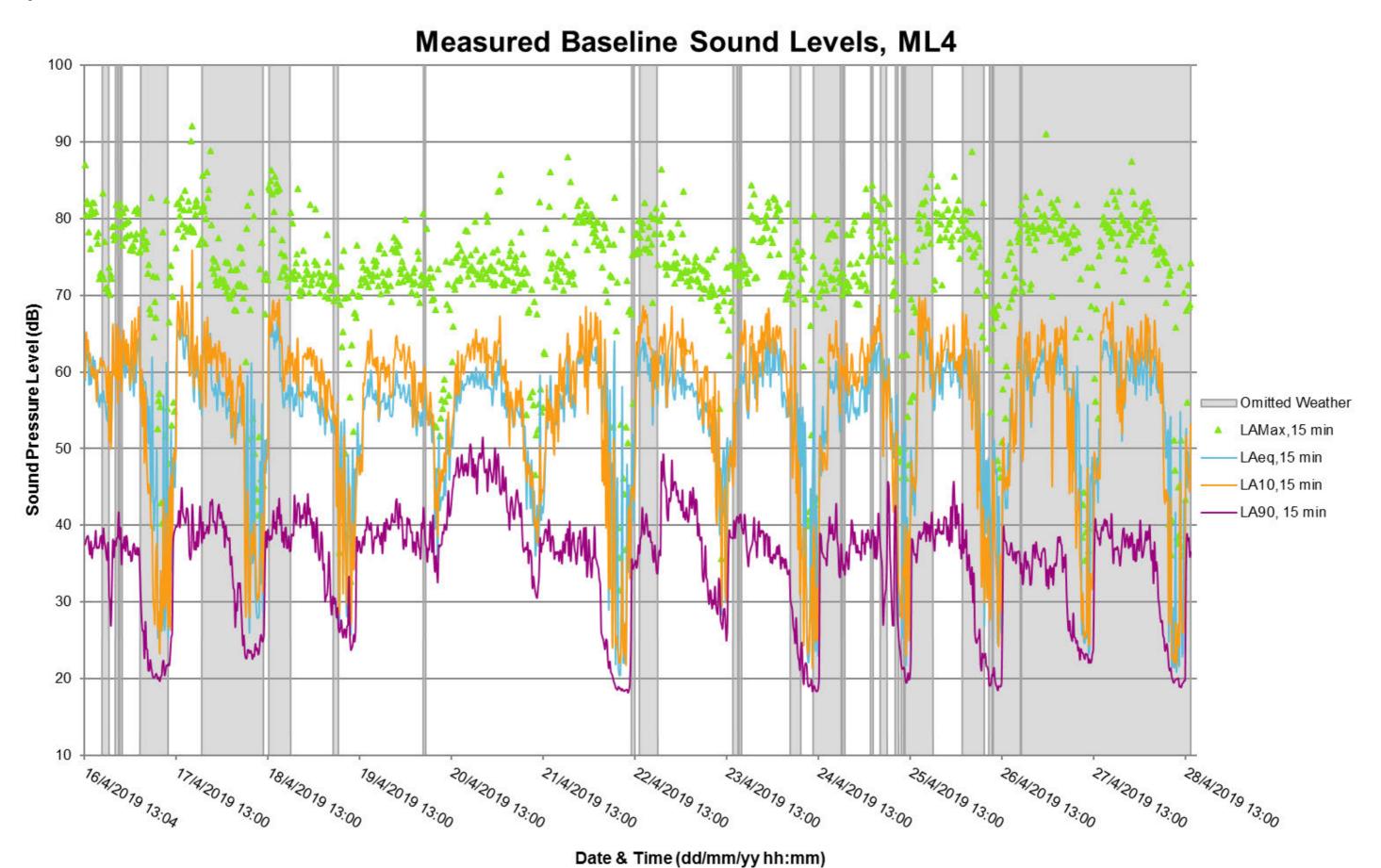


Figure 7.49: Measured Baseline Sound Levels – ML5

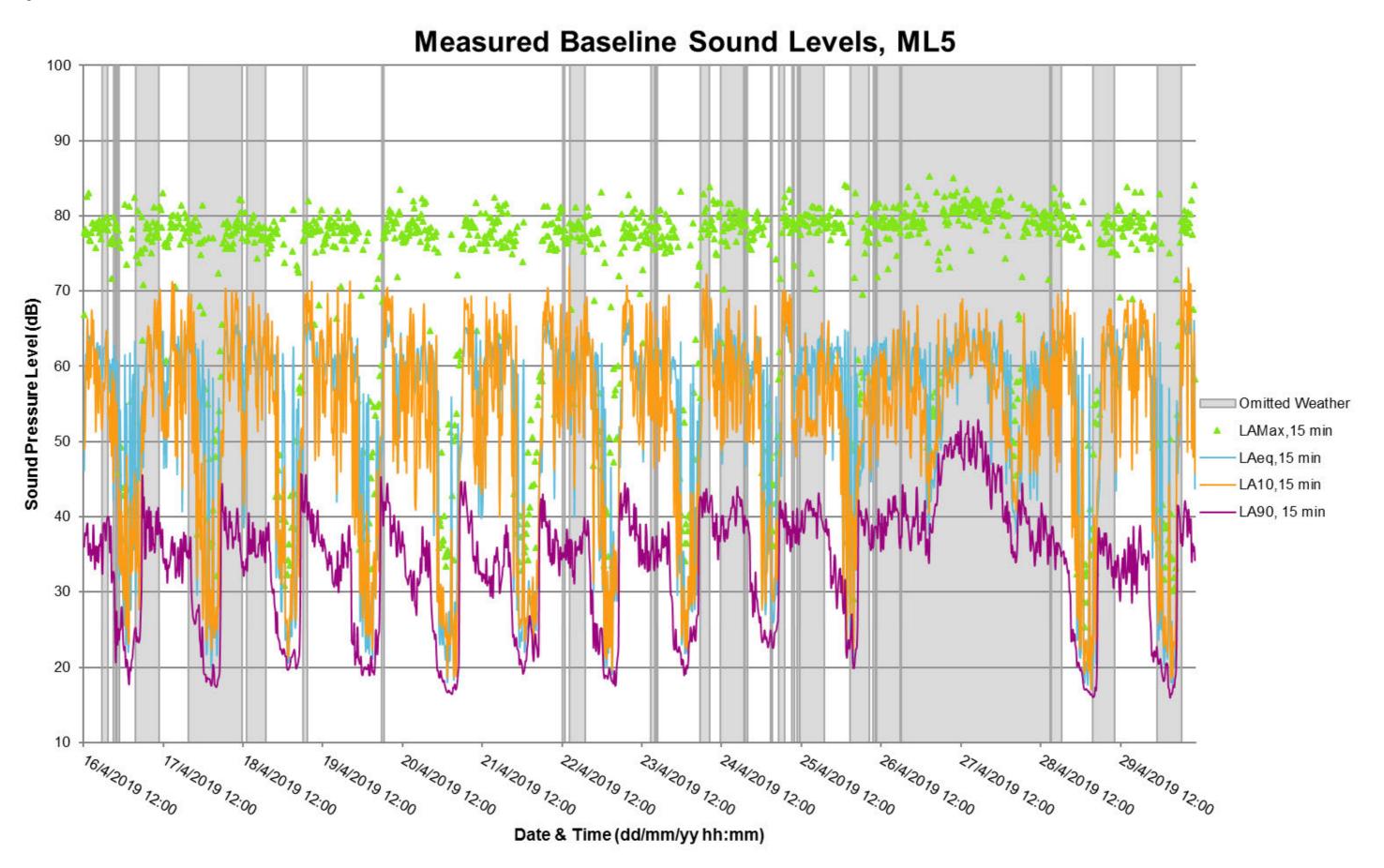


Figure 7.50: Measured Baseline Sound Levels – ML6

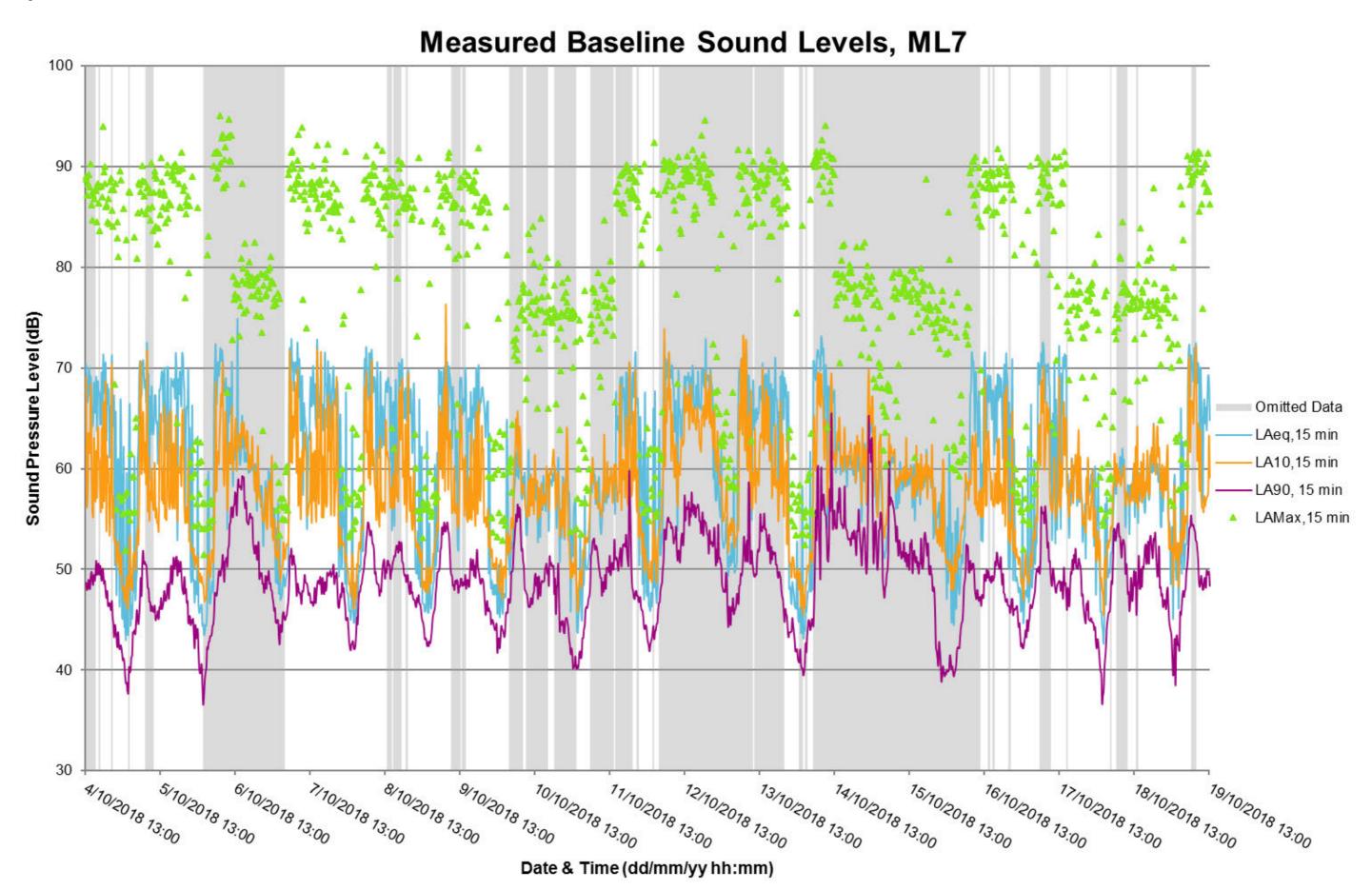


Figure 7.51: Measured Baseline Sound Levels - ML7

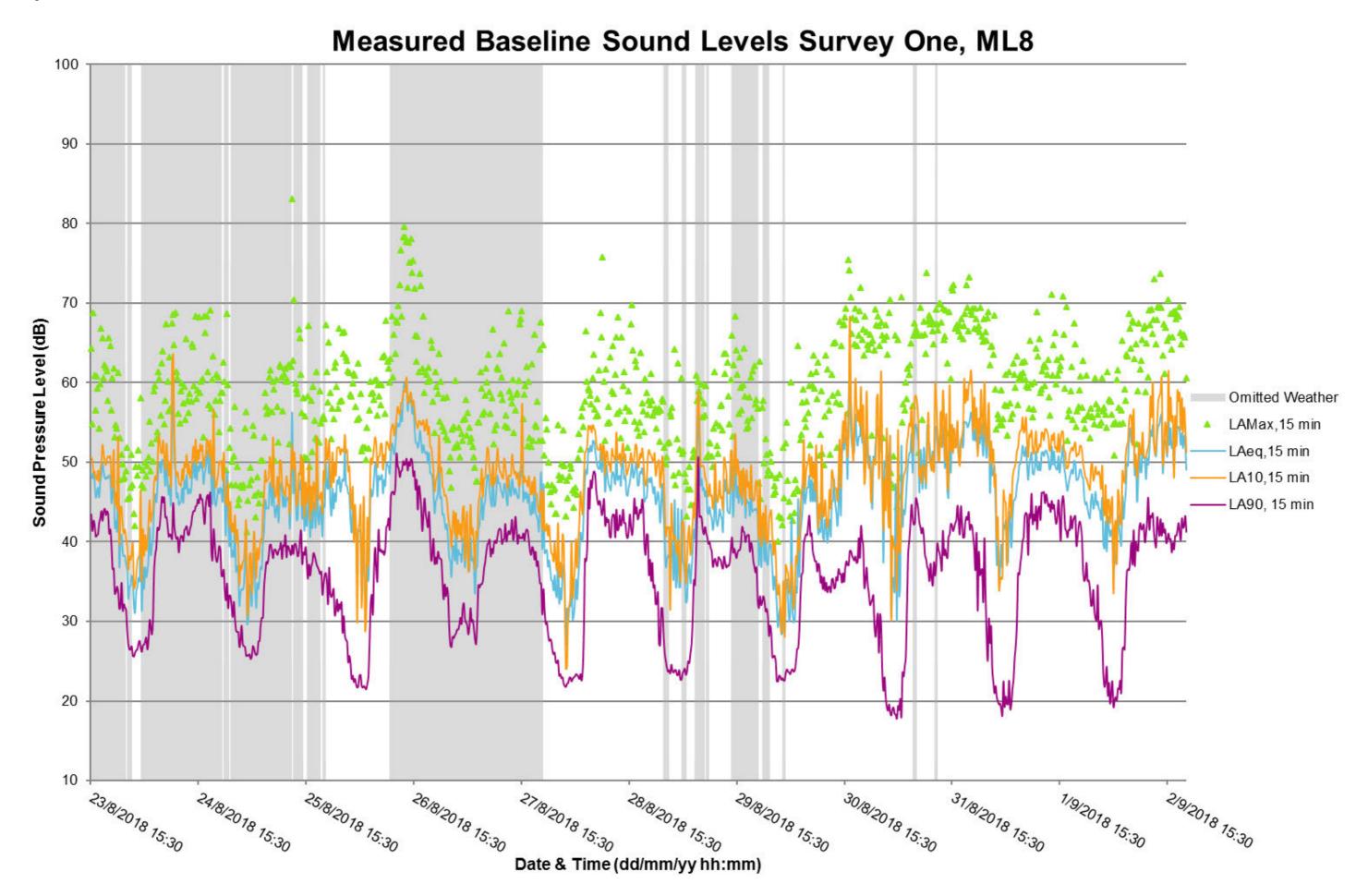


Figure 7.52: Measured Baseline Sound Levels – ML8

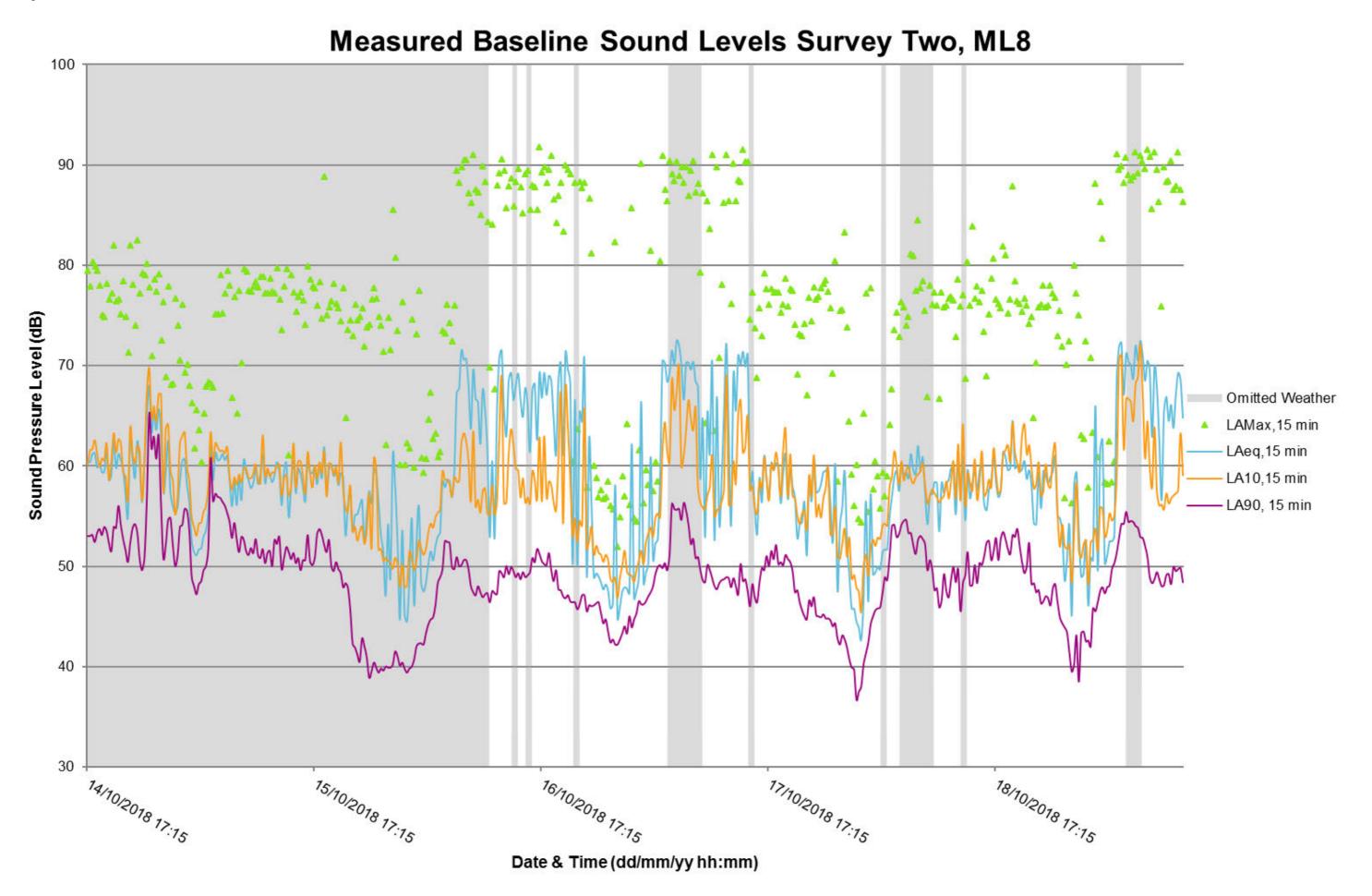


Figure 7.53: Measured Baseline Sound Levels – ML9

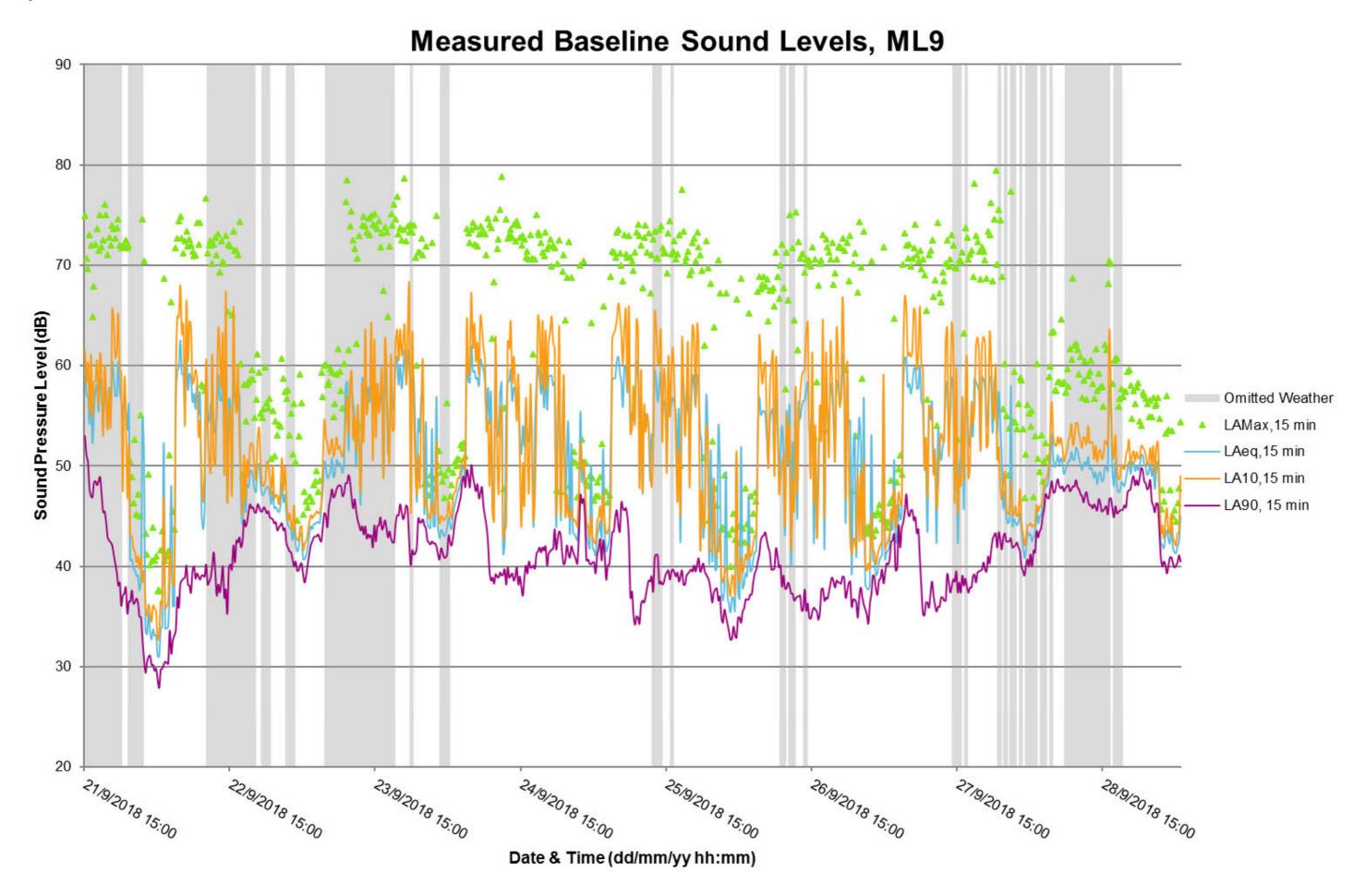


Figure 7.54: Measured Baseline Sound Levels – ML10 Survey 1

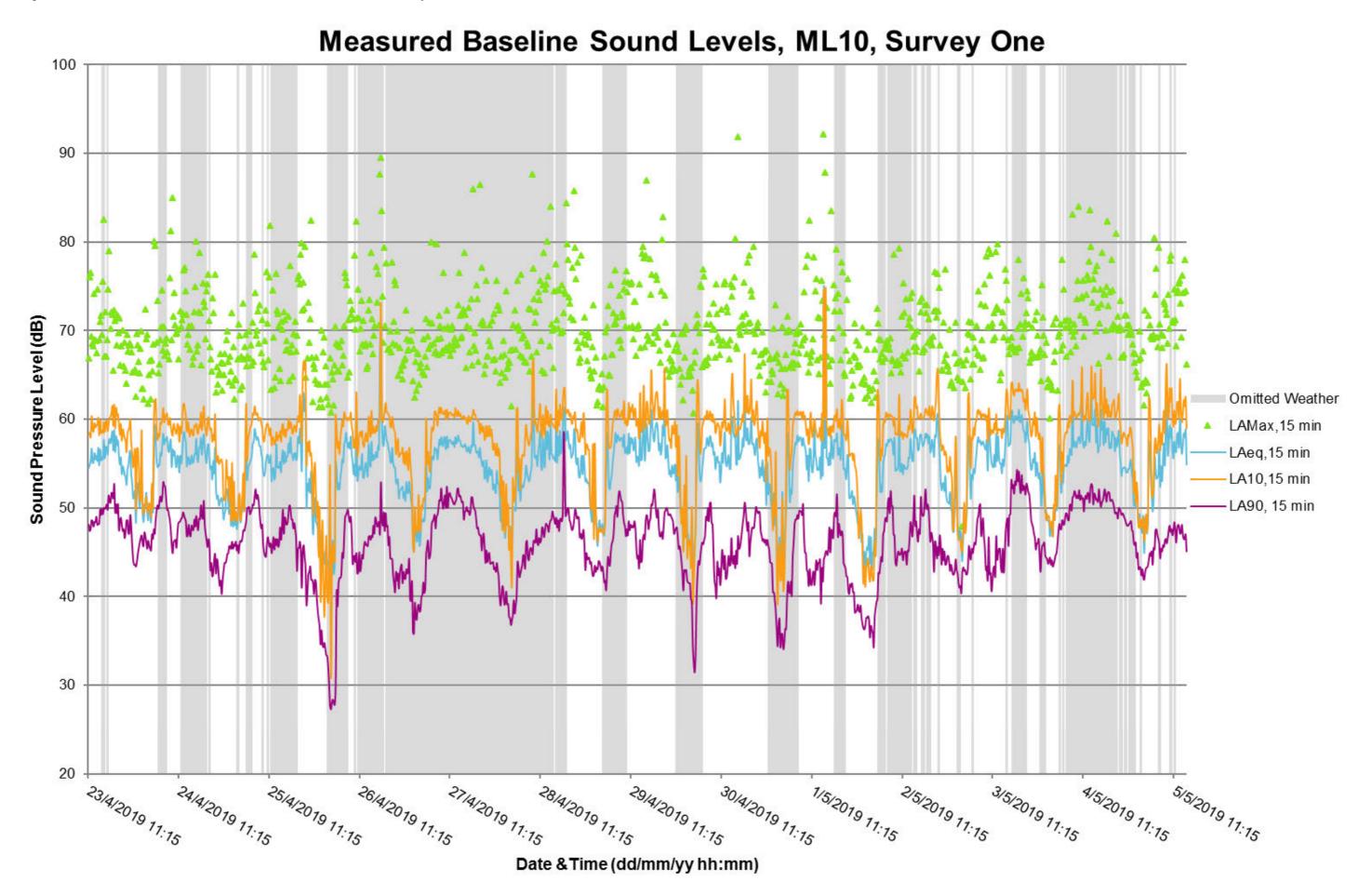


Figure 7.55: Measured Baseline Sound Levels – ML10 Survey 2

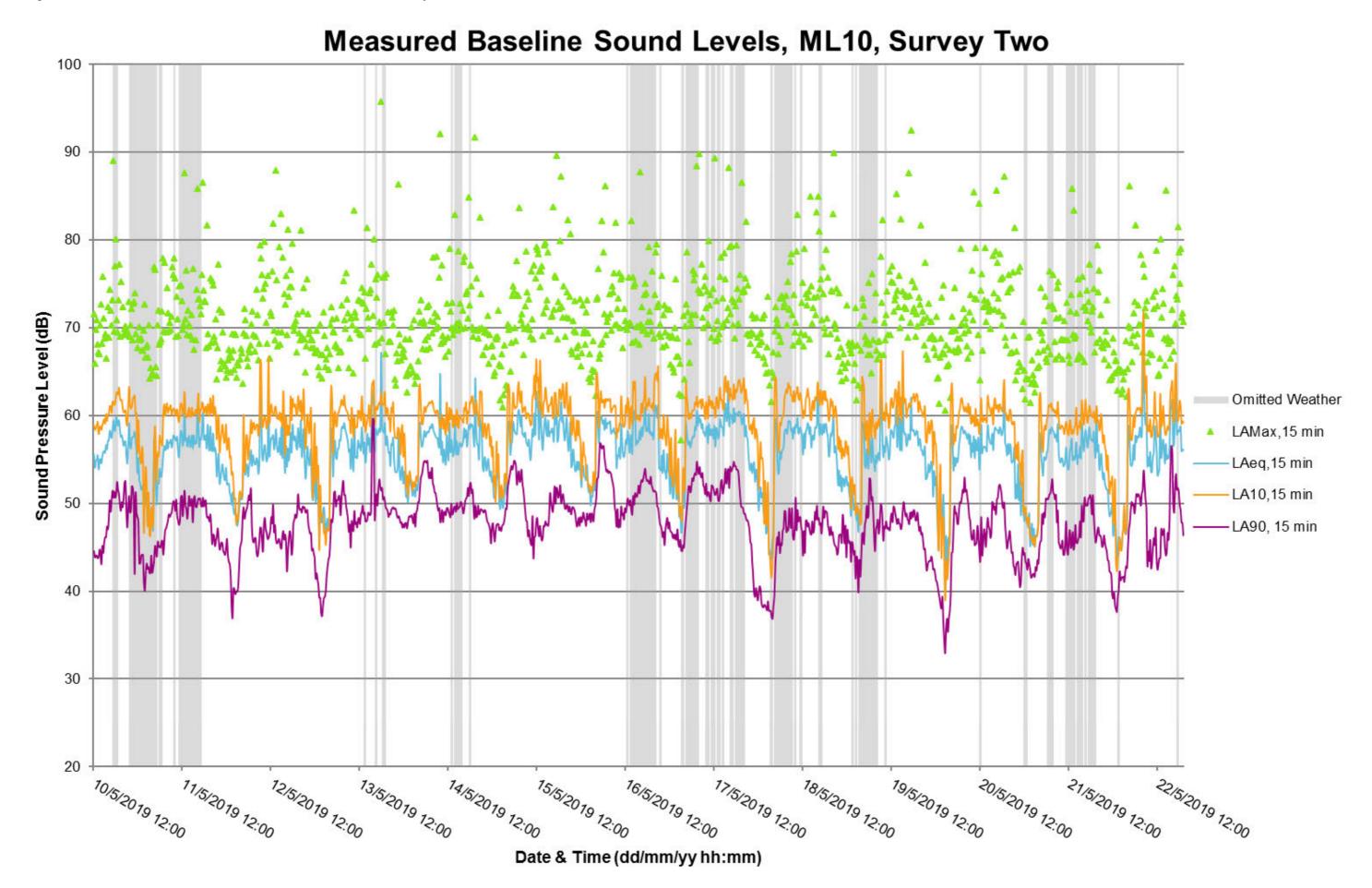


Figure 7.56: Measured Baseline Sound Levels – ML11 Survey 1

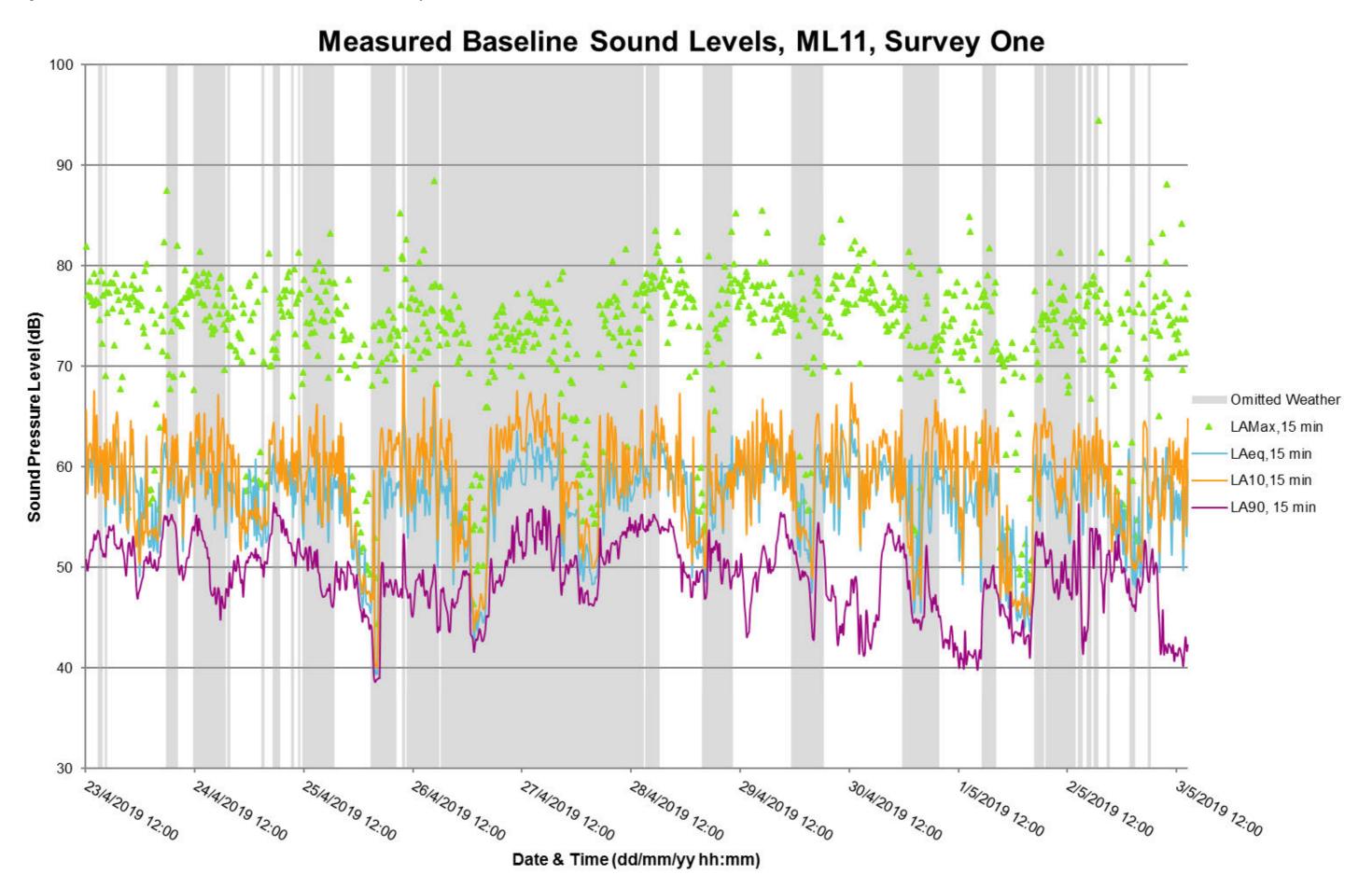


Figure 7.57: Measured Baseline Sound Levels – ML11 Survey 2

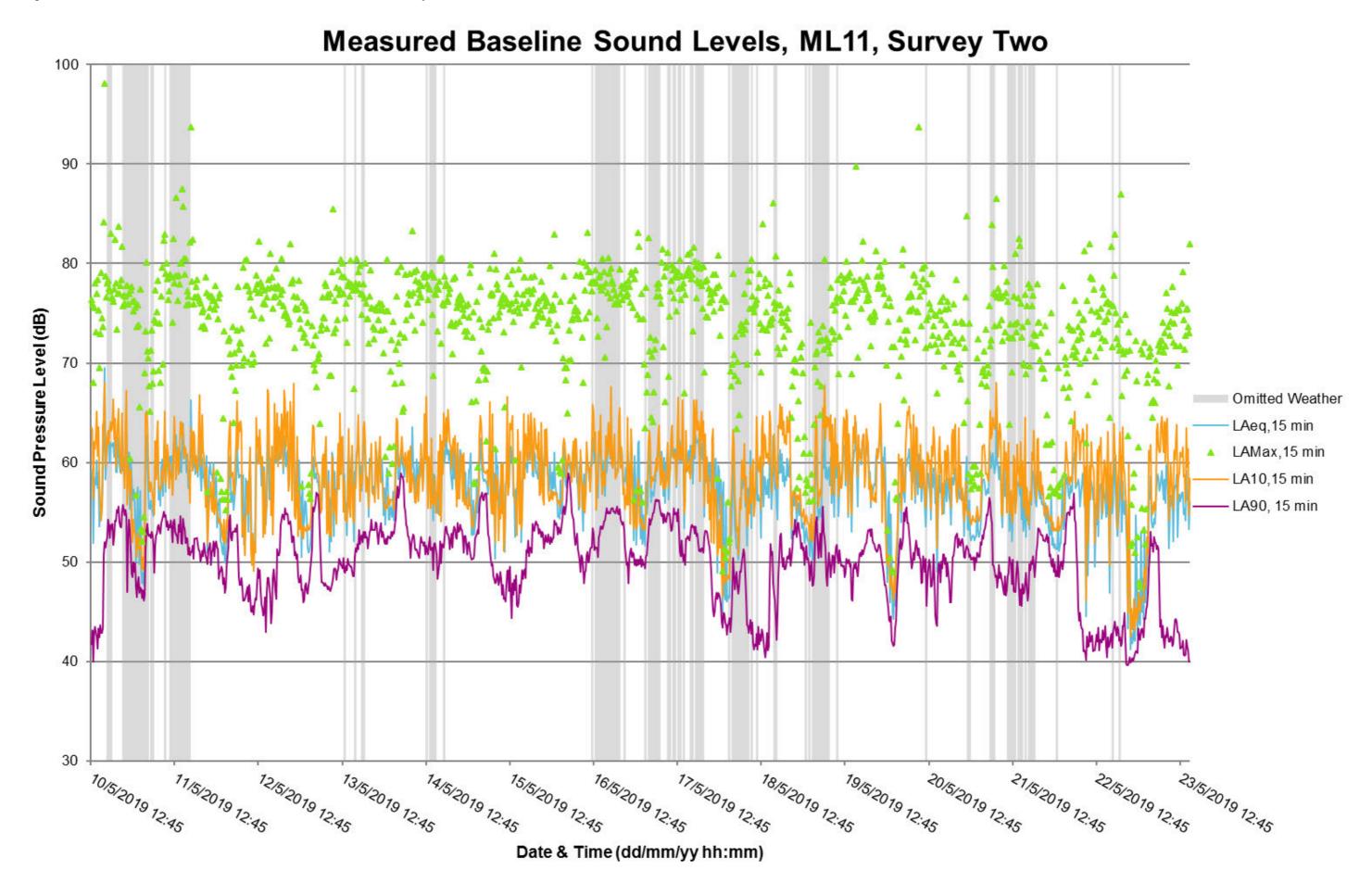


Figure 7.58: Measured Baseline Sound Levels – ML12 Survey 1

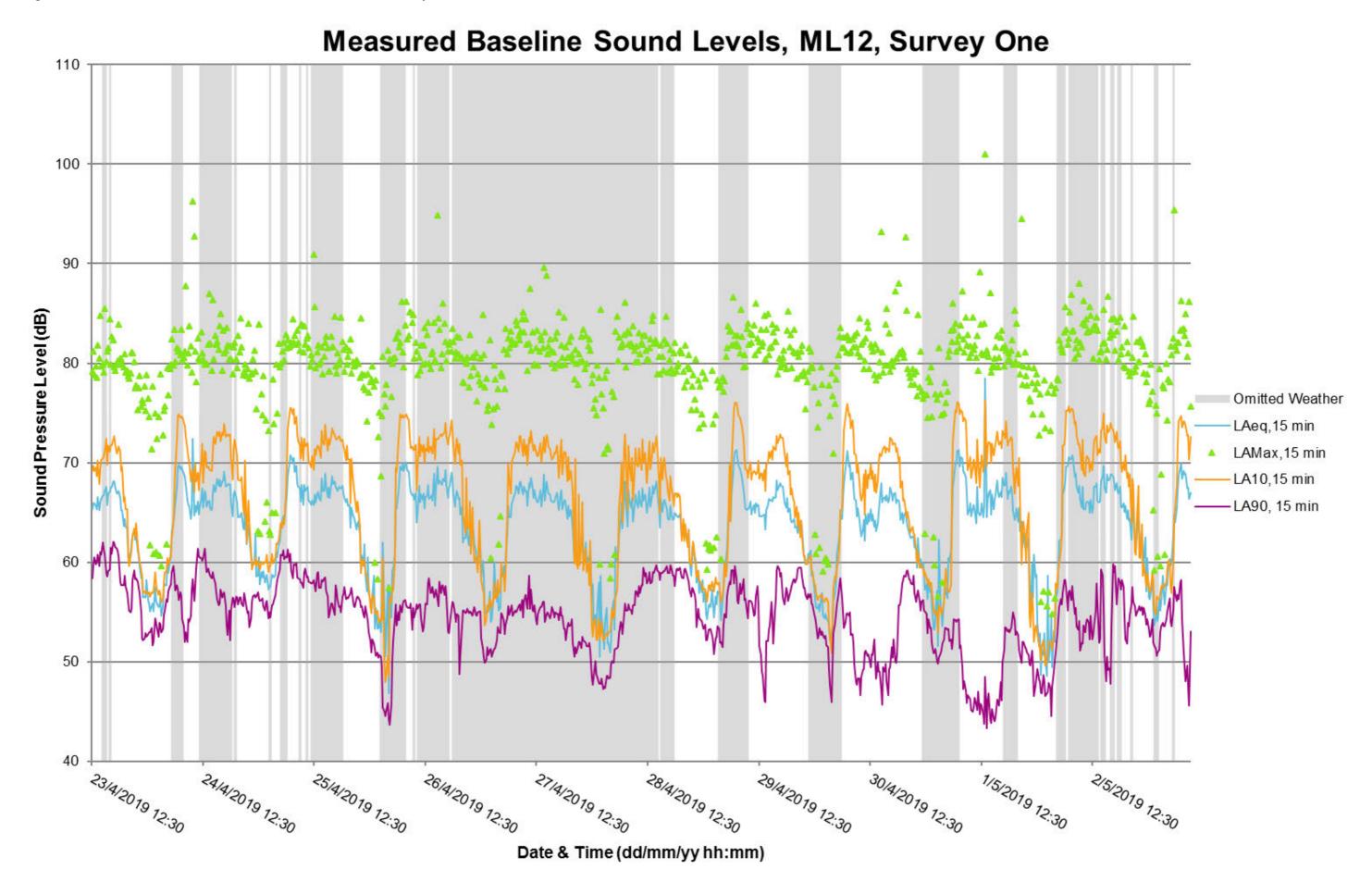


Figure 7.59: Measured Baseline Sound Levels – ML12 Survey 2

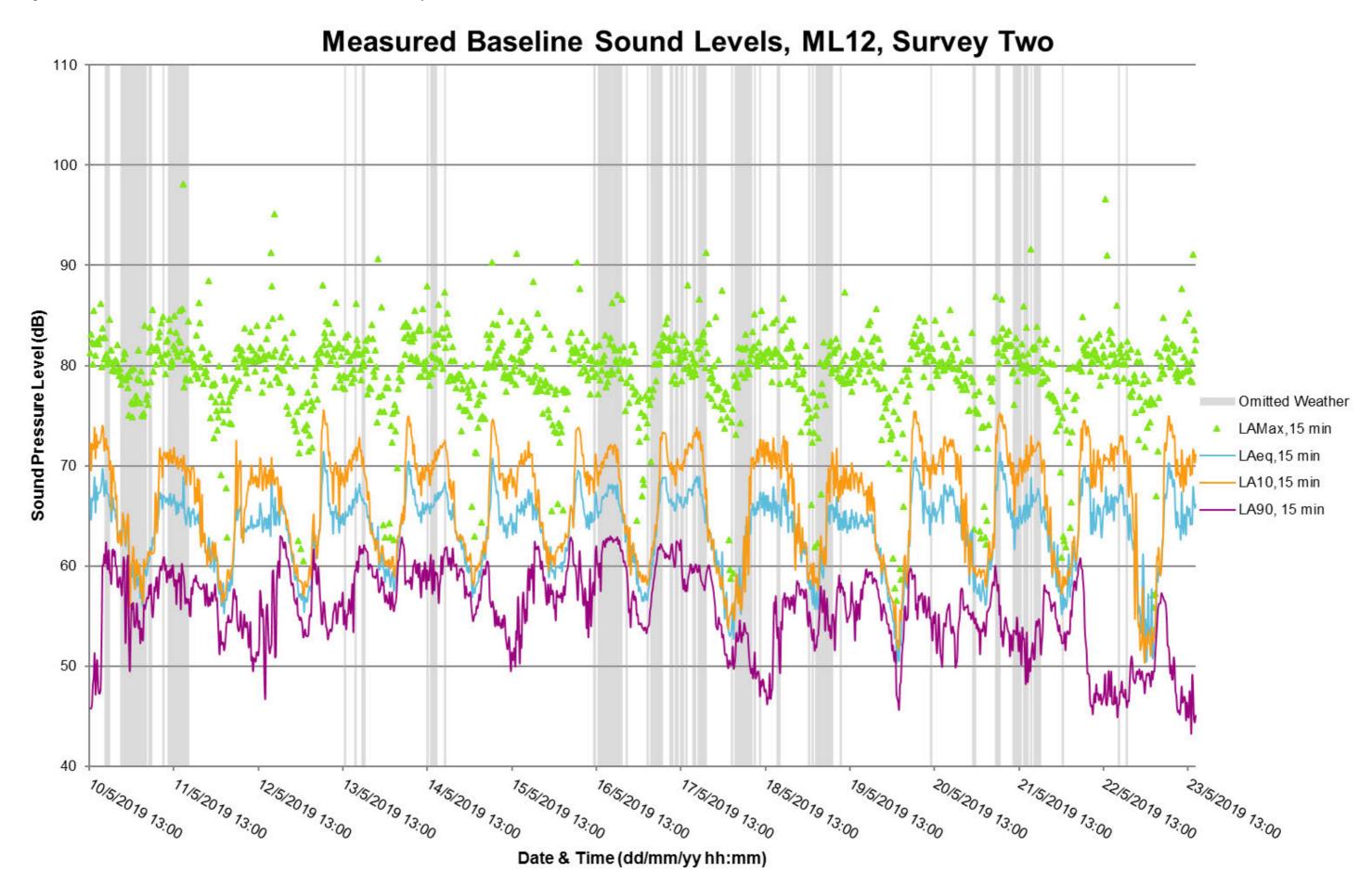


Figure 7.60: Measured Baseline Sound Levels – ML13

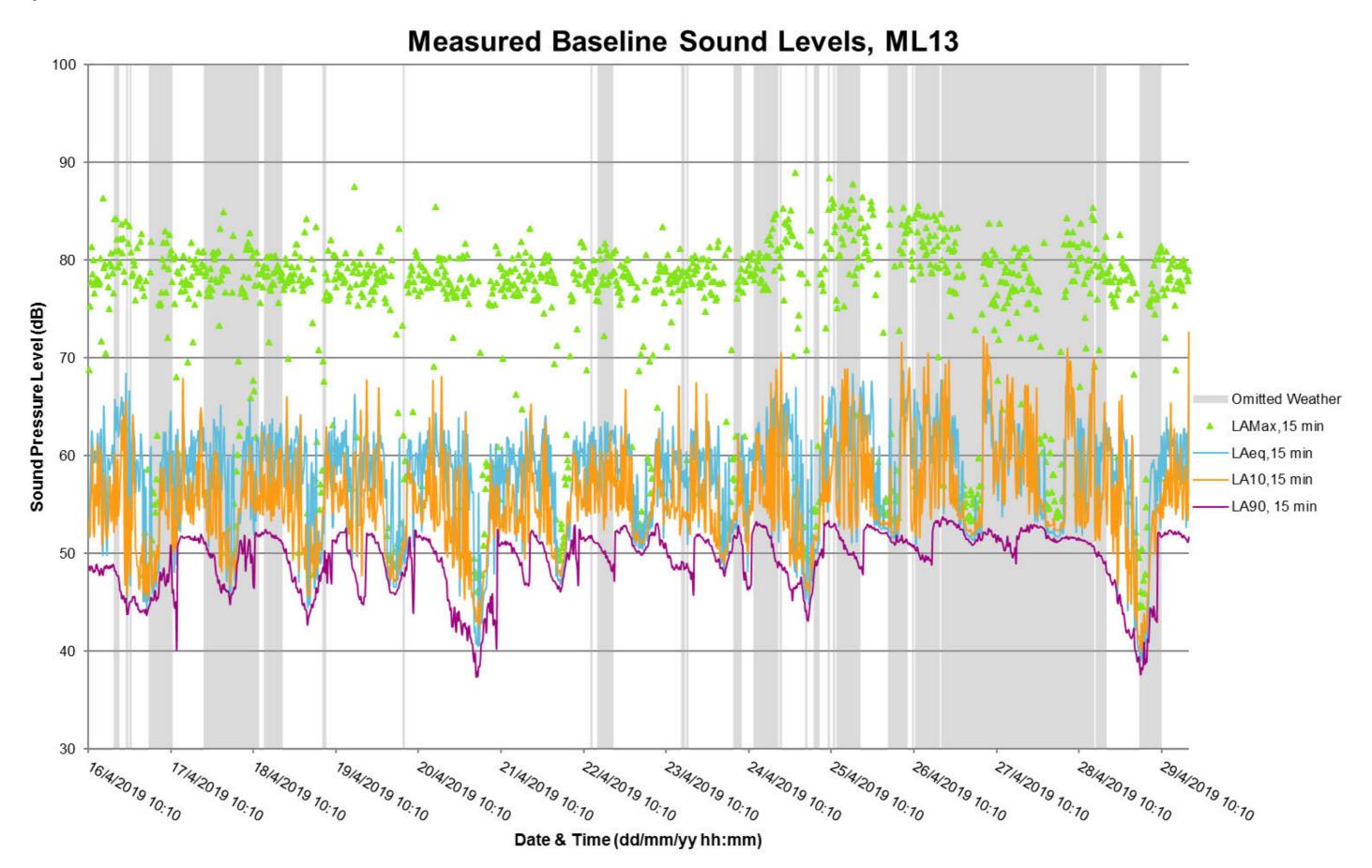


Figure 7.61: Measured Baseline Sound Levels – ML14

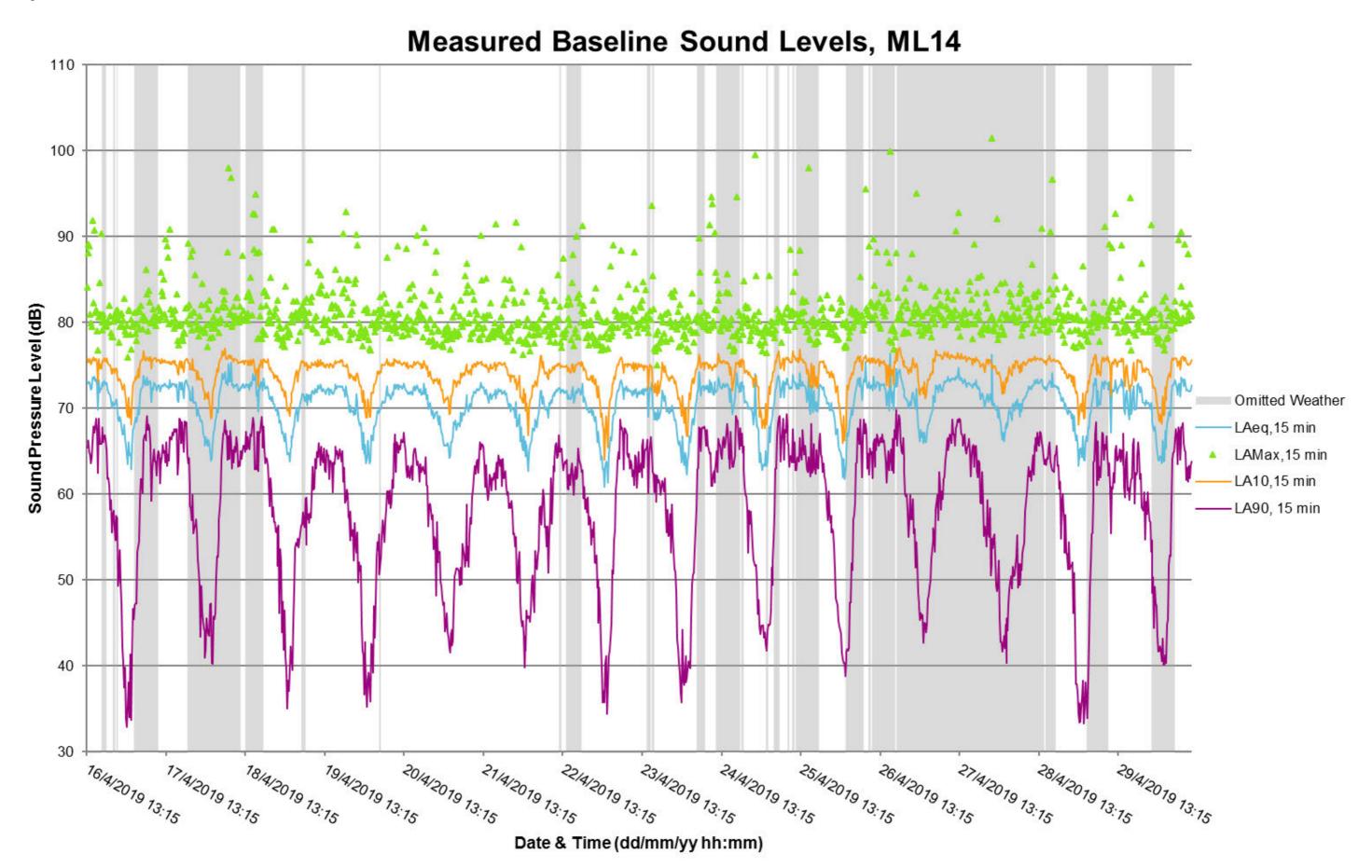


Figure 7.62: Measured Baseline Sound Levels – ML15

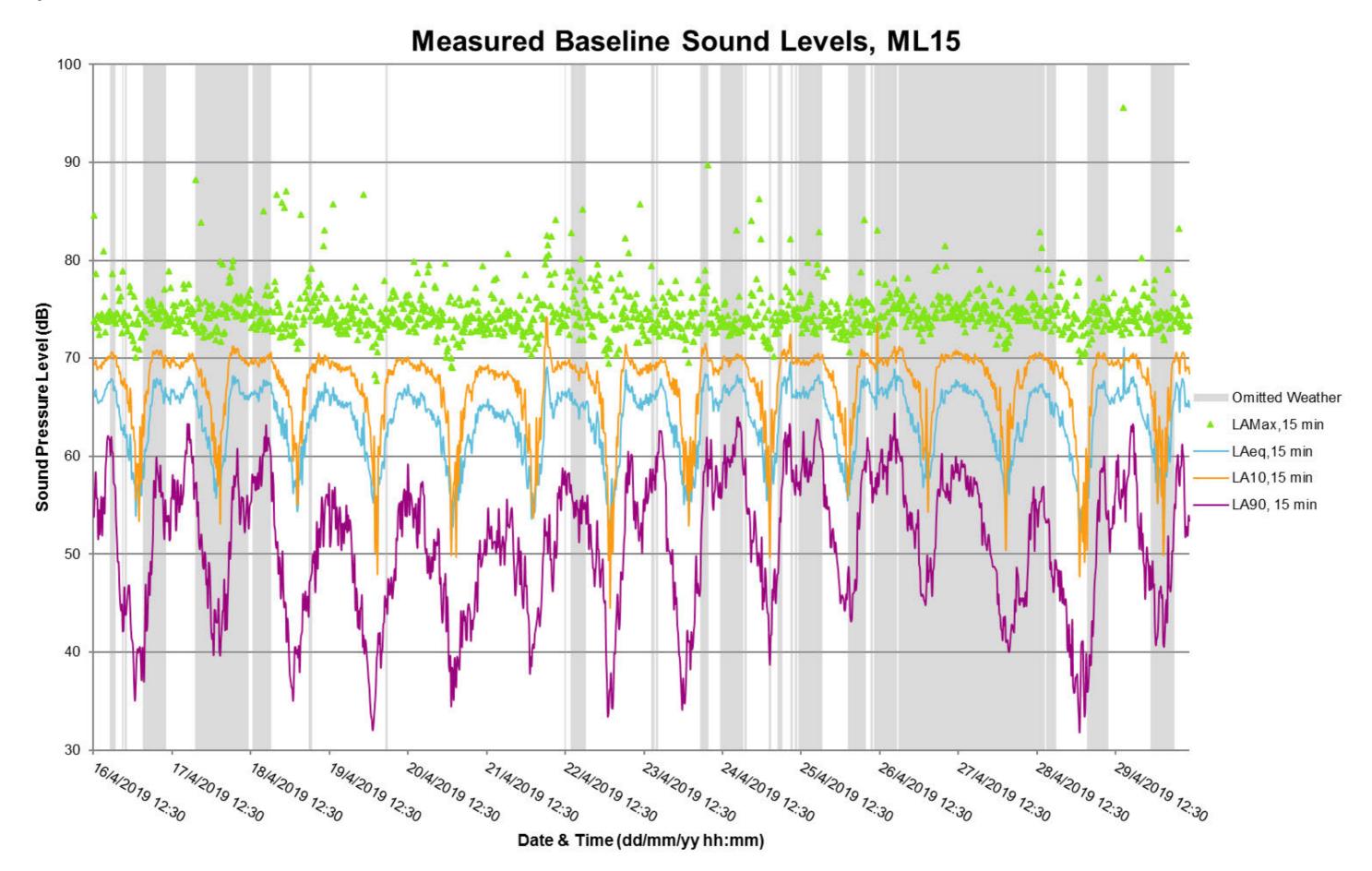


Figure 7.63: Measured Baseline Sound Levels – ML16

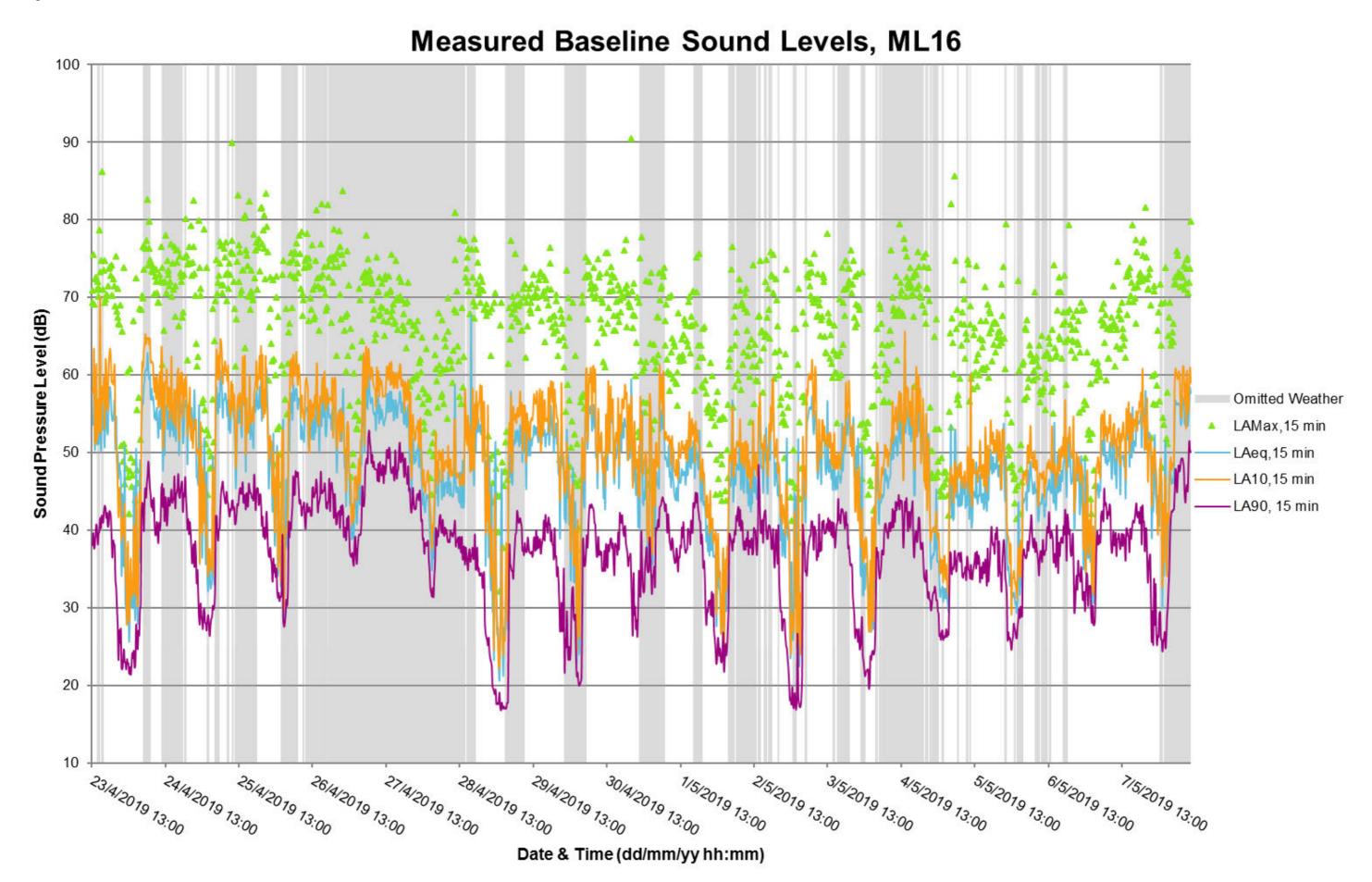


Figure 7.64: Measured Baseline Sound Levels – ML17 Survey 1

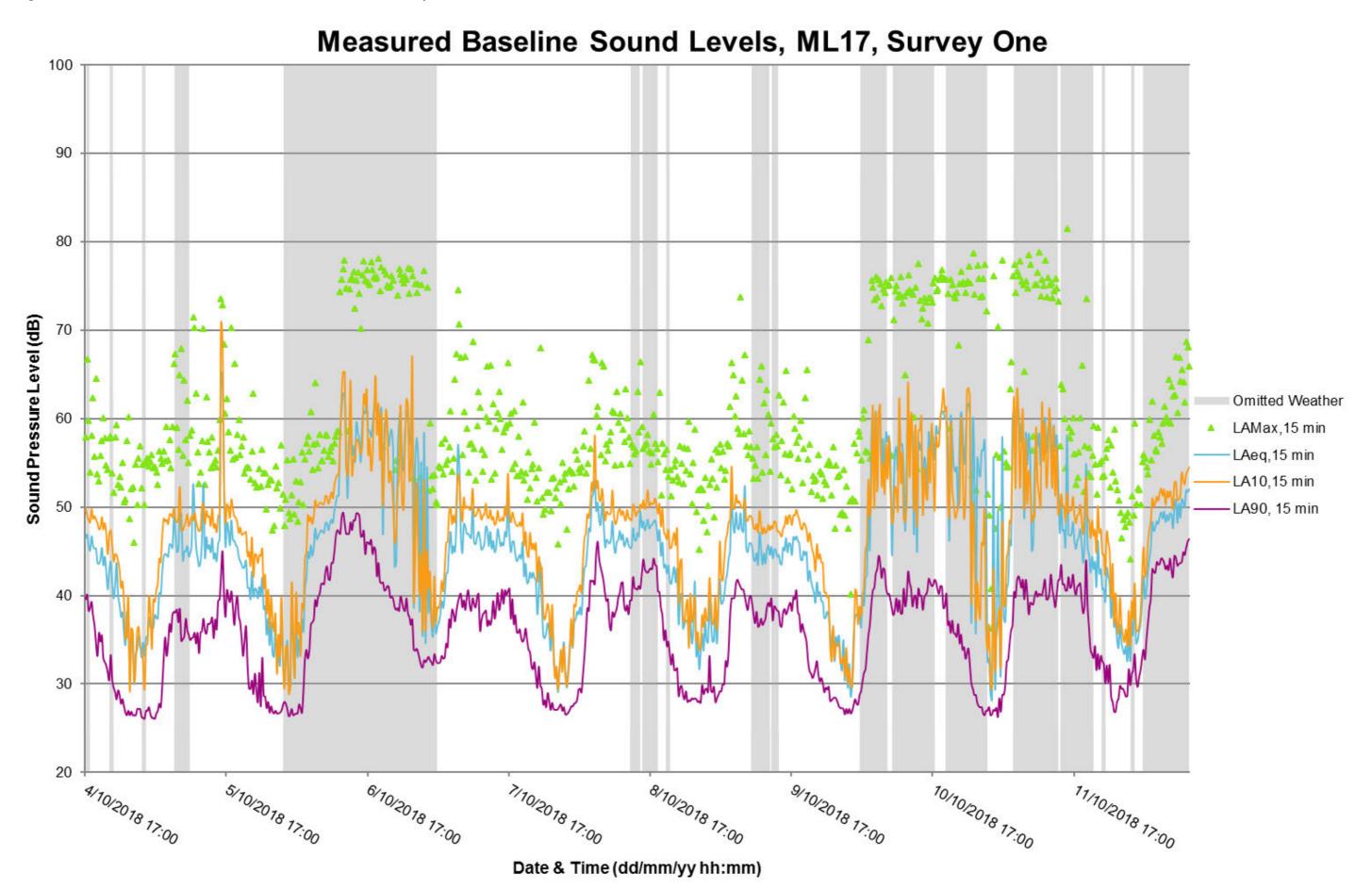


Figure 7.65: Measured Baseline Sound Levels – ML17 Survey 2

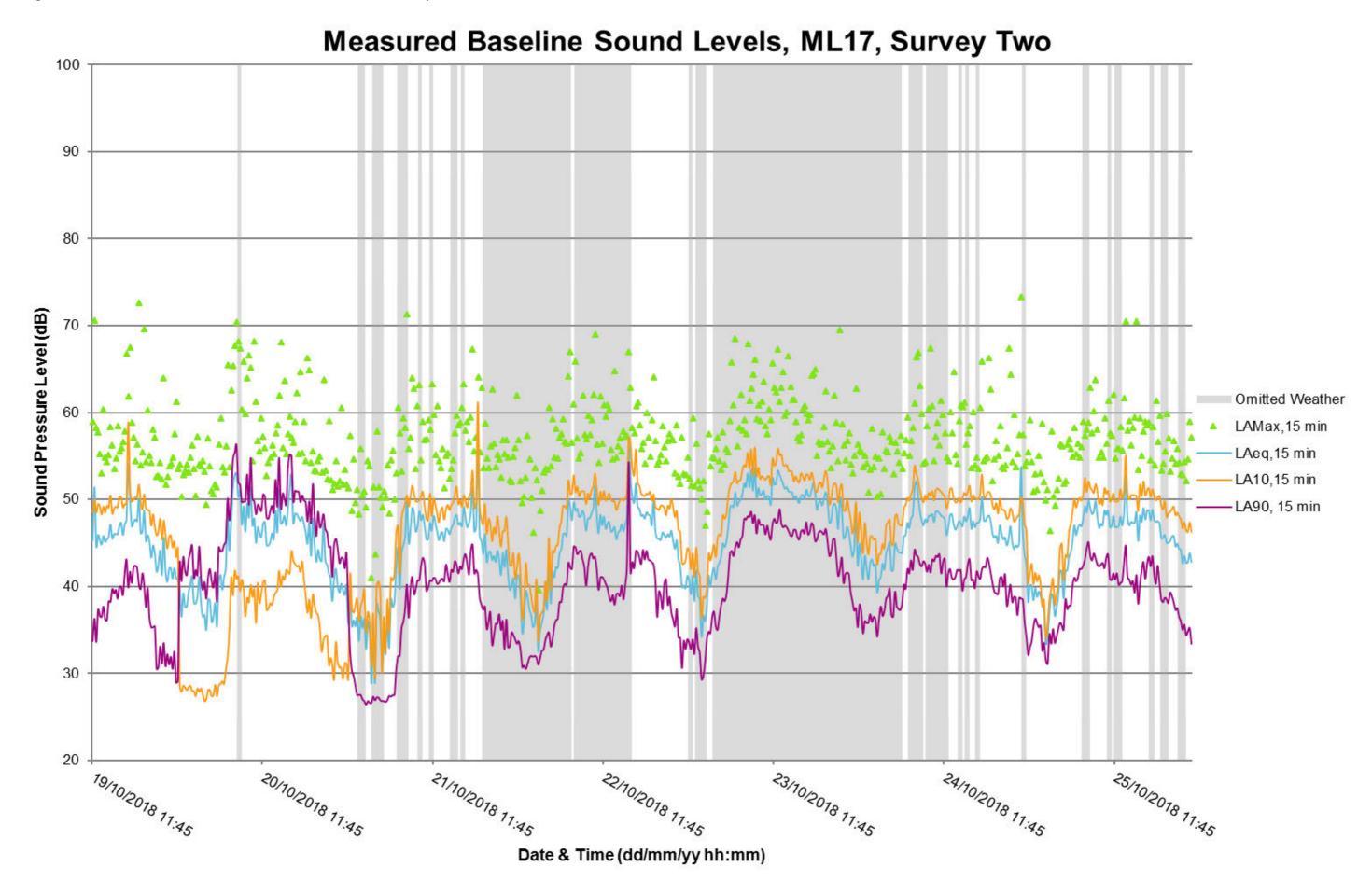


Figure 7.66: Measured Baseline Sound Levels – ML18

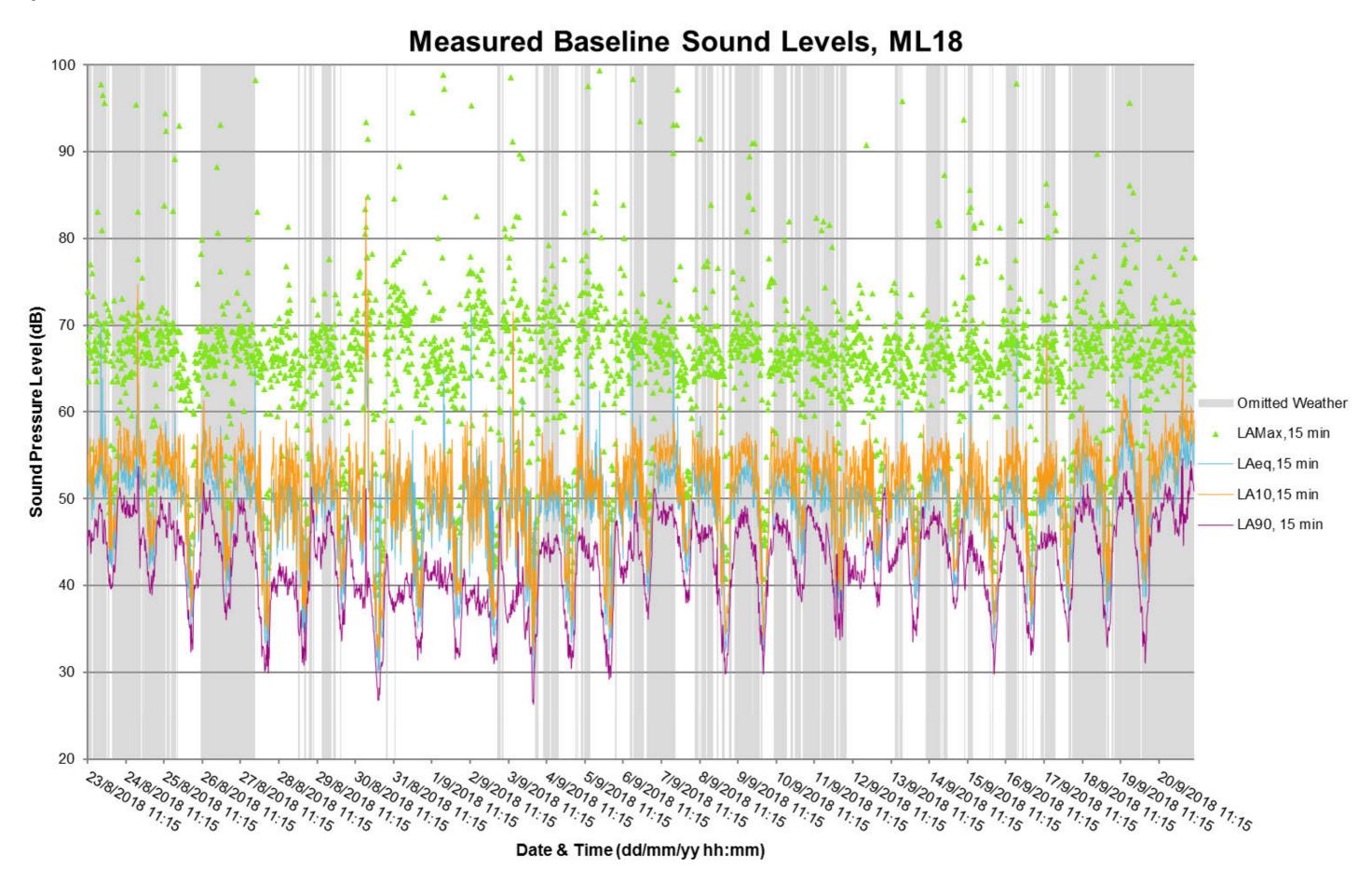


Figure 7.67: Measured Baseline Sound Levels – ML19

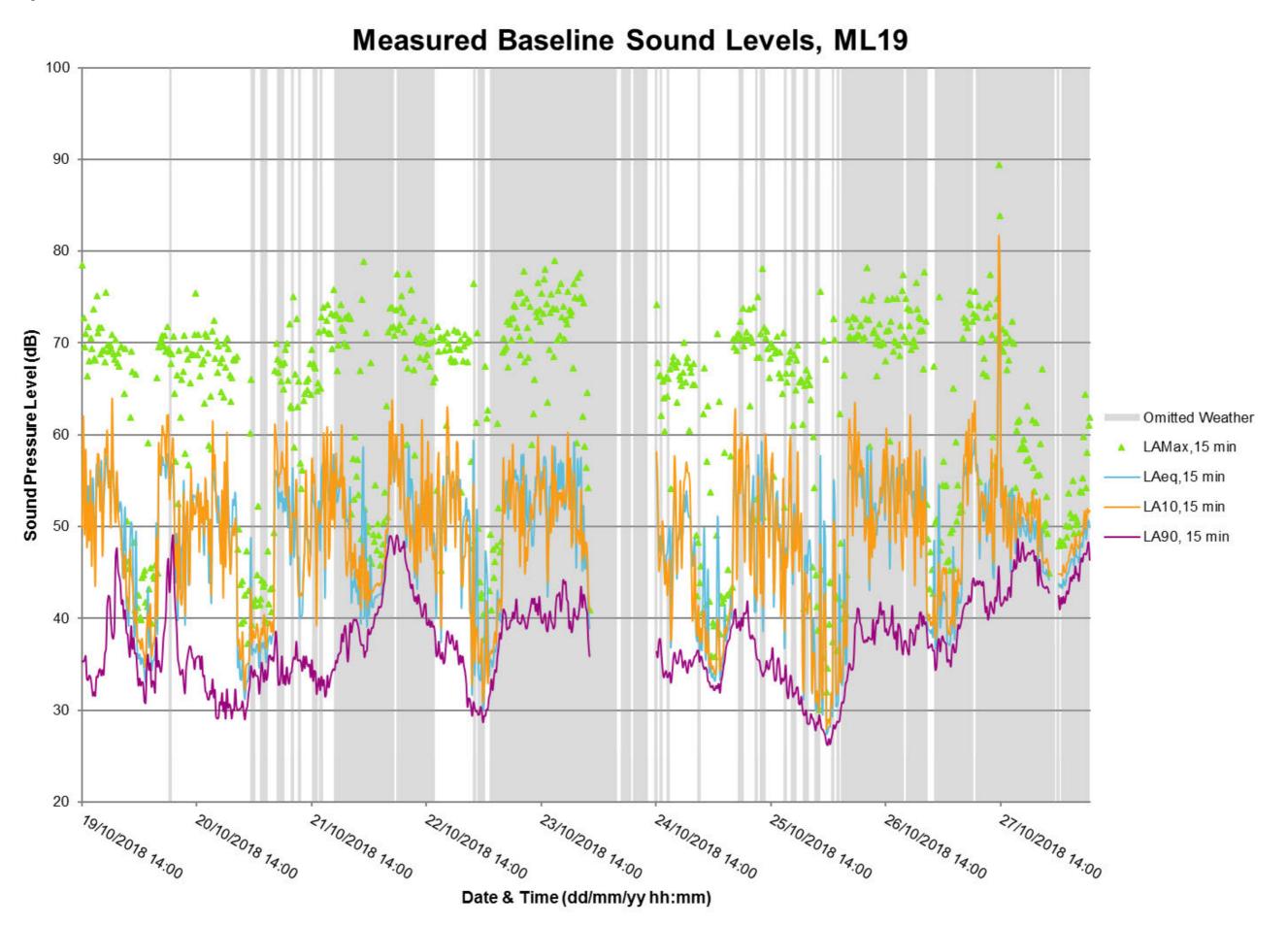


Figure 7.68: Measured Baseline Sound Levels – ML20 Survey 1

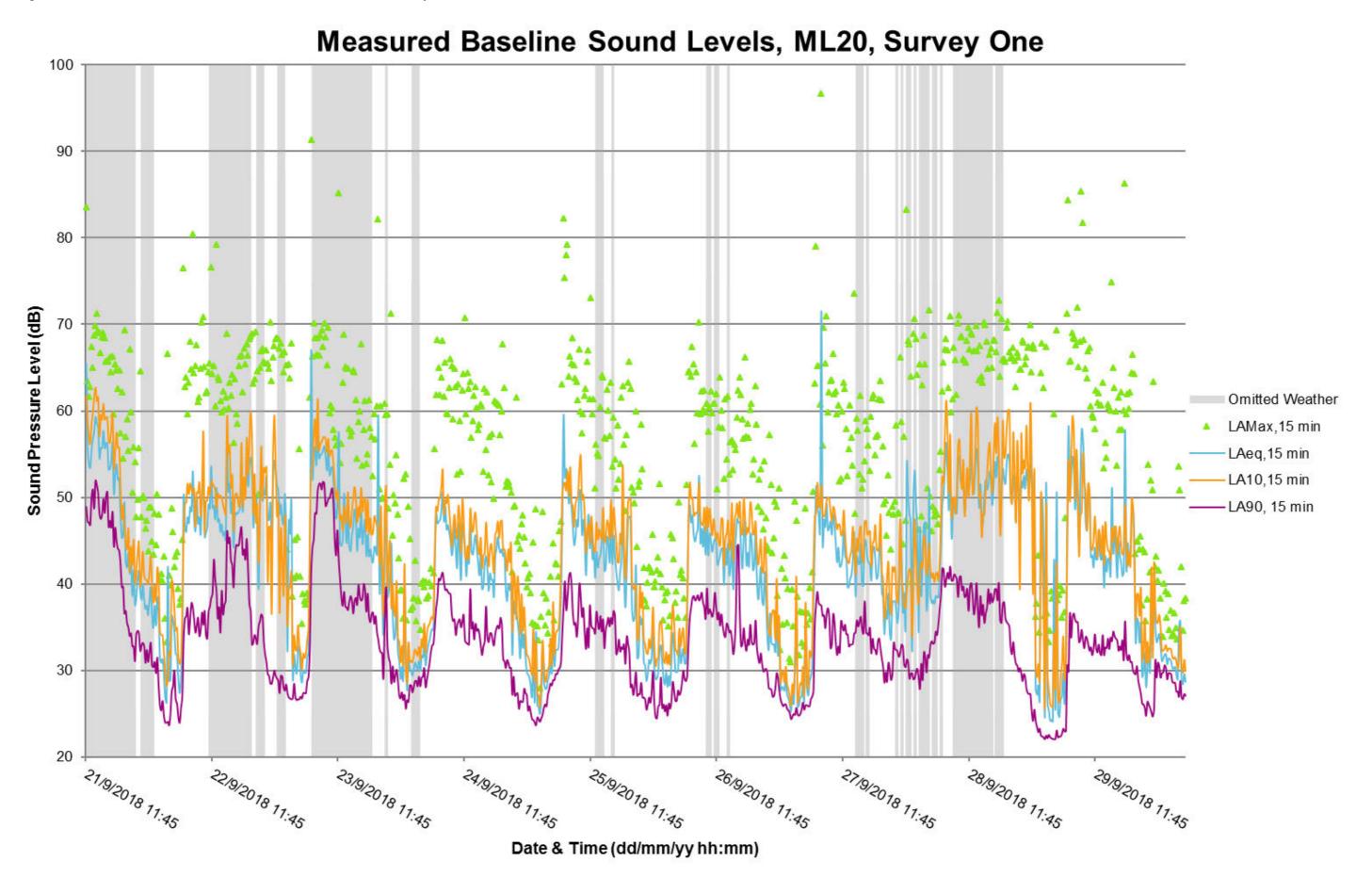


Figure 7.69: Measured Baseline Sound Levels – ML20 Survey 2

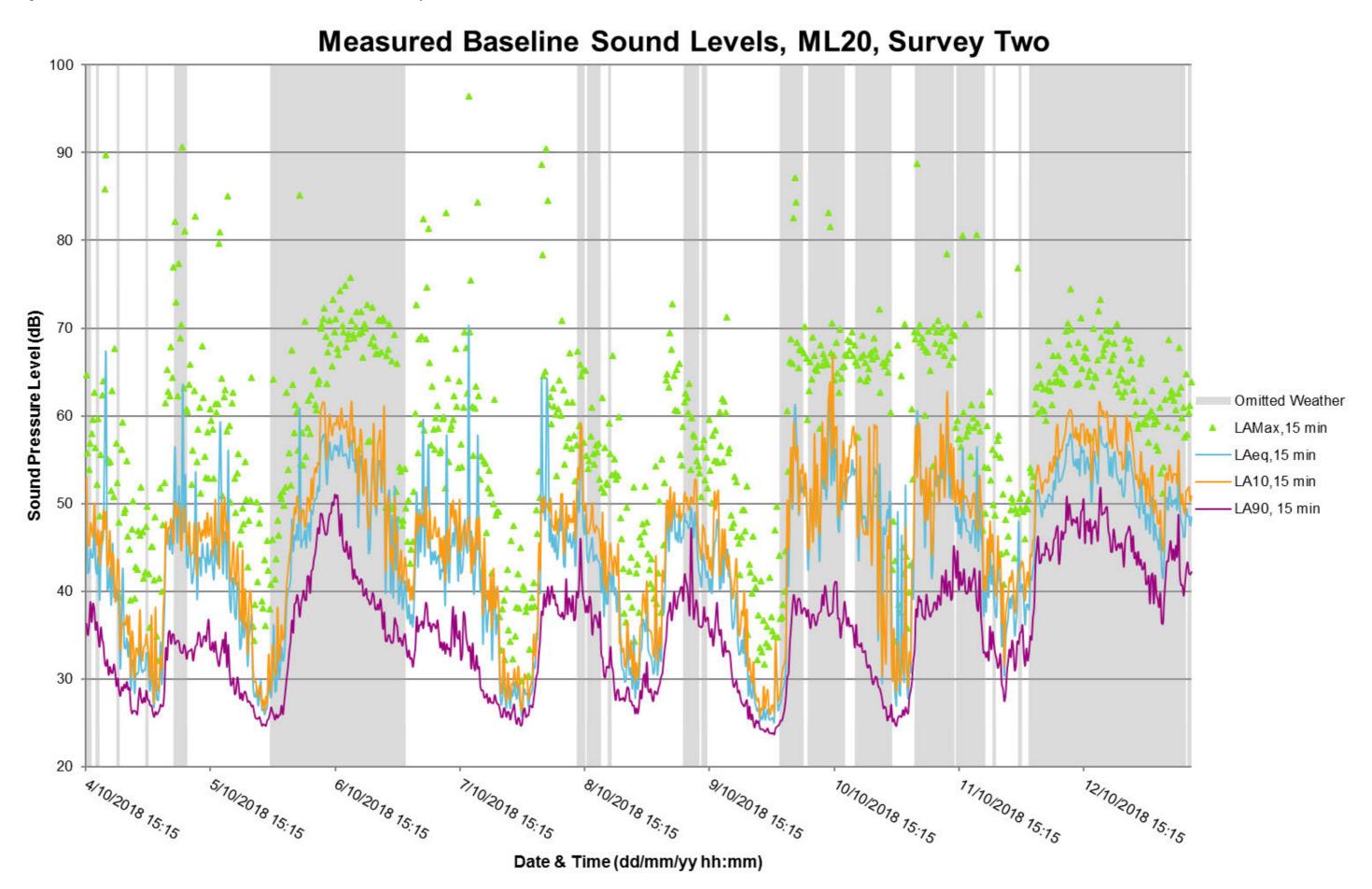


Figure 7.70: Measured Baseline Sound Levels – ML21

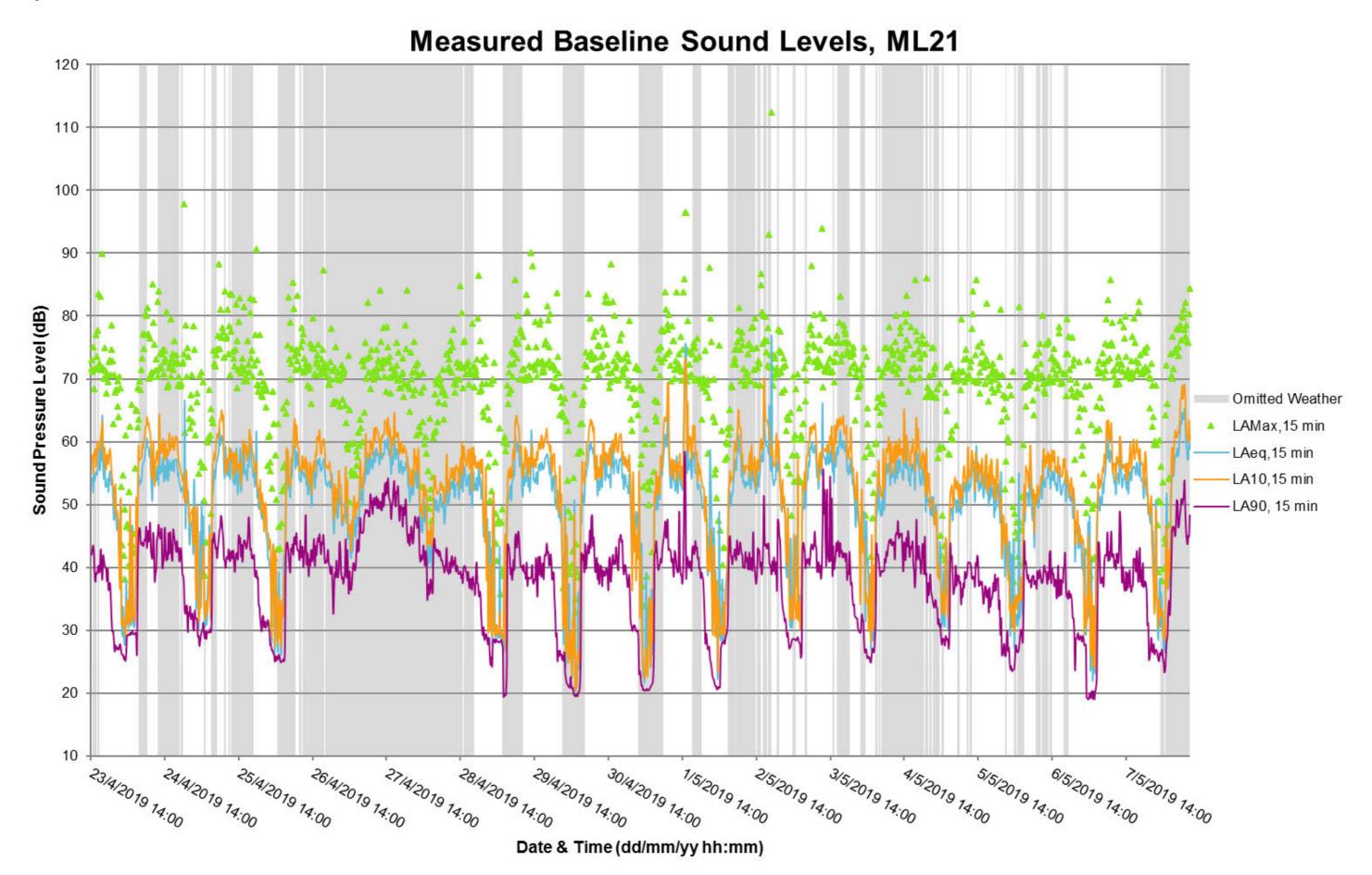


Figure 7.71: Measured Baseline Sound Levels – ML22 Survey 1

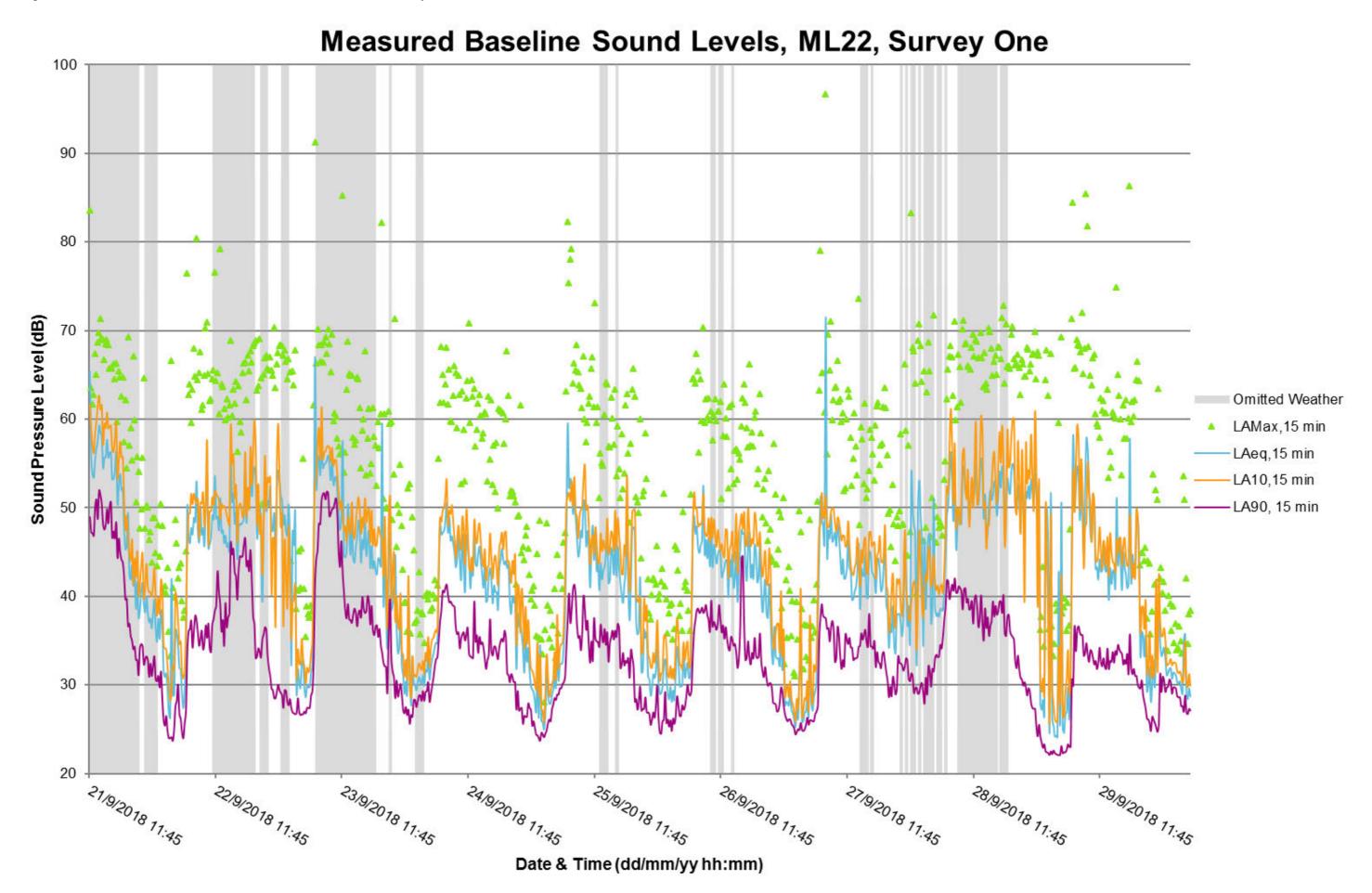


Figure 7.72: Measured Baseline Sound Levels – ML22 Survey 2

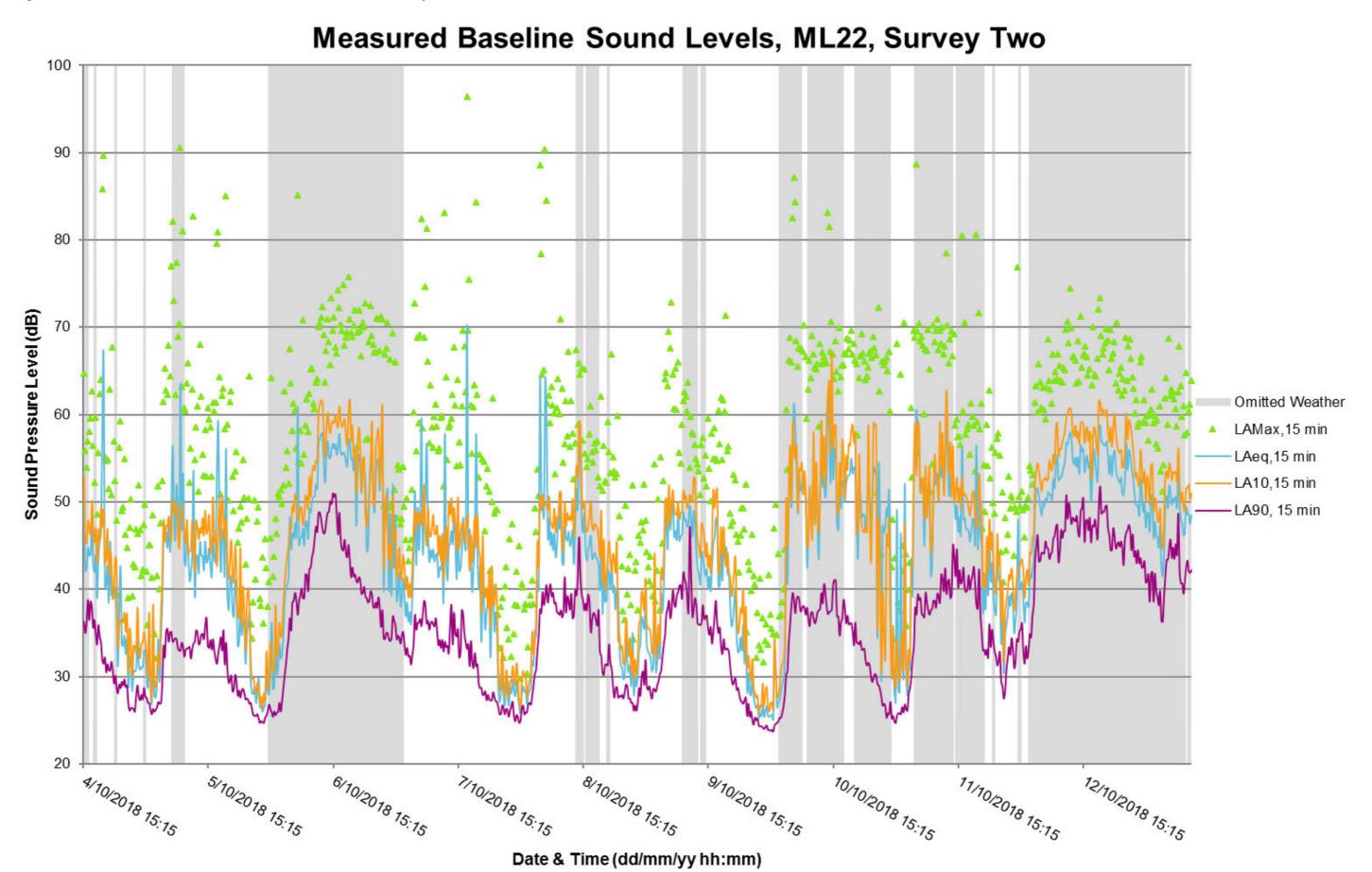


Figure 7.73: Measured Baseline Sound Levels – ML30 Survey 1

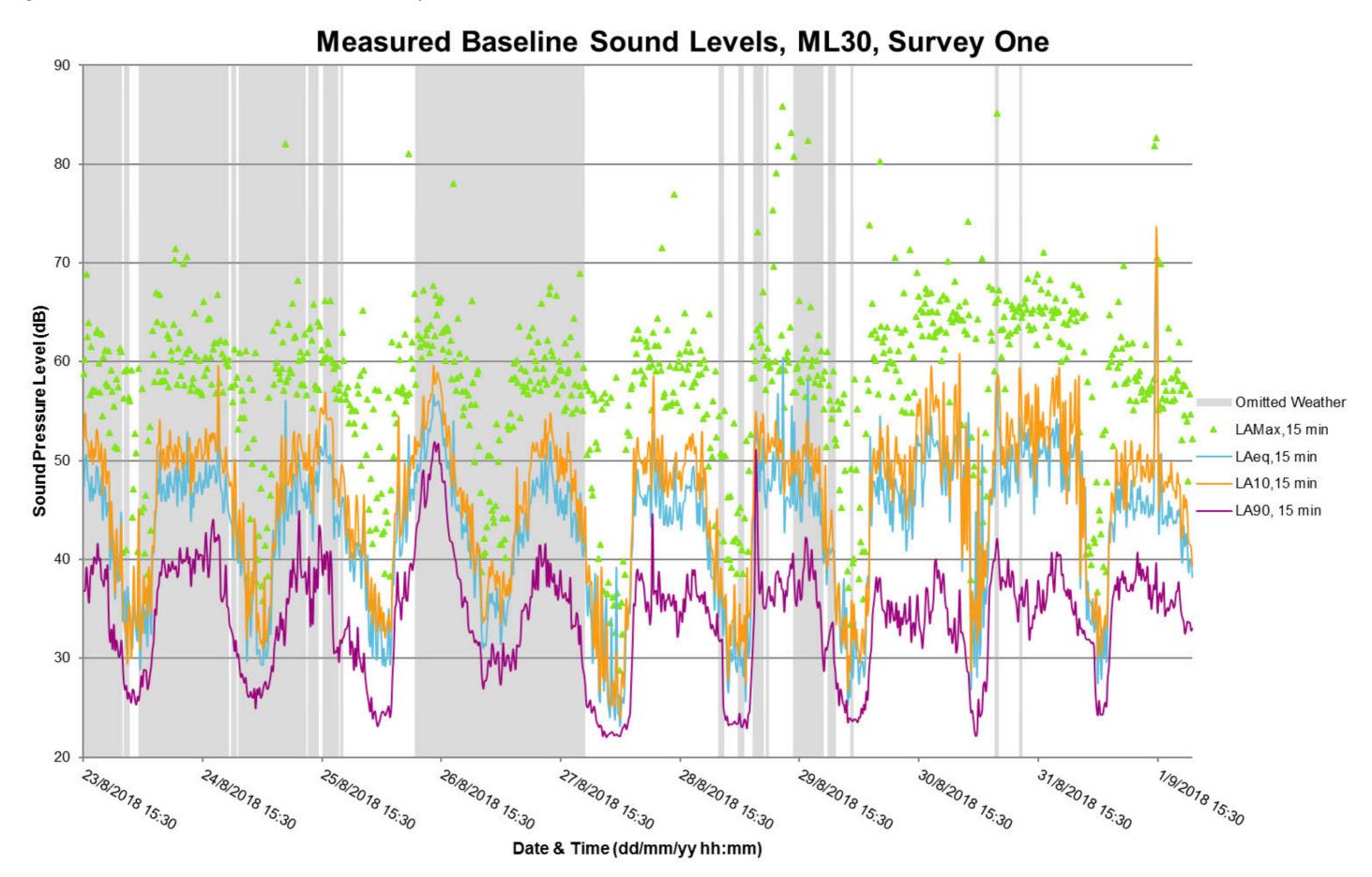


Figure 7.74: Measured Baseline Sound Levels – ML30 Survey 2

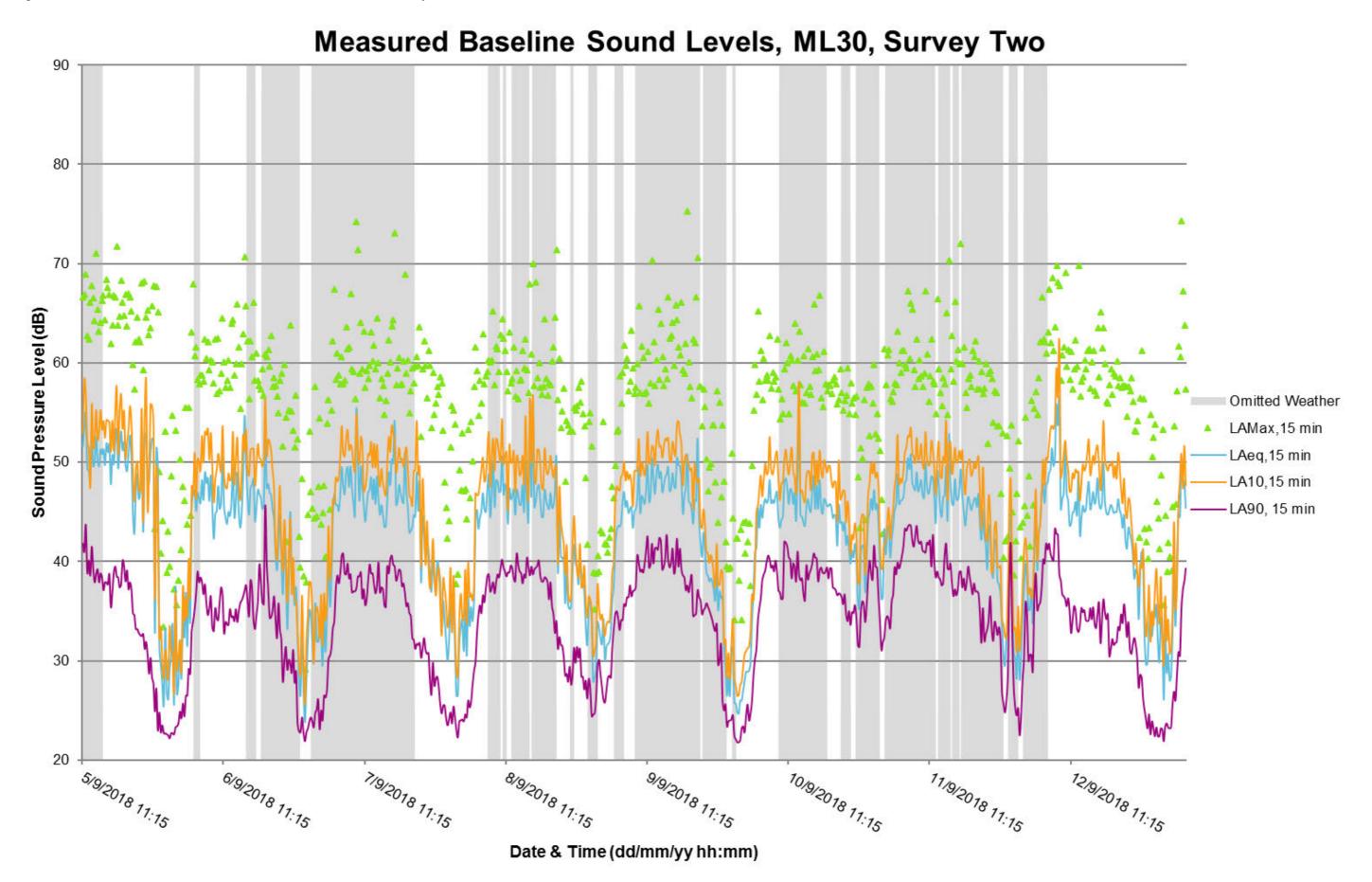


Figure 7.75: Measured Baseline Sound Levels – ML31 Survey 1

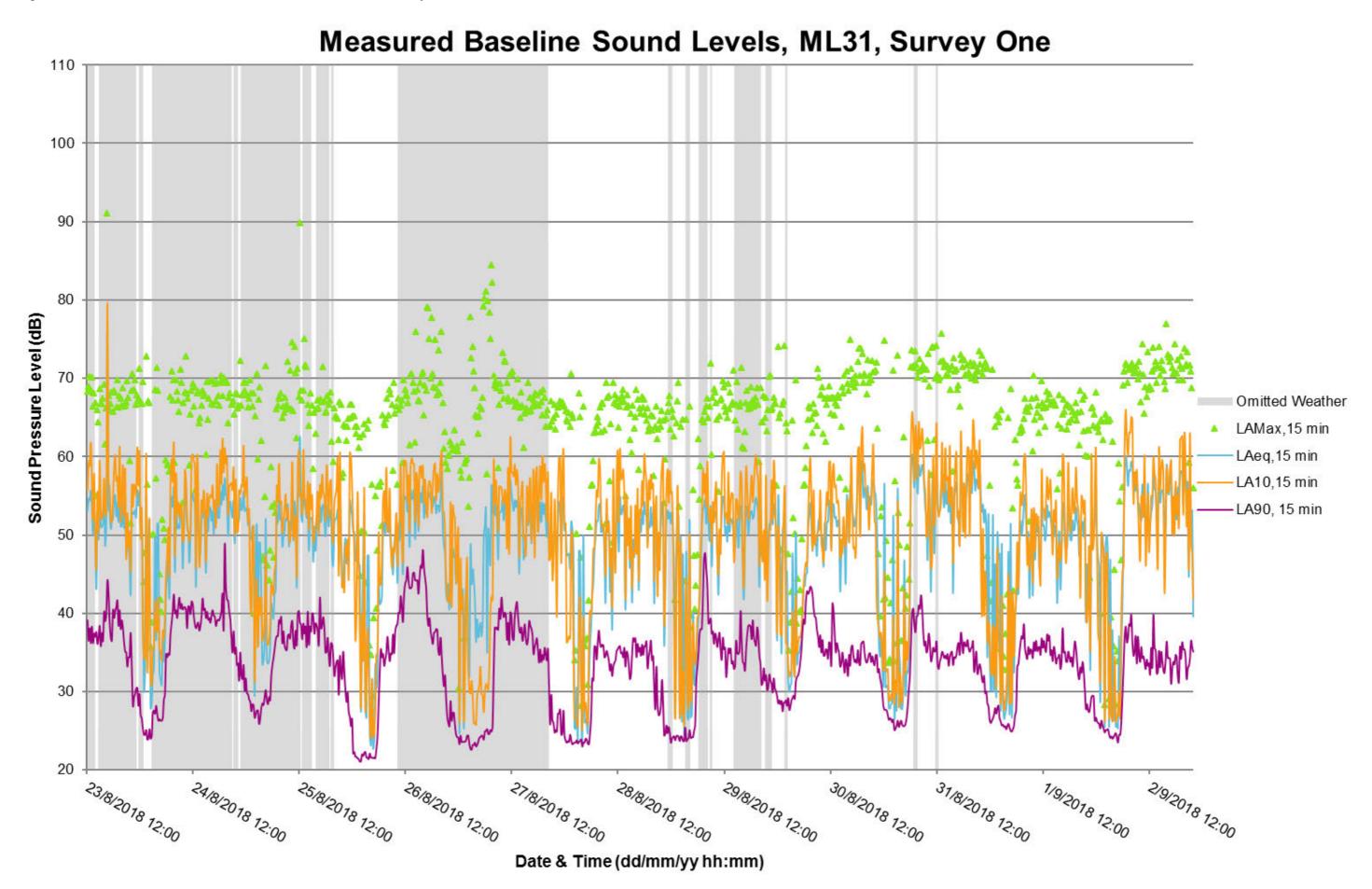


Figure 7.76: Measured Baseline Sound Levels – ML31 Survey 2

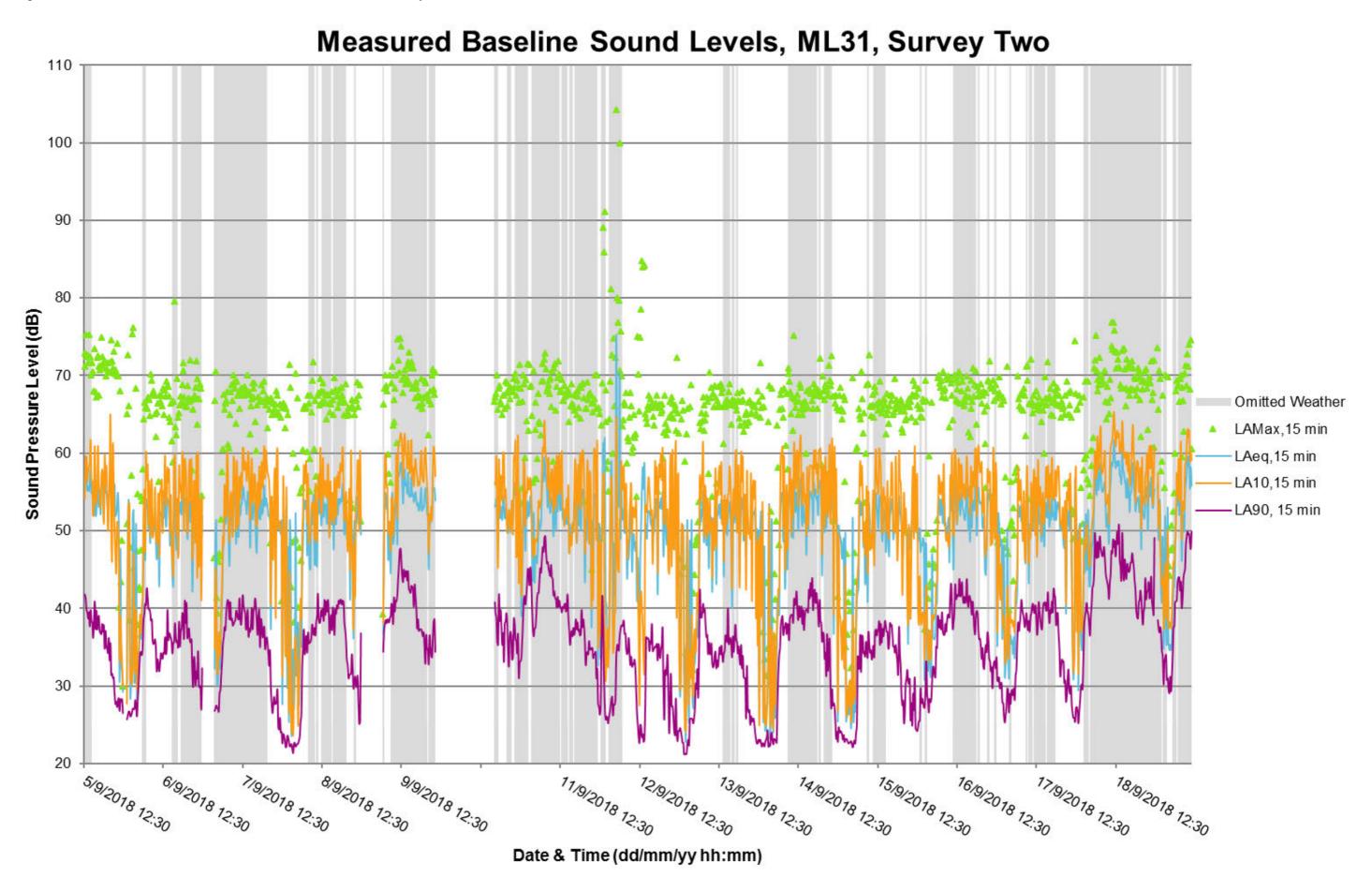


Figure 7.77: Measured Baseline Sound Levels – ML37

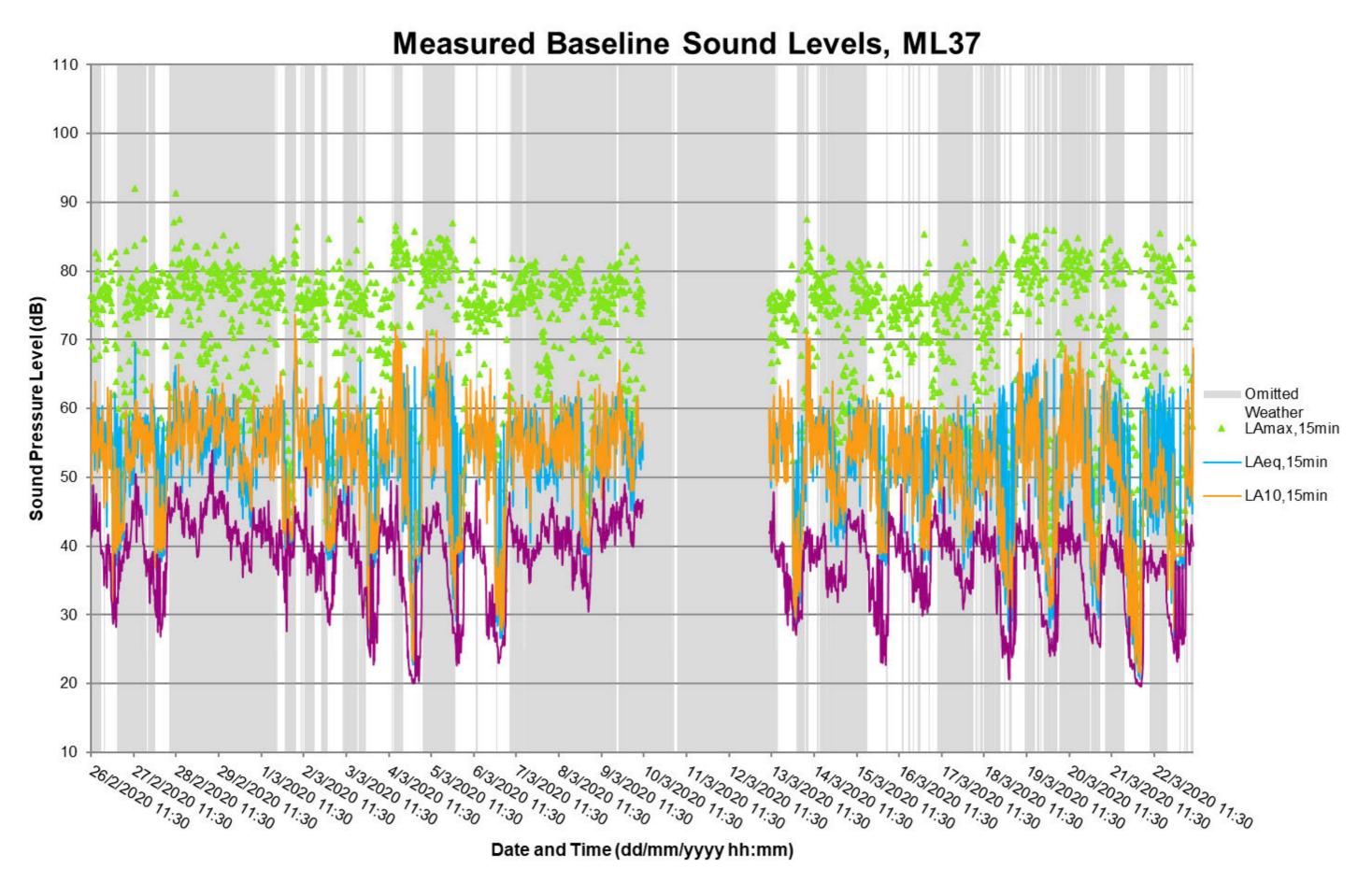
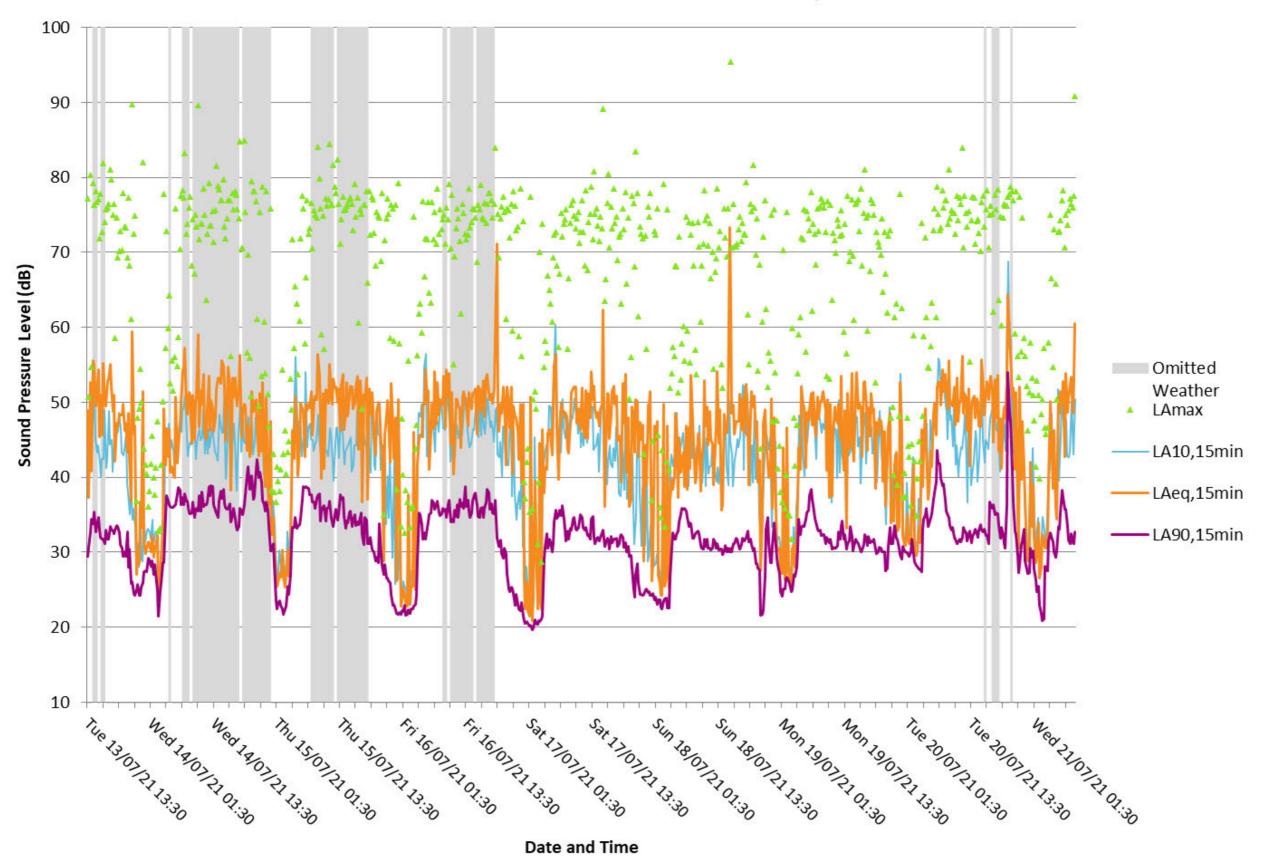


Figure 7.78: Measured Baseline Sound Levels – ML41

Measured Baseline Sound Levels, ML41



REFERENCES

Ref 1 British Standards Institute (2003), BS 7445-1 – Description and Measurement of Environmental Noise. BSi, London. Ref 2 British Standards Institute (2013), BS EN 61672-1:2013 Electroacoustics. Sound level meters - Specifications. BSi, London.