



## SUNNICA ENERGY FARM

# Preliminary Environmental Information Report

Appendix 11B: Baseline Noise Survey

Sunnica Ltd

AUGUST 2020



## Quality information

Prepared by	Checked by	Verified by	Approved by
Various	Colin O'Connor Principal Acoustics Consultant	Yuyou Liu Acoustics Regional Manager	Neil Titley Technical Director

## Revision History

Revision	Revision date	Details	Authorized	Name	Position
1	September 2020	For issue	YL	Yuyou Liu	Acoustics Regional Manager

Prepared for:  
Sunnica Ltd.

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## 11.1 Monitoring Equipment

11.1.1 The following equipment was used for the baseline noise surveys.

**Table 11B-1: Noise Monitoring Equipment**

<i>Type</i>	<i>Supplier</i>	<i>Model</i>	<i>Serial Number</i>	<i>Location(s) Used</i>
Sound Level Meter	RION	NL-52	420763	LT1,LT5
Sound Level Meter	RION	NL-52	542907	LT2
Sound Level Meter	RION	NL-52	420764	LT3,LT7
Sound Level Meter	RION	NL-52	542906	LT4,LT6,ST1,ST2
Sound Level Meter	01dB	DUO	12081	LT8
Sound level Meter (used with weather station)	01dB	DUO	12076	LT3,LT8
Weather Station	L1920417	Vaisala	WXT520	LT3,LT8
Calibrator	RION	NC-74	50541127	All locations

11.1.2 The noise monitoring was undertaken following the principles of BS 7445-1 and BS 4142:2014. The long-term measurement was undertaken with the sound level meter stored in a weather proof peli case with the microphone attached to a pole secured onto the peli case at approximately 1.2m. Short term Measurements were undertaken with the microphone fixed on a tripod at a height of approximately 1.2 m. Measurements were taken under free-field conditions.

11.1.3 The calibration of the equipment was checked before and after each set of measurements and there was no drift in calibration levels ( $\pm 0.5\text{dB}$ ).

## 11.2 Survey Dates and Measurement Locations

11.2.1 Long-term (LT) noise measurements were undertaken from 5<sup>th</sup> November to 19<sup>th</sup> November 2019. Short term (ST) noise measurements were undertaken during the setup of the LT monitors.

**Table 11B-2: Noise Monitoring locations**

<i>Measurement type</i>	<i>Location ID</i>	<i>Receptor</i>
Long-term unattended	LT1	<ul style="list-style-type: none"> <li>R1 Residential properties, Weirs Grove / Hythe Ln, Burwell, Cambridge CB25 0EH</li> </ul>
	LT2	<ul style="list-style-type: none"> <li>R3 Biggin Stud farmhouse, Newmarket Road A142, Fordham, Ely CB7 5WW</li> </ul>
	LT3	<ul style="list-style-type: none"> <li>R4 Residential properties, The Green, Snailwell, Newmarket CB8 7LT</li> </ul>
	LT4	<ul style="list-style-type: none"> <li>R5 Arran House Stud Bed &amp; Breakfast, Norwich Road, Kennett, Newmarket CB8 7RQ / RF</li> <li>R6 Tillbrook &amp; Sons farmhouse, La Hogue Hall, Ely CB7 5PZ</li> <li>R7 Dane Hill Farm, Newmarket, CB8 7QX</li> </ul>
	LT5	<ul style="list-style-type: none"> <li>R8 Residential properties, Acacia Close, Red Lodge, Bury Saint Edmunds, IP28 8WS</li> </ul>
	LT6	<ul style="list-style-type: none"> <li>R10 Residential properties, Beck Rd, Isleham, Ely CB7 5QP</li> </ul>
	LT7	<ul style="list-style-type: none"> <li>R11 Residential properties, East View, Freckenham. Bury Saint Edmunds, IP28 8H</li> </ul>
	LT8	<ul style="list-style-type: none"> <li>R12 Residential properties, Walnut Grove, Freckenham Road B1102, Worlington, Bury Saint Edmunds IP28 8SJ</li> </ul>
Short-term attended	ST1	<ul style="list-style-type: none"> <li>R2 Fuller KW &amp; Son farmhouse, Ness Farm, Ness Road B1102, Cambridge CB25 0DB</li> </ul>
	ST2	<ul style="list-style-type: none"> <li>R9 Residential properties, Badlingham Road, Ely CB7 5QQ</li> </ul>

### 11.3 Description of Noise Climate

11.3.1 During the surveys the dominant noise source at the majority of the locations was observed to be road traffic from the surrounding road network. During site attendance, LT1 was also influenced by aircraft noise and ST2 was influenced by leaves blowing in the wind. Aircraft noise was also noted at LT3, LT6 and ST2.

### 11.4 Meteorological Data

11.4.1 A weather station was set up along with the noise monitor to measure the meteorological conditions during the survey. Periods that are not seen as conducive to environmental noise measurements as per guidance in BS 4142 (i.e. wind speeds greater than 5 m/s and/or precipitation) were removed from the analysis and shown in red on the time history graphs below. Daily weather data can be found below.

**Table 11B-3: Meteorological Data**

<i>Day/Date</i>	<i>Wind Direction</i>	<i>Wind Speed (m/s)</i>		<i>Maximum Temperature (°C)</i>	<i>Total Rainfall (mm)</i>
		<i>Average</i>	<i>Maximum</i>		
05/11/2019	NW	1.7	5.5	13.0	0.0
06/11/2019	SW	0.7	2.8	9.0	0.0
07/11/2019	SSE	1.0	4.3	9.2	1.0
08/11/2019	SEE	1.1	4.5	8.3	1.8
09/11/2019	SSE	0.8	2.9	7.8	0.0
10/11/2019	SSE	0.6	2.4	11.3	0.0
11/11/2019	SW	1.7	7.9	8.7	2.6
12/11/2019	NW	1.0	4.5	8.3	0.0
13/11/2019	NW	0.6	2.6	8.8	0.0
14/11/2019	SWW	0.5	2.2	7.0	6.0
15/11/2019	S	0.7	3.9	8.3	1.0
16/11/2019	NWW	0.4	1.6	7.6	0.0
17/11/2019	W	0.5	1.8	7.9	0.0
18/11/2019	S	1.6	5.7	8.4	0.0
19/11/2019	NW	0.7	2.3	8.4	0.0

## 11.5 Survey Results

- 11.5.1 A summary of the measured long-term noise levels are presented below. All noise levels are in dB re. 20µPa, free-field, fast time-weighting and have been presented as follows:
- 11.5.2 Noise levels have been calculated over daytime periods of 07:00 – 23:00 and night periods of 23:00 – 07:00 for all noise levels.
- 11.5.3 The  $L_{Aeq,T}$  level for each period is the logarithmic average of all logged  $L_{Aeq,15min}$  levels over that period.
- 11.5.4 The  $L_{A90,15min}$  level for each period is the mode of all recorded  $L_{A90,15min}$  levels over that period.
- 11.5.5 Time history charts of the long-term measurements are presented below.

**Table 11B-4: Long Term 1 Spectrum results**

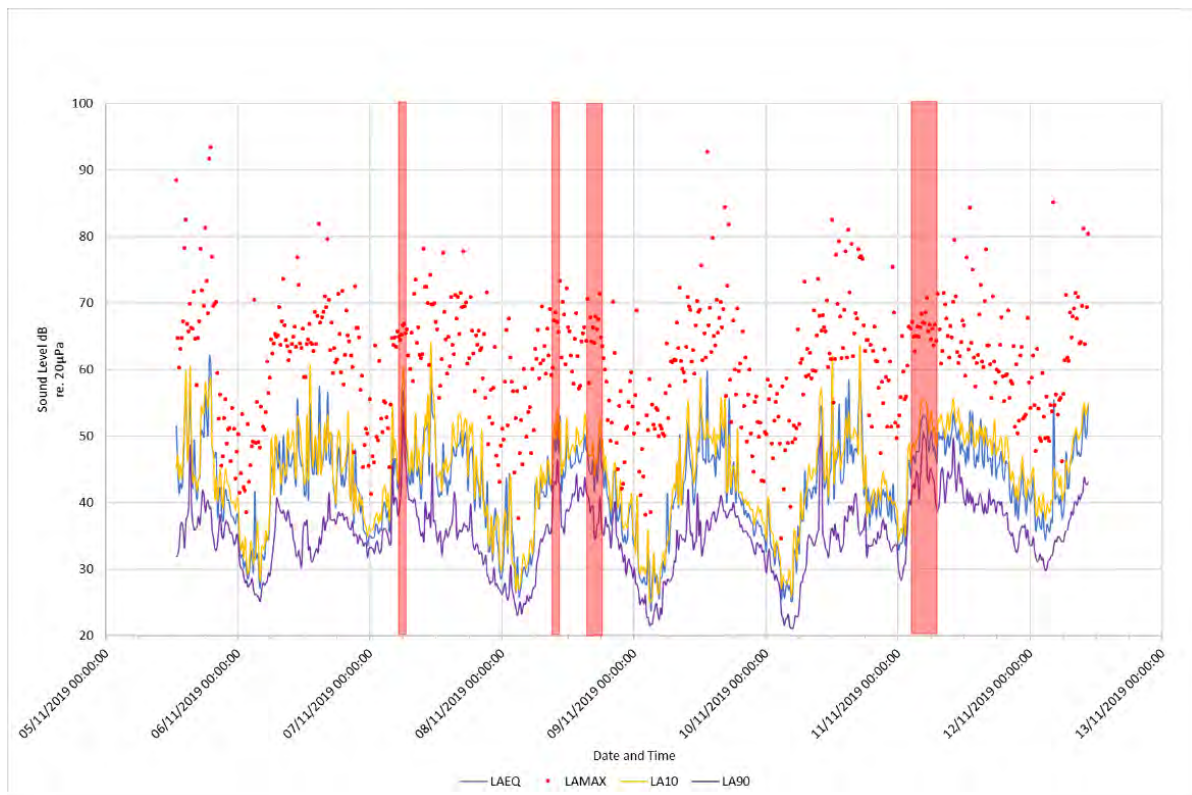
<i>Period</i>		<i>Octave band levels (Hz), dB</i>								<i>L<sub>Aeq</sub> (dB)</i>	
		<i>31.5</i>	<i>63</i>	<i>125</i>	<i>250</i>	<i>500</i>	<i>1k</i>	<i>2k</i>	<i>4k</i>		<i>8k</i>
Day	L <sub>eq</sub> (L <sub>f</sub> )	57	55	50	45	45	45	41	38	35	49
	L <sub>90</sub> (L <sub>f</sub> )	44	43	37	32	32	32	27	24	21	36
Night	L <sub>eq</sub> (L <sub>f</sub> )	56	55	49	44	44	43	42	39	38	40
	L <sub>90</sub> (L <sub>f</sub> )	37	37	32	26	26	23	20	20	19	29

**Table 11B-5: Long Term 1 results**

Day/Date	Day 07:00-23:00		Night 23:00-07:00	
	L <sub>Aeq,16hr</sub> dB	L <sub>A90,15min</sub> dB	L <sub>Aeq,8hr</sub> dB	L <sub>A90,15min</sub> dB
05/11/2019 <sup>1</sup>	52	37	39	30
06/11/2019	48	36	42	35
07/11/2019	48	35	37	27
08/11/2019	45	36	35	26
09/11/2019	48	36	34	27
10/11/2019	50	37	40	33
11/11/2019	48	40	43	33
12/11/2019 <sup>2</sup>	50	41	-	-
Overall	49	36	40	29

<sup>1</sup> Start Time 12:45pm , <sup>2</sup> Stop Time 10:30 am.

**Figure 11B-1: Long Term 1 Time History**

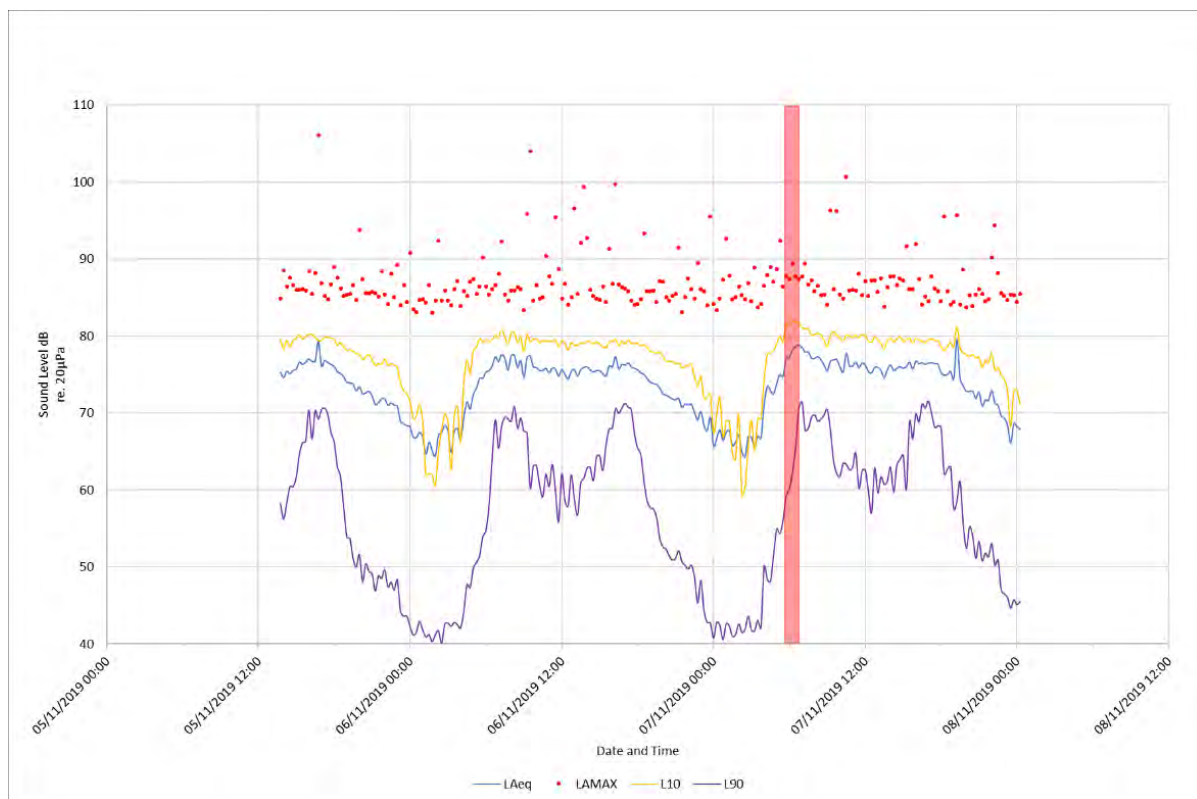


**Table 11B-6: Long Term 2 results**

<i>Day/Date</i>	<i>Day 07:00-23:00</i>		<i>Night 23:00-07:00</i>	
	<i>L<sub>Aeq,T</sub> dB</i>	<i>L<sub>A90,15min</sub> dB</i>	<i>L<sub>Aeq,T</sub> dB</i>	<i>L<sub>A90,15min</sub> dB</i>
05/11/2019 <sup>1</sup>	75	58	71	46
06/11/2019	75	61	70	45
07/11/2019 <sup>2</sup>	76	63	68	46
Overall	75	62	70	46

<sup>1</sup>Start Time 13:45pm, <sup>2</sup> Stop Time 00:30 am.

**Figure 11B-2: Long Term 2 Time History**



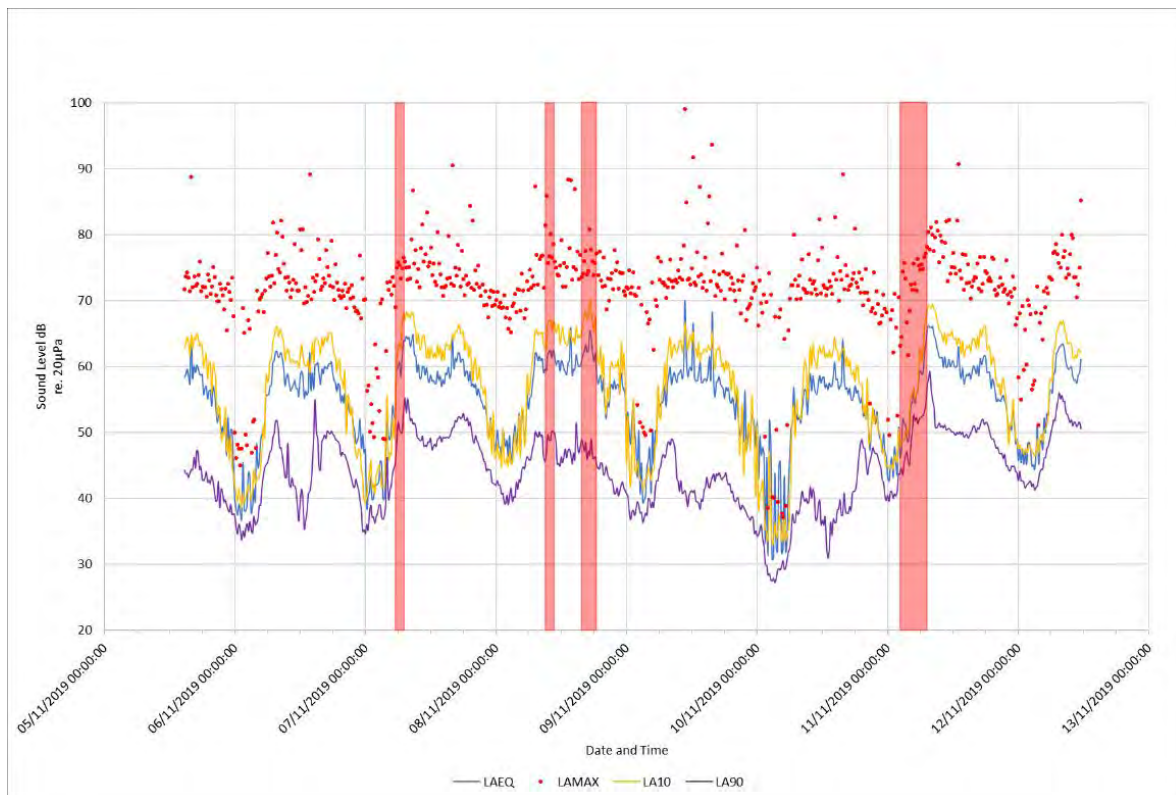


**Table 11B-7: Long Term 3 results**

Day/Date	Day 07:00-23:00		Night 23:00-07:00	
	<i>L<sub>Aeq,T</sub></i> dB	<i>L<sub>A90,15min</sub></i> dB	<i>L<sub>Aeq,T</sub></i> dB	<i>L<sub>A90,15min</sub></i> dB
05/11/2019 <sup>1</sup>	57	43	50	39
06/11/2019	58	45	59	45
07/11/2019	59	49	51	43
08/11/2019	60	46	52	40
09/11/2019	59	42	48	32
10/11/2019	56	40	47	41
11/11/2019	61	50	58	44
12/11/2019 <sup>2</sup>	61	53	-	-
Overall	58	46	54	40

<sup>1</sup> Start Time 14:45pm , <sup>2</sup> Stop Time 11:30am

**Figure 11B-3: Long Term 3 Time History**

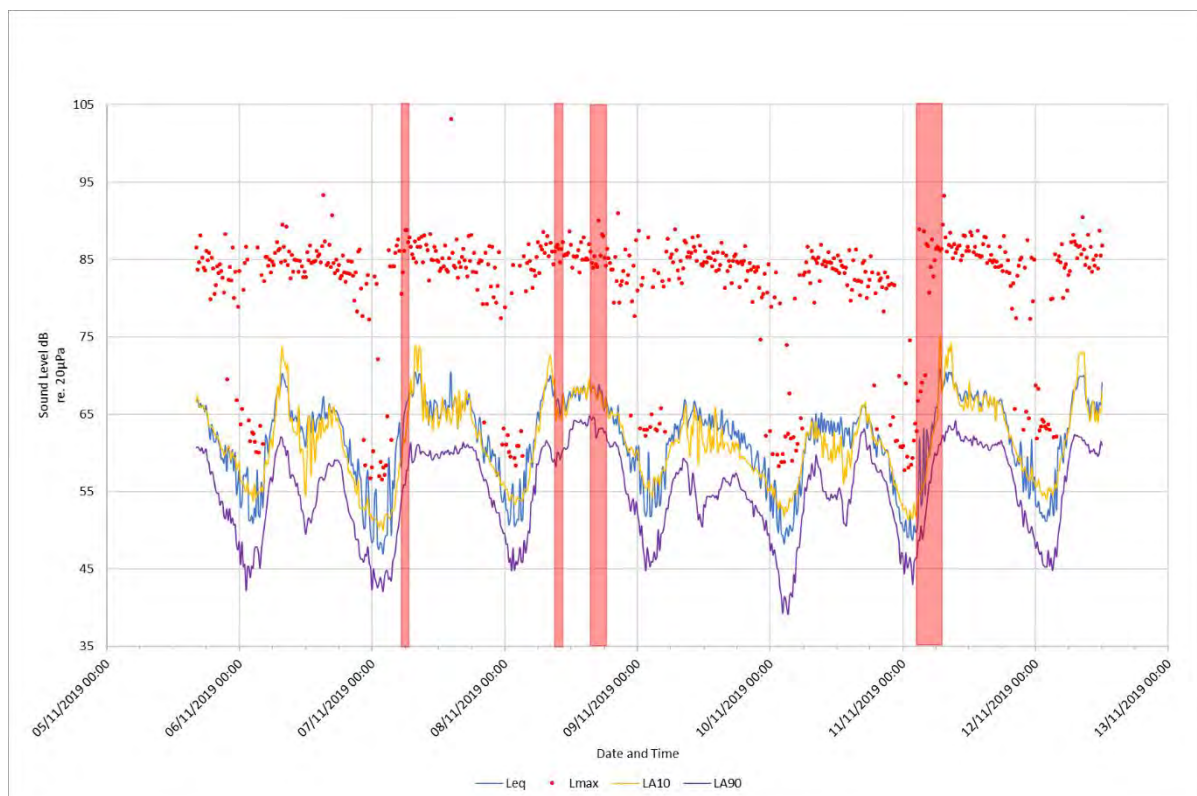


**Table 11B-8: Long Term 4 results**

Day/Date	Day 07:00-23:00		Night 23:00-07:00	
	<i>L</i> <sub>Aeq,T</sub> dB	<i>L</i> <sub>A90,15min</sub> dB	<i>L</i> <sub>Aeq,T</sub> dB	<i>L</i> <sub>A90,15min</sub> dB
05/11/2019 <sup>1</sup>	63	56	56	47
06/11/2019	65	55	57	46
07/11/2019	66	59	60	50
08/11/2019	67	61	59	50
09/11/2019	63	55	55	46
10/11/2019	63	56	62	51
11/11/2019	67	60	60	51
12/11/2019 <sup>2</sup>	68	61	-	-
Overall	66	58	59	48

<sup>1</sup> Start Time 16:15pm , <sup>2</sup> Stop Time 12:15pm

**Figure 11B-4: Long Term 4 Time History**



**Table 11B-9: Long Term 5 results**

Day/Date	Day 07:00-23:00		Night 23:00-07:00	
	<i>L<sub>Aeq,T</sub></i> dB	<i>L<sub>A90,15min</sub></i> dB	<i>L<sub>Aeq,T</sub></i> dB	<i>L<sub>A90,15min</sub></i> dB
12/11/2019 <sup>1</sup>	61	56	54	40
13/11/2019	57	52	46	38
14/11/2019	55	50	54	39
15/11/2019	62	56	51	39
16/11/2019	57	53	49	40
17/11/2019	56	51	59	44
18/11/2019	64	57	54	37
19/11/2019 <sup>2</sup>	59	56	-	-
Overall	60	54	54	40

<sup>1</sup> Start Time 13:30pm , <sup>2</sup> Stop Time 11:00am

**Figure 11B-5: Long Term 5 Time History**

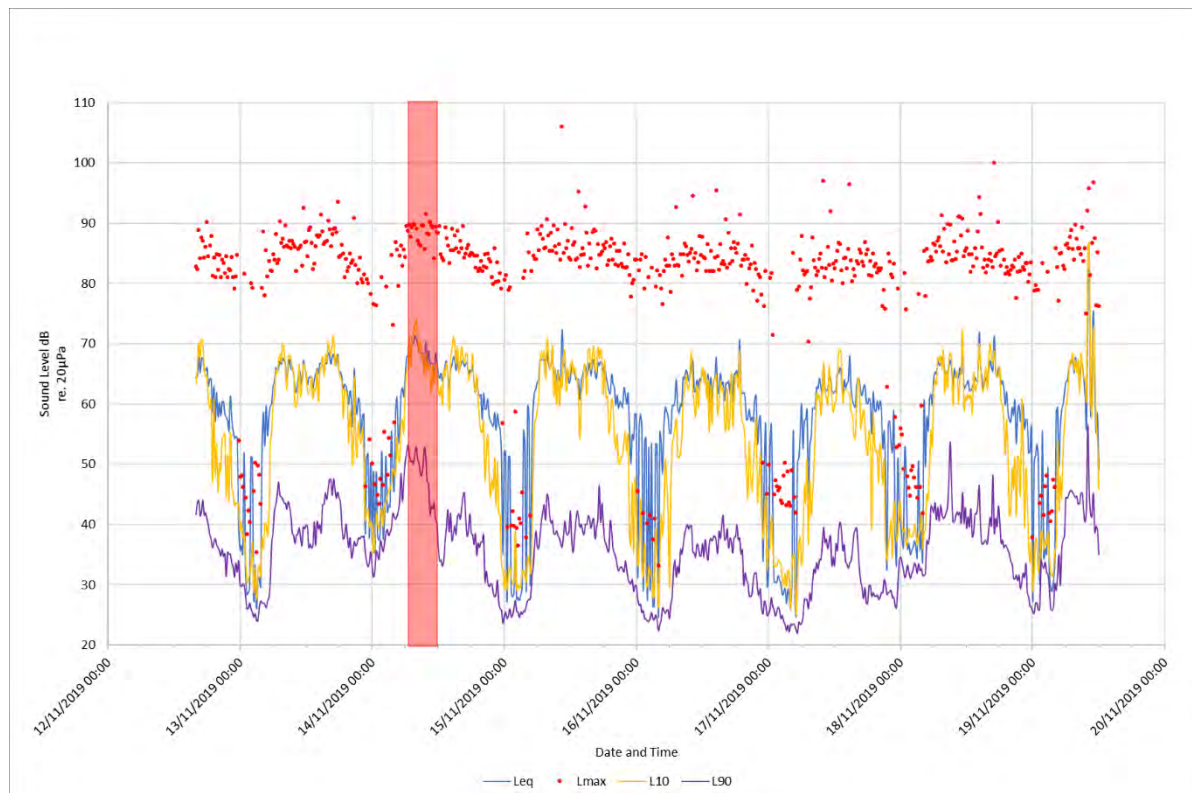


**Table 11B-10: Long Term 6 results**

Day/Date	Day 07:00-23:00		Night 23:00-07:00	
	<i>L<sub>Aeq,T</sub></i> dB	<i>L<sub>A90,15min</sub></i> dB	<i>L<sub>Aeq,T</sub></i> dB	<i>L<sub>A90,15min</sub></i> dB
05/11/2019 <sup>1</sup>	63	38	57	30
06/11/2019	65	40	52	37
07/11/2019	65	37	59	28
08/11/2019	65	38	55	26
09/11/2019	63	35	51	25
10/11/2019	62	32	58	34
11/11/2019	65	39	58	32
12/11/2019 <sup>2</sup>	73	43	-	-
Overall	67	38	57	30

<sup>1</sup> Start Time 16:00pm , <sup>2</sup> Stop Time 12:15pm

**Figure 11B-6: Long Term 6 Time History**



**Table 11B-11: Long Term 7 results**

<i>Day/Date</i>	<i>Day 07:00-23:00</i>		<i>Night 23:00-07:00</i>	
	<i>L<sub>Aeq,T</sub> dB</i>	<i>L<sub>A90,15min</sub> dB</i>	<i>L<sub>Aeq,T</sub> dB</i>	<i>L<sub>A90,15min</sub> dB</i>
12/11/2019 <sup>1</sup>	68	44	63	35
13/11/2019	69	39	60	35
14/11/2019 <sup>2</sup>	69	46	-	-
Overall	69	43	62	35

<sup>1</sup> Start Time 14:15pm , <sup>2</sup> Stop Time 11:00am

**Figure 11B-7: Long Term 7 Time History**

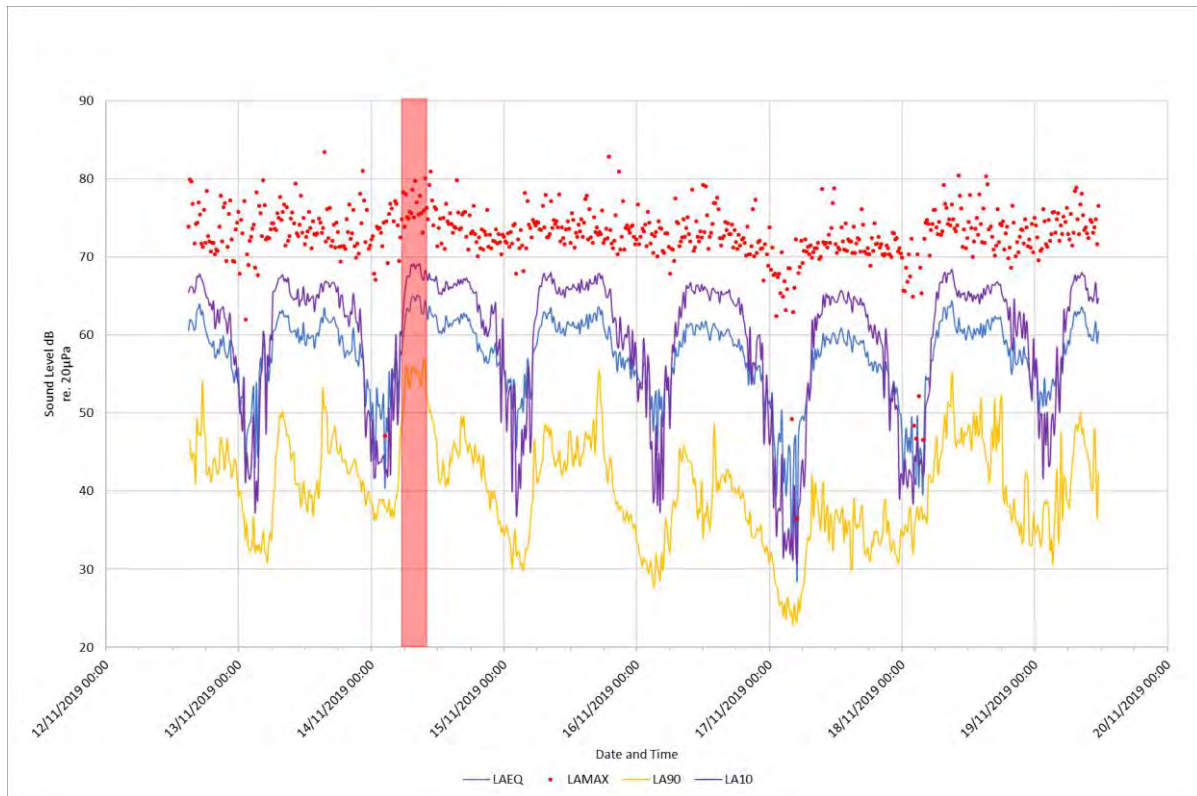


**Table 11B-12: Long Term 8 results**

Day/Date	Day 07:00-23:00		Night 23:00-07:00	
	<i>L<sub>Aeq,T</sub></i> dB	<i>L<sub>A90,15min</sub></i> dB	<i>L<sub>Aeq,T</sub></i> dB	<i>L<sub>A90,15min</sub></i> dB
05/11/2019 <sup>1</sup>	60	45	55	36
06/11/2019	61	44	53	38
07/11/2019	61	44	56	35
08/11/2019	61	44	54	32
09/11/2019	59	40	48	28
10/11/2019	58	35	54	38
11/11/2019	61	45	56	37
12/11/2019 <sup>2</sup>	62	46	-	-
Overall	60	45	54	35

<sup>1</sup> Start Time 15:00pm , <sup>2</sup> Stop Time 11:45am

**Figure 11B-8: Long Term 8 Time History**



**Table 11B-4: Short Term 1 results**

<i>Date and Time</i>	<i>Duration (Minutes)</i>	<i>L<sub>Aeq</sub></i>	<i>L<sub>A90</sub></i>
05/11/2019 12:00-15:00	180	70	48

**Table 11B-5: Short Term 2 results**

<i>Date and Time</i>	<i>Duration (Minutes)</i>	<i>L<sub>Aeq</sub></i>	<i>L<sub>A90</sub></i>
12/11/2019 12:00-15:00	180	60	47

## 11.6 Equipment Calibration Certificates

NL-52 420763



### CERTIFICATE OF CALIBRATION



0653

**Date of Issue: 04 July 2018**

**Certificate Number: UCRT18/1675**

Issued by:  
ANV Measurement Systems  
Beaufort Court  
17 Roebuck Way  
Milton Keynes MK5 8HL  
Telephone 01908 642846 Fax 01908 642814  
E-Mail: info@noise-and-vibration.co.uk  
Web: www.noise-and-vibration.co.uk  
Acoustics Noise and Vibration Ltd trading as ANV Measurement Systems

Page 1 of 2 Pages
Approved Signatory     K. Mistry

**Customer** AECOM Ltd  
St Georges House  
5 St Georges Road  
London  
SW19 4DR

**Order No.** 08215735-Gen\_Gen  
**Description** Sound Level Meter / Pre-amp / Microphone / Associated Calibrator  
**Identification**

Manufacturer	Instrument	Type	Serial No. / Version
Rion	Sound Level Meter	NL-52	00420763
Rion	Firmware		1.8
Rion	Pre Amplifier	NH-25	20812
Rion	Microphone	UC-59	05741
Brüel & Kjær	Calibrator	4231	3002998
	Calibrator adaptor type if applicable		UC 0210

**Performance Class** 1  
**Test Procedure** TP 2.SLM 61672-3 TPS-49  
*Procedures from IEC 61672-3:2006 were used to perform the periodic tests.*  
**Type Approved to IEC 61672-1:2002** YES Approval Number 21.21 / 13.02  
*If YES above there is public evidence that the SLM has successfully completed the applicable pattern evaluation tests of IEC 61672-2:2003*  
**Date Received** 03 July 2018 ANV Job No. UKAS18/07417  
**Date Calibrated** 04 July 2018

The sound level meter submitted for testing has successfully completed the class 1 periodic tests of IEC 61672-3:2006, for the environmental conditions under which the tests were performed. As public evidence was available, from an independent testing organisation responsible for approving the results of pattern evaluation tests performed in accordance with IEC 61672-2:2003, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2002, the sound level meter submitted for testing conforms to the class 1 requirements of IEC 61672-1:2002.

Previous Certificate	Dated	Certificate No.	Laboratory
	28 Jun 2016	UCRT16/1210	7623

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**NL-52 542907**



**CERTIFICATE  
OF CALIBRATION**




0653

**Date of Issue: 06 March 2019**

**Certificate Number: UCRT19/1286**

Issued by:  
ANV Measurement Systems  
Beaufort Court  
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Web: www.noise-and-vibration.co.uk

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Approved Signatory  K. Mistry

Acoustics Noise and Vibration Ltd trading as ANV Measurement Systems

**Customer** AECOM Limited  
St. George's House  
5 St. George's Road  
Wimbledon  
London  
SW19 4DR

**Order No.** 08215735-GEN\_GEN

Description Identification	Manufacturer	Instrument	Type	Serial No. / Version
Sound Level Meter / Pre-amp / Microphone / Associated Calibrator	Rion	Sound Level Meter	NL-52	00542907
	Rion	Firmware		2.0
	Rion	Pre Amplifier	NH-25	42935
	Rion	Microphone	UC-59	06485
	Rion	Calibrator	NC-74	34536109
		Calibrator adaptor type if applicable		NC-74-002

**Performance Class** 1

**Test Procedure** TP 2.SLM 61672-3 TPS-49

*Procedures from IEC 61672-3:2006 were used to perform the periodic tests.*

**Type Approved to IEC 61672-1:2002** YES Approval Number 21.21 / 13.02

*If YES above there is public evidence that the SLM has successfully completed the applicable pattern evaluation tests of IEC 61672-2:2003*

**Date Received** 05 March 2019

ANV Job No. UKAS19/03144

**Date Calibrated** 06 March 2019

The sound level meter submitted for testing has successfully completed the class 1 periodic tests of IEC 61672-3:2006, for the environmental conditions under which the tests were performed. As public evidence was available, from an independent testing organisation responsible for approving the results of pattern evaluation tests performed in accordance with IEC 61672-2:2003, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2002, the sound level meter submitted for testing conforms to the class 1 requirements of IEC 61672-1:2002.

Previous Certificate	Dated	Certificate No.	Laboratory
	22 February 2017	UCRT17/1069	7623

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**NL-52 420764**



## CERTIFICATE OF CALIBRATION



0653

**Date of Issue: 05 July 2018**

**Certificate Number: UCRT18/1678**

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ANV Measurement Systems  
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K. Mistry

Acoustics Noise and Vibration Ltd trading as ANV Measurement Systems

**Customer**                   AECOM Ltd  
St Georges House  
5 St Georges Road  
London  
SW19 4DR

**Order No.**                   08215735-Gen\_Gen  
**Description**               Sound Level Meter / Pre-amp / Microphone / Associated Calibrator  
**Identification**

<i>Manufacturer</i>	<i>Instrument</i>	<i>Type</i>	<i>Serial No. / Version</i>
Rion	Sound Level Meter	NL-52	00420764
Rion	Firmware		1.8
Rion	Pre Amplifier	NH-25	20813
Rion	Microphone	UC-59	03573
Brüel & Kjær	Calibrator	4231	3002998
	Calibrator adaptor type if applicable		UC 0210

**Performance Class**       1  
**Test Procedure**           TP 2.SLM 61672-3 TPS-49  
*Procedures from IEC 61672-3:2006 were used to perform the periodic tests.*

**Type Approved to IEC 61672-1:2002**   **YES**       **Approval Number**   21.21 / 13.02  
*If YES above there is public evidence that the SLM has successfully completed the applicable pattern evaluation tests of IEC 61672-2:2003*

**Date Received**           03 July 2018                                   **ANV Job No.**       UKAS18/07417  
**Date Calibrated**       05 July 2018

The sound level meter submitted for testing has successfully completed the class 1 periodic tests of IEC 61672-3:2006, for the environmental conditions under which the tests were performed. As public evidence was available, from an independent testing organisation responsible for approving the results of pattern evaluation tests performed in accordance with IEC 61672-2:2003, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2002, the sound level meter submitted for testing conforms to the class 1 requirements of IEC 61672-1:2002.

<b>Previous Certificate</b>	<i>Dated</i>	<i>Certificate No.</i>	<i>Laboratory</i>
	28 June 2016	UCRT16/1212	7623

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**NL-52 542906**



## CERTIFICATE OF CALIBRATION



0853

**Date of Issue: 22 August 2018**

**Certificate Number: UCRT18/1868**

Issued by:  
ANV Measurement Systems  
Beaufort Court  
17 Roebuck Way  
Milton Keynes MK5 8HL  
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Web: www.noise-and-vibration.co.uk

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K. Mistry

Acoustics Noise and Vibration Ltd trading as ANV Measurement Systems

**Customer**                   AECOM Limited  
St George's House  
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London  
SW19 4DR

**Order No.**                   08215735 - GEN\_GEN  
**Description**               Sound Level Meter / Pre-amp / Microphone / Associated Calibrator  
**Identification**

Manufacturer	Instrument	Type	Serial No. / Version
Rion	Sound Level Meter	NL-52	00542906
Rion	Firmware		1.8
Rion	Pre Amplifier	NH-25	42934
Rion	Microphone	UC-59	06484
Rion	Calibrator	NC-74	34536109
	Calibrator adaptor type if applicable		NC-74-002


**Performance Class**       1  
**Test Procedure**           TP 2.SLM 61672-3 TPS-49  
*Procedures from IEC 61672-3:2006 were used to perform the periodic tests.*  
**Type Approved to IEC** 61672-1:2002   **YES**    **Approval Number**   21.21 / 13.02  
*If YES above there is public evidence that the SLM has successfully completed the applicable pattern evaluation tests of IEC 61672-2:2003*  
**Date Received**           21 August 2018                                    **ANV Job No.**    UKAS18/08537  
**Date Calibrated**         22 August 2018

The sound level meter submitted for testing has successfully completed the class 1 periodic tests of IEC 61672-3:2006, for the environmental conditions under which the tests were performed. As public evidence was available, from an independent testing organisation responsible for approving the results of pattern evaluation tests performed in accordance with IEC 61672-2:2003, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2002, the sound level meter submitted for testing conforms to the class 1 requirements of IEC 61672-1:2002.

<b>Previous Certificate</b>	<i>Dated</i>	<i>Certificate No.</i>	<i>Laboratory</i>
	17 August 2016	UCRT16/1260	7623

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**DUO 12081**

<h2 style="text-align: center;">Certificate of Calibration</h2> <p style="font-size: small;">Issued by University of Salford (Acoustics Calibration Laboratory)  UKAS ACCREDITED CALIBRATION LABORATORY NO. 0801</p>		
<p>Page 1 of 3</p>		
<p><b>APPROVED SIGNATORIES</b></p> <p>Claire Lomax [x]     Andy Moorhouse [ ]     <i>C. Lomax</i></p> <p>Gary Phillips [ ]     Danny McCaul [ ]</p>		<p><b>University of Salford</b>  <b>MANCHESTER</b></p>
<p><b>acoustic calibration laboratory</b></p> <p style="font-size: x-small;">The University of Salford, Salford Campus, Manchester, M6 6PU, UK  <a href="http://www.acoustics.salford.ac.uk">http://www.acoustics.salford.ac.uk</a>  T: 0161 295 4000/161 2952510 F: 0161 295 4456 E: <a href="mailto:csomak@salford.ac.uk">csomak@salford.ac.uk</a></p>		

Certificate Number: 03639/1

Date of Issue: 13 March 2018

**PERIODIC TEST OF A SOUND LEVEL METER to IEC 61672-3:2006**

FOR:	Aecom St George's House 5 St George's Road Wimbledon London SW19 4DR.
FOR THE ATTENTION OF:	Thomas Citrine
PERIODIC TEST DATE:	12/03/2018
TEST PROCEDURE:	CTP12 (Laboratory Manual)

**Sound Level Meter Details**



Manufacturer	01dB	
Model	DUO	
Serial number	12081	
Class	1	
Hardware version	LIS1005G	Application FW: 2.35. Metrology FW: 2.12

<b>Associated Items</b>	<b>Microphone</b>
Manu	GRAS
Model	40CD
Serial Number	231578

Test Engineer (initial): GP Name: Gary Phillips

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**DUO 12076**

<h2 style="text-align: center;">Certificate of Calibration</h2> <p style="text-align: center;">Issued by University of Salford (Acoustics Calibration Laboratory)  UKAS ACCREDITED CALIBRATION LABORATORY NO. 0801</p>		 <b>UKAS</b> CALIBRATION <b>0801</b>
<p>Page 1 of 3</p>		
<p><b>APPROVED SIGNATORIES</b></p> <p>Claire Lomax [x]    Andy Moorhouse [ ]  Gary Phillips [ ]    Danny McCaul [ ]</p> <p style="text-align: right;"><i>C Lomax</i></p>		 <b>University of</b> <b>Salford</b> <b>MANCHESTER</b>
<p><b>acoustic calibration laboratory</b></p> <p><small>The University of Salford, Salford, Greater Manchester, M6 6WT, UK  <a href="http://www.acoustics.salford.ac.uk">http://www.acoustics.salford.ac.uk</a>  T: 0161 295 3050/3161/209 5519 F: 0161 295 4456 E: <a href="mailto:calibration@salford.ac.uk">calibration@salford.ac.uk</a></small></p>		

Certificate Number: 03639/3

Date of Issue: 13 March 2018

**PERIODIC TEST OF A SOUND LEVEL METER to IEC 61672-3:2006**

FOR:	Aecom St George's House 5 St George's Road Wimbledon London SW19 4DR
FOR THE ATTENTION OF:	Thomas Citrine
PERIODIC TEST DATE:	12 <sup>th</sup> and 13 <sup>th</sup> March 2018
TEST PROCEDURE:	CTP12 (Laboratory Manual)

**Sound Level Meter Details**

Manufacturer	01dB	
Model	DUO	
Serial number	12076	
Class	1	
Hardware version	LIS1005G	Application FW: 2.35. Metrology FW: 2.12

<b>Associated Items</b>	<b>Microphone</b>
Manu	GRAS
Model	40CD
Serial Number	209841

Test Engineer (initial): GP Name: Gary Phillips

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**NC-74 50541127**



## CERTIFICATE OF CALIBRATION



0653

**Date of Issue: 30 November 2018**

**Certificate Number: UCRT18/2191**

Issued by:

ANV Measurement Systems

Beaufort Court

17 Roebuck Way

Milton Keynes MK5 8HL

Telephone 01908 642846 Fax 01908 642814

E-Mail: [info@noise-and-vibration.co.uk](mailto:info@noise-and-vibration.co.uk)

Web: [www.noise-and-vibration.co.uk](http://www.noise-and-vibration.co.uk)

Acoustics Noise and Vibration Ltd trading as ANV Measurement Systems

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Approved Signatory

K. Mistry

Customer AECOM Ltd  
St George's House  
5 St George's Road  
Wimbledon  
London  
SW19 4DR

Order No. 08215735 - GEN\_GEN

Test Procedure Procedure TP 1 Calibration of Sound Calibrators

Description Acoustic Calibrator

Identification	Manufacturer	Instrument	Model	Serial No.
	Rion	Calibrator	NC-74	50541127

The calibrator has been tested as specified in Annex B of IEC 60942:2003. As public evidence was available from a testing organisation (PTB) responsible for approving the results of pattern evaluation tests, to demonstrate that the model of sound calibrator fully conformed to the requirements for pattern evaluation described in Annex A of IEC 60942:2003, the sound calibrator tested is considered to conform to all the class 1 requirements of IEC 60942:2003.

ANV Job No. UKAS18/11736

Date Received 29 November 2018

Date Calibrated 30 November 2018

Previous Certificate

<i>Dated</i>	20 November 2017
<i>Certificate No.</i>	UCRT17/2044
<i>Laboratory</i>	0653

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## 11.7 Location Photographs

Long  
Term 1



Long  
Term 2



Long  
Term 3



Long  
Term 4





Long  
Term 5



Long  
Term 6



Long  
Term 7



Long  
Term 8



Short  
Term 1



Short  
Term 2



