Baseline Noise Monitoring

Existing sources of noise at the Site principally comprise the following:

- Distant road traffic; and
- Birdsong.

In order to determine the baseline noise climate around the Site an unattended long-term survey was undertaken from 27th March 2013 to 8th April 2013 at ground level.

The monitoring location was deemed representative of the nearest noise sensitive receptors following subjective analysis of the positioning of the property in relation to the site and nearby main roads.

The parameters logged throughout the survey period were L_{Aeq}, L_{Amax}, L_{Amin}, L_{A90} and L_{A10}. These parameters are described in Appendix A. The L_{Aeq} level is the equivalent continuous sound pressure level over the measurement period; L_{Amax} is an indicator of the highest sound level during the measurement period; the L_{Amin} is the lowest level during the measurement period; L_{A90} is used as a descriptor of background noise levels and L_{A10} is the noise level which is achieved for 10% of the monitoring period and is often used to describe road traffic noise.

The monitoring equipment used during the survey period is described in Table A9.2.1. The sound level meter was calibrated both before and after each monitoring period; no significant drift from the reference level of 94 dB was recorded.

Table A9.2.1: Noise Monitoring Equipment

Sound Level Meter	
Meter Model	Rion NL-32
Serial Number	00482656
Calibrator	
Calibrator Model	Rion NC-74
Serial Number	35173533
Calibration Level at 1000 Hz	94 dB
Microphone	
Microphone Type	UC-53A

All measurements were undertaken under free-field conditions and were taken at a height of approximately 1.5m from ground level. The average ambient temperature varied between approximately 7°C and -4°C. Wind speeds were low, measured under 3m/s during set up and decommission of the meter and were expected to be under 5m/s throughout the majority of the survey period. A wind shield was fitted to the monitoring equipment at all times.

Monitoring was undertaken by trained and competent staff being a member of the Institute of Acoustics (IOA).

The noise measurement location is shown on Figure 9.1. The measurement results are summarised in Table A9.2.2.

Table A9.2.2: Existing Noise Levels at the Site – Long Term Measurements

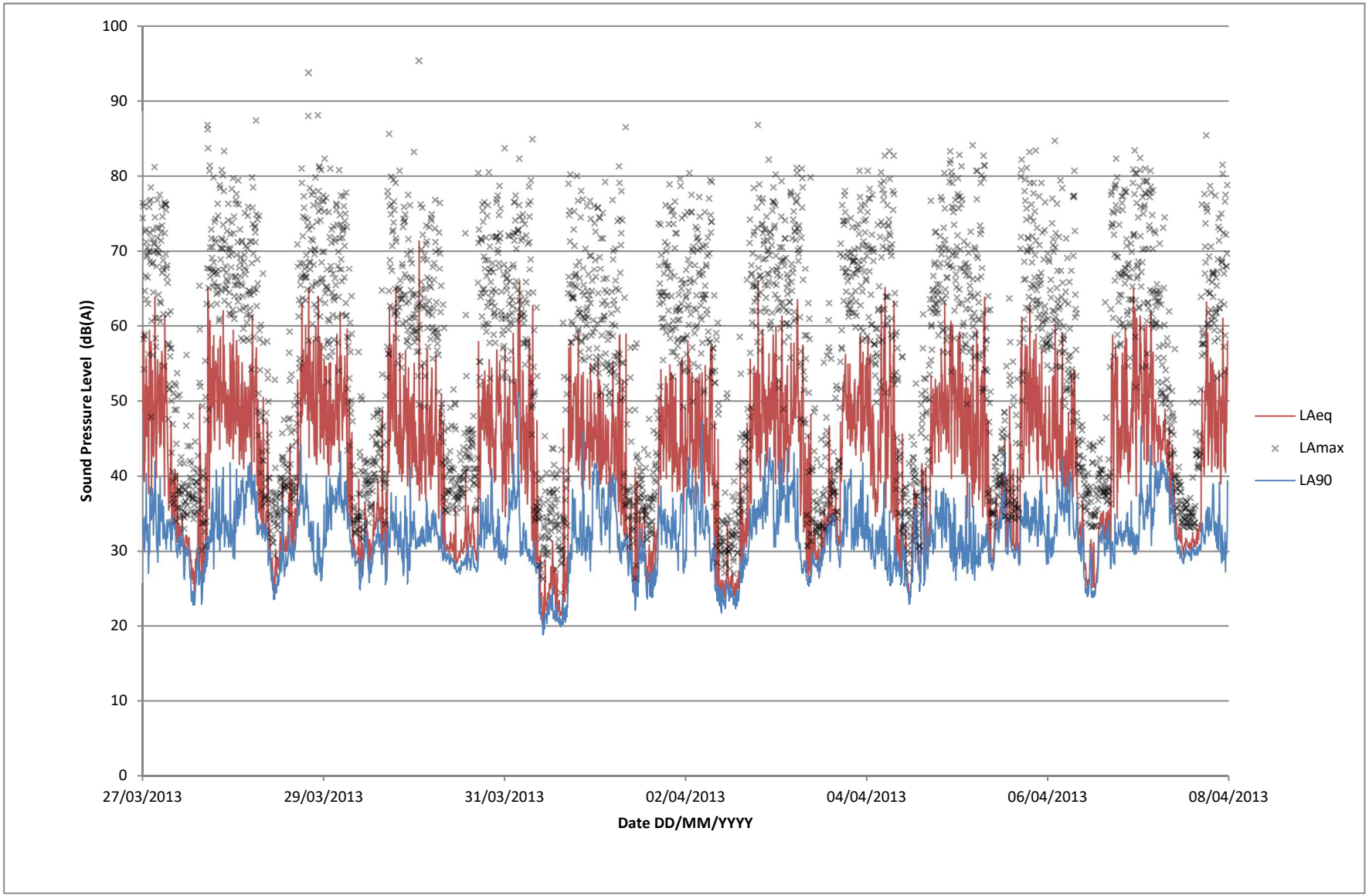
Location (Figure 9.1)		Monitoring Period [1]	Noise Level dB					
			$L_{Aeq,T}$	$L_{A90,ave}$	$L_{A90,25pc}$+	L_{A10}	L_{Amax}#	$L_{Amax,90pc}$*
LT1	Free-field ground floor long term unattended monitoring location 280175,857193	Day (0700-2300)	50.9	32.7	29.7	45.3	95.4	76.1
		Night (2300 – 0700)	46.9	29.7	27.5	37.5	86.8	69.6

Note: T is 16 hours for the daytime and 8 hours for the night-time

+ $L_{A90, 25pc}$ value is lower 25th percentile of measurements over survey period.

Maximum monitored noise level during survey period

* L_{Amax} value is 90th percentile of measurements over survey period.


100
90
80
70
60
50
40
30
20
10
0
Sound Pressure Level (dB(A))
27/03/2013
29/03/2013
31/03/2013
02/04/2013
04/04/2013
06/04/2013
08/04/2013
Date DD/MM/YYYY
LAeq
LAmax
LA90

History for Inverness, United Kingdom

March 27, 2013 through April 8, 2013 — View Current Conditions

March 27, 2013 through April 8, 2013

Top of Form

March 27 2013 - TO - April 8 2013 Go

Bottom of Form

	Max	Avg	Min	Sum
Temperature				
Max Temperature	9 °C	7 °C	3 °C	
Mean Temperature	4 °C	1 °C	-1 °C	
Min Temperature	1 °C	-4 °C	-8 °C	
Degree Days				
Heating Degree Days (base 65)	36	31	25	399
Cooling Degree Days (base 65)	0	0	0	0
Growing Degree Days (base 50)	0	0	0	0
Dew Point				
Dew Point	5 °C	-2 °C	-9 °C	
Precipitation				
Precipitation	0.0 mm	0.0 mm	0.0 mm	0.00 mm
Snowdepth	-	-	-	-
Wind				
Wind	24 km/h	7 km/h	0 km/h	

	Max	Avg	Min	Sum
Gust Wind	-	-	-	
Sea Level Pressure				
Sea Level Pressure	1028 hPa	1021 hPa	1009 hPa