REPORT TITLE:

33 Belsize Lane Environmental Noise Survey and Plant Noise Assessment

CLIENT DETAILS:

XUL Architecture

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PREPARED BY:

James Williams BSc (Hons), AMIOA

CHECKED/AUTHORISED BY:

Joan-Carles Blanco BSc (Hons), MIOA

Pace Consult Ltd, 5th Floor Fairfax House, Causton Road, Colchester CO1 1RJ
t: 0845 241 0142 | **f:** 0845 241 2212 | **e:**info@paceconsult.co.uk | www.paceconsult.co.uk

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1. Introduction

Pace Consult Limited was commissioned by XUL Architecture to undertake a noise survey and assessment to aide in support of the proposed plant installations at 33 Belsize Lane, London, NW3 5AS.

Camden Council produced a set of Planning Conditions set out under the application reference 2014/1015/P. A post-installation noise survey was requested. This survey was undertaken in February 2015 and details are presented in this report.

This report assesses the predicted and measured noise impacts of the development on the surrounding area based on environmental noise survey data measured on site. It has been prepared in accordance with relevant Local Authority guidance, standards or policies as well as national standards and guidelines including British Standard BS4142: 1997, Method for Rating Industrial Noise affecting Mixed Residential and Industrial Areas.

The site is shown in figure 1 to the rear of this report.

The development is a refurbished commercial space. The main noise source to the rear of the property, where the plant is to be installed, is existing plant.

2. Assessment Methodology

2.1 Perception

Noise is defined as unwanted sound. Human ears are able to respond to sound over the frequency range of about 20 Hz to 20 kHz and over the audible range of 0 dB (the threshold of perception) to 140 dB (the threshold of pain). The ear does not respond equally to different frequencies of the same magnitude, and is more responsive to mid-frequencies than to lower or higher frequencies. To quantify noise in a manner that approximates to the response of the human ear, a weighting mechanism is used. This reduces the importance of lower and higher frequencies, in a similar manner to the human ear. To help understand the range of noise levels which may be encountered, an indication of the level of some common sounds on the dB(A) scale is given in the table below.

Table 1 - Common Sounds on the dB(A) Scale

dB(A)	Description
140	Threshold of pain
120	Jet take off at 50 metres
100	Maximum noise levels on an underground platform
80	Kerbside of a busy urban street
60	Busy general office
40	Residential area at night
20	Background in a TV and recording studio
0	Threshold of hearing

Furthermore, the perception of noise may be determined by a number of other factors, both acoustic and non-acoustic. In general, the impact of noise depends upon its level, the margin by which it exceeds the background level, its character and its variation over a given period of time. In addition, the time of day and other acoustic features such as tonality may be important, as may the disposition of the affected individual receptor.

Any assessment of noise should give due consideration to all of these factors when assessing the significance of a noise source.

The most widely used weighting mechanism that corresponds to the response of the human ear is the A-weighting scale. This is widely used for environmental noise measurement, and the levels are denoted as dB(A) or L_{Aeq}, L_{A90}, etc., according to the parameter being measured.

The decibel scale is logarithmic rather than linear, and hence a 3 dB increase in sound level represents a doubling of the sound energy present. Judgement of sound is subjective, but as a general guide a 10 dB(A) increase can be taken to represent a doubling of loudness, whilst an increase in the order of 3 dB(A) of a steady source is generally regarded as the minimum difference needed to perceive a change.

2.2 Legislation and Policy

The impact of potential noise emission from the proposed development is assessed in compliance with BS 4142:1997 and the following noise levels measured/determined:

a. Existing background noise levels at the nearest or most exposed noise-sensitive development to the proposed development; or at a location where background conditions can be argued to be similar.

b. The rating noise level resulting from the proposed noise-source. This can be based upon reference to similar installations or sites, or determined by calculation.

2.3 British Standard BS4142: 1997, Method for Rating Industrial Noise affecting Mixed Residential and Industrial Areas

BS4142 is intended to be used for assessment of whether noise from factories, industrial premises or fixed installations and sources of an industrial nature in commercial premises is likely to give rise to complaints from people residing in nearby dwellings. The Standard states that:

'It (BS4142) may be found helpful in certain aspects of environmental planning and may be used in conjunction with recommendations on noise levels and methods of measurement published elsewhere.'

The procedure contained in BS4142 for assessing the likelihood of complaints is to compare the measured or predicted noise level from the source in question, the 'specific noise level', at the assessment position with the background noise level. Where the noise contains a 'distinguishable, discreet, continuous note (whine, hiss, screech, hum etc.) or if there are

distinct impulses in the noise (bangs, clicks, clatters or humps), or if the noise is irregular enough to attract attention' then a correction of 5 dB is added to the specific noise level to obtain the 'rating level'. British Standard, BS7445: Part 2: 1991: Description and measurement of environmental noise - Guide to the acquisition of data pertinent to land use contains a more objective method of assessing whether a sound is tonal. It states:

'In some practical cases, a prominent tonal component may be detected in one-third octave spectra if the level of a one-third octave band exceeds the level of the adjacent bands by 5dB or more.'

To assess the likelihood of complaints, the measured background noise level is subtracted from the rating noise level. BS4142 states:

'A difference of around 10 dB or higher indicates that complaints are likely. A difference of around 5 dB is of marginal significance. At a difference below 5 dB, the lower the value the less likelihood there is that the complaints will occur. A difference of -10 dB is a positive indication that complaints are unlikely.'

However, in addressing the potential for noise intrusion the standard also states that:

'For the purposes of this standard, background noise levels below about 30 dB and rating levels below about 35 dB are considered to be very low.'

2.4 Camden Council

This report was undertaken further to a request from Camden Council. The Council have set noise criteria and these are detailed in the Camden Development Policies 2010 – 2025, Local Development Framework. The requirements are shown below.

Table E: Noise levels from plant and machinery at which planning permission will not be granted

Noise description and location of measurement	Period	Time	Noise level
Noise at 1 metre external to a sensitive façade	Day, evening and night	0000-2400	5dB(A) <LA90
Noise that has a distinguishable discrete continuous note (whine, hiss, screech, hum) at 1 metre external to a sensitive façade.	Day, evening and night	0000-2400	10dB(A) <LA90
Noise that has distinct impulses (bangs, clicks, clatters, thumps) at 1 metre external to a sensitive façade.	Day, evening and night	0000-2400	10dB(A) <LA90
Noise at 1 metre external to sensitive façade where LA90>60dB	Day, evening and night	0000-2400	55dBL_{Aeq}'

Planning Condition 4 sets out the post-installation requirements and reads as follows:

Within three months from the date of this permission a noise survey shall be carried out to ascertain that the predicted noise levels from the machinery, as cited in the acoustic report referenced PC-14-0009-RP1 are being met. A Noise Report shall be submitted for the approval of the Local Planning Authority. The Noise Report shall clearly contain map/plan showing all measurements locations, tabulated and graphically raw data, calculations /façade corrections /assumptions made, time date, etc.

Reason: To safeguard the amenities of the adjoining premises and the area generally in accordance with the requirements of policy CS5 of the London Borough of Camden Local Development Framework Core Strategy and policies DP26 and DP28 of the London Borough of Camden Local Development Framework Development Policies.

3. Noise Survey Details

The initial noise survey was carried out at the proposed site between the 5th and 7th March 2014.

The noise levels measured are representative of the existing noise climate at the facades of nearest sensitive receptors.

During the survey the noise monitor was positioned on a low level roof to the rear of 33 Belsize Lane, opposite and in line with the nearest sensitive receptors. Measurements were taken in accordance with the principles of BS 7445:2003 Parts 1 (2003) & 2-3(1991), 'Description and Measurement of Environmental Noise', and BS 4142:1997 Method for Rating Industrial Noise Affecting Mixed Residential and Industrial Areas.

The climatic conditions during the noise surveys were warm with light winds (< 2m/s). There was no occasion of rain during measurements, hence conditions were considered conducive to undertake environmental noise measurement. Subjectively, the site and surrounding buildings experience noise predominantly from existing plant.

Measurements were made with calibrated precision grade sound level meters which achieve the requirements of BS EN 61672: 2003.

The noise parameters L_{Aeq}, L_{A90} and $L_{Amax(fast)}$ have been monitored and the relevant values obtained for day and night-time periods. Measurements were taken in octaves but noise limits later in this report are to be set as single figure 'A' weighted values rather than octave or third octave levels.

The measurement position, MP1, is shown in Appendix one.

4. Summary of Lowest Background Levels (LA90)

The plant noise assessment is based on the existing background noise levels at the nearest sensitive receiver.

The results of the lowest background noise measurements are presented in table 2 below. A full set of noise data is presented in Appendix 1.

Table 2 : MP1 Day-time	
Time	Lowest $L_{A90,T}$ dB
Day Time (07:00 – 23:00)	51.6
Night Time (23:00 – 07:00)	44.4
Office Hours (08:00 – 18:00)	52.7

Average noise levels recorded over a 24 hour period are presented in table 3 for information purposes.

Table 3 : MP1 Night-time			
Time	Log Average $L_{Aeq,T}$ dB	Average L_{Amax} dB	Average $L_{A90,T}$ dB
Day Time 0700 - 2300	68	73	56
Night Time 2300 - 0700	57	61	55

5. Noise Limits at the Nearest Residential Receivers

The noise impact of items of plant and fixed installation has been determined in accordance to the guidance contained in BS4142: 1997, 'Method for Rating Industrial Noise Affecting Mixed Residential and Industrial Areas' in compliance with Local Authority requirements.

Camden Council requires that plant noise does not exceed 5dB below background. The installation has been assessed in accordance with BS4142:1997 which indicates that complaints will be less likely to occur at this level. The penalty of 5dB for tonal plant, as discussed in BS4142:1997, would also apply where appropriate.

The proposed plant will be running during office hours only, therefore the criteria is based on the lowest background level recorded during the hours of 08:00 – 18:00, this is presented in table 5.

Table 4: Summary of the recommended Noise Rating Level dB

Location	Period	Rating Noise Level $L_{Ar,\,T}$ (dB)
MP1	Office Hours (08:00 – 18:00)	48.0

For circumstances where plant items emit noise with an audible tone, 5dB should be removed from the values above, as per the requirements for assessment under the provisions of BS4142: 1997 '*Method for rating industrial noise affecting mixed residential and industrial areas*'.

6. Prediction of Noise from Mechanical Plant

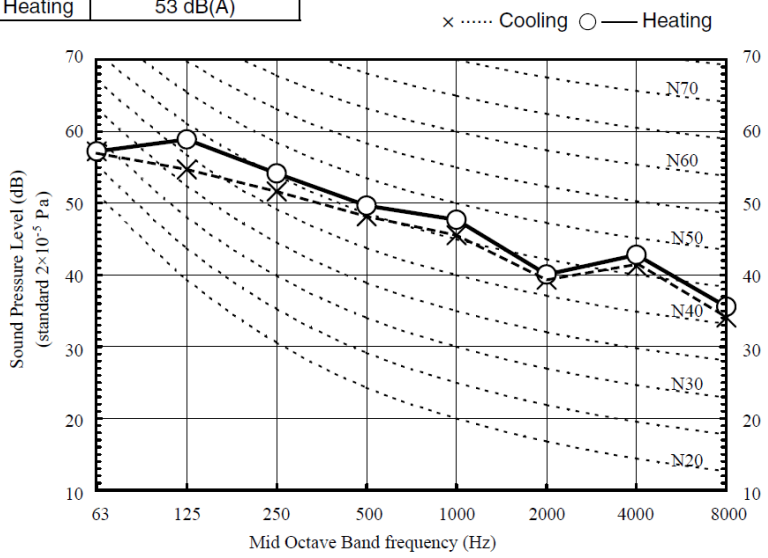
6.1 Mechanical Plant

The following external plant noise sources are to be located on the building: 1 No. Inverter Heat Pump Model SRC50ZJ-S & 2 No. Inverter Heat Pump Model SRK25ZMPS.

The manufacturer noise data for the proposed units is shown below.

(Outdoor Unit)

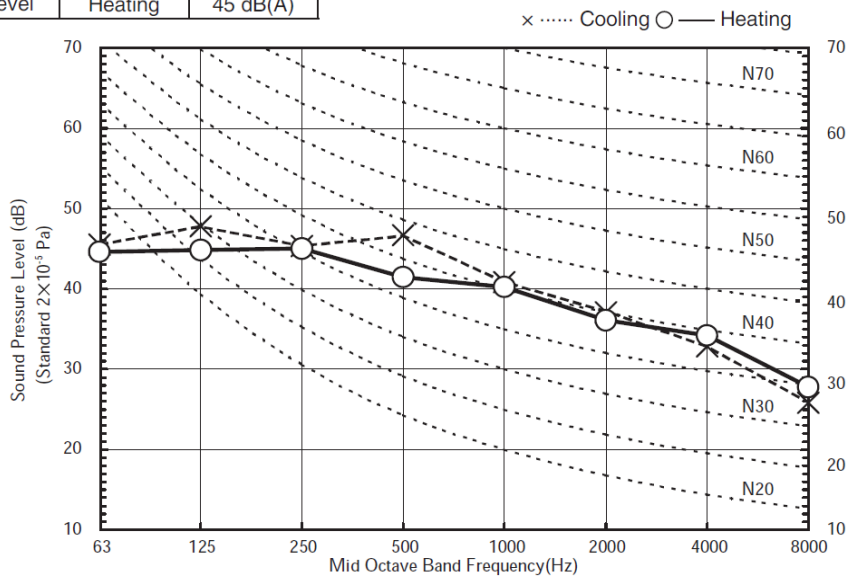
Model	SRC50ZJ-S	
Noise Level	Cooling	51 dB(A)
	Heating	53 dB(A)



(Outdoor Unit)

Model	SRC25ZMP-S	
Noise Level	Cooling	47 dB(A)
	Heating	45 dB(A)

• Mike position: at highest noise level in position as mentioned below
Distance from front side 1m



6.2 Mechanical Plant Noise Levels at Nearest Residential Receiver:

The nearest residential receiver is directly above the proposed offices. It is approximately 2m from the top unit of the proposed plant installations. The following table shows the expected plant noise levels and the nearest residential receiver.

Project - 33 Belsize Lane
Reference - PC-14-0009

Table 5 - Summary of Atmospheric Noise calculations from M & E Plant to the nearest residential window directly above the proposed development

Source Plant Reference	Lp @	Distance	Screening By Building	Distance	Dist Correction	Lp at distance
Inverter Heat Pump Model SRC50ZJ-S	53	1.0m	0.0 dB(A)	3.2m	-10.1	42.9 dB(A)
Inverter Heat Pump Model SRK25ZMPS	45	1.0m	0.0 dB(A)	2.6m	-8.3	36.7 dB(A)
Inverter Heat Pump Model SRK25ZMPS	45	1.0m	0.0 dB(A)	2.0m	-6.0	39.0 dB(A)
					Total	45.1 dB(A)
						(53dBA Measured L90)

As can be seen in the above calculation summary, noise from the condenser units is expected to be 8dB below the measured background noise level.

Note: the above calculation shows the noise levels when the units are in heating mode. The overall noise level is the same during cooling.

7. Measurement of Noise from Mechanical Plant

7.1 Post-Installation Noise Survey Details

The post-installation noise survey was carried out at the proposed site on 3rd February 2015.

The plant noise levels were measured at 1m from the heat pumps as it was not possible to position a sound level meter at 1m from the nearest residential window.

During the survey the noise monitor was positioned out of the rear office window 1m from the heat pumps. Measurements were taken in accordance with the principles of BS 7445:2003 Parts 1 (2003) & 2-3(1991), 'Description and Measurement of Environmental Noise', and BS 4142:1997 Method for Rating Industrial Noise Affecting Mixed Residential and Industrial Areas.

The climatic conditions during the noise surveys were cold with light winds (< 2m/s). There was no occasion of rain during measurements, hence conditions were considered conducive to undertake environmental noise measurement.

Measurements were made with calibrated precision grade sound level meters which achieve the requirements of BS EN 61672: 2003.

The noise parameter L_{Aeq} was monitored as required in BS4142:1997. Measurements were taken in octaves but noise limits later in this report are to be set as single figure 'A' weighted values rather than octave or third octave levels.

The measurement position, MP2, is shown in Appendix one.

The results of the noise measurements are presented in table 2 below. A full set of noise data is presented in Appendix 1.

Table 6 : MP2 Day-time

Time/Scenario	Lowest $L_{A90,T}$ dB
Office Hours 14:00 – 14:30 Plant On (measured)	61.1
Office Hours 14:30 – 15:00 Plant Off (residual)	59.2

7.2 BS4142:1997 Plant Noise Assessment

The BS4142:1997 plant noise assessment is as follows:

- Measured Noise Level LAeq = 61.1dB
- Residual Noise Level LAeq = 59.2
- Background level LA90 = 52.7
- Correction made to measured noise level based on difference to residual = N/A

It is not possible to simply apply a correction to the noise level reading when the difference between the measured and residual levels is less than 3dBA. Table 1 from BS4142 states the following:

Table 1. Corrections to noise level readings

Difference between noise level readings with specific noise present and absent dB	Correction to be subtracted from noise level reading with specific noise present dB
> 9	0
6 to 9	1
4 to 5	2
3	3
< 3	see **6.3.4** to **6.3.7**

NOTE. An estimate of the residual noise level during the measurement time intervals when the residual noise level has subsided to typically low levels can be made by measuring the background noise level when all other conditions are similar to those when the measurements are taken with the specific noise present.

6.3.4 states the following:

Where possible, determine the specific noise level directly by measurement at the assessment location(s).

This was not possible as the measurement position used was already 1m from the plant installations.

It was therefore not considered possible to determine the rating noise level by measurement. The background noise level is relatively constant and therefore measuring at a different time in the day would not provide a clearer result. Section 6.3.6 of BS4142:1997 states the following as an alternative to measurement:

Determine the specific noise level by calculation alone if measurement is not practicable, for example if the source is not yet in operation. In such cases, report the method of calculation in detail and give the reason for using it.

The calculation provided in section 6.2 of this report demonstrates that the plant noise from the three heat pumps is compliant with Camden Council's requirement of 5dB below the lowest measured background level.

As the rating level could not be measured over the residual noise level it is therefore concluded that the installation is compliant with BS4142:1997 and Planning Condition 4 on the basis of calculation.

8. Conclusions

The effects and impact of noise relating to background noise and the impact of plant noise from the three proposed condenser units at 33 Belsize Lane have been assessed. Throughout, the assessment has been undertaken with reference to Local Authority criteria and relevant British Standards and national guidance on noise impacts.

To minimise risk of noise nuisance to the surrounding community plant noise target design levels have been calculated based on measured background noise levels and local authority guidance. The effects of the proposed condenser units have been assessed.

The expected plant noise levels at the nearest residential receiver is 8dB below the lowest background measurement during office hours (08:00 – 18:00). This is therefore compliant with the Local Authority's plant noise requirements.

A post-installation noise survey was undertaken to satisfy the requirements of Planning Condition 4. It was not possible to measure the rating noise level above the residual noise level. It is therefore concluded that the heat pump noise levels are compliant with the requirements of Planning Condition 4 of the basis of calculation.

Figure 1 – Site Location:

Appendix 1 – 24 Hour Noise Survey Results

Date	LAeq	LAFmax	LA90
(2014/03/05 13:05:02.00)	61.9	84	57.6
(2014/03/05 13:10:02.00)	58.9	75.5	57.5
(2014/03/05 13:15:02.00)	58.6	68.2	56.9
(2014/03/05 13:20:03.00)	58	70.2	56.8
(2014/03/05 13:25:03.00)	75	89.3	57.7
(2014/03/05 13:30:02.00)	71.1	87.7	57
(2014/03/05 13:35:02.00)	71.7	90	53.4
(2014/03/05 13:40:02.00)	67.6	84.8	52.1
(2014/03/05 13:45:03.00)	68.2	83.2	52.6
(2014/03/05 13:50:03.00)	64.6	83.9	52.8
(2014/03/05 13:55:02.00)	69.7	92.3	51.4
(2014/03/05 14:00:02.00)	59.3	77.6	54.9
(2014/03/05 14:05:02.00)	67.4	89.6	57.7
(2014/03/05 14:10:03.00)	71.2	87.1	57.4
(2014/03/05 14:15:03.00)	70.4	89.7	57.4
(2014/03/05 14:20:02.00)	75.6	89.6	57.5
(2014/03/05 14:25:02.00)	75.2	94	57.5
(2014/03/05 14:30:02.00)	71	88.6	57.1
(2014/03/05 14:35:02.00)	74.4	89.5	57.4
(2014/03/05 14:40:03.00)	59.9	78.1	57.3
(2014/03/05 14:45:02.00)	72.2	87.2	56.8
(2014/03/05 14:50:02.00)	76.3	88.6	57.3
(2014/03/05 14:55:02.00)	77	89.7	58.5
(2014/03/05 15:00:02.00)	60.8	79.2	57.6
(2014/03/05 15:05:03.00)	65.3	86.5	57.7
(2014/03/05 15:10:03.00)	73.9	88.5	57
(2014/03/05 15:15:02.00)	58.3	69.3	56.9
(2014/03/05 15:20:02.00)	59.5	72.9	57.5
(2014/03/05 15:25:02.00)	78.5	89.1	57.9
(2014/03/05 15:30:03.00)	70.8	90.1	57.1
(2014/03/05 15:35:03.00)	72.2	87.8	57.1
(2014/03/05 15:40:02.00)	76	88.9	56.8
(2014/03/05 15:45:02.00)	73.4	89.2	57.7
(2014/03/05 15:50:02.00)	64.5	87.9	58
(2014/03/05 15:55:02.00)	71.4	87.9	57.4
(2014/03/05 16:00:03.00)	76.1	88.5	57.1
(2014/03/05 16:05:02.00)	71.3	87.9	57.5
(2014/03/05 16:10:02.00)	72.3	86.4	57.3
(2014/03/05 16:15:03.00)	61.3	77.5	57.3

Date	LAeq	LAFmax	LA90
(2014/03/05 16:20:02.00)	63.7	82.8	56.9
(2014/03/05 16:25:03.00)	65	81.1	57
(2014/03/05 16:30:03.00)	60	78.5	57.1
(2014/03/05 16:35:02.00)	58	69.2	57
(2014/03/05 16:40:02.00)	58.1	77.4	56.6
(2014/03/05 16:45:02.00)	58	70.9	57.1
(2014/03/05 16:50:03.00)	60	84.8	56.9
(2014/03/05 16:55:02.00)	58.5	73.4	57
(2014/03/05 17:00:02.00)	58.3	69.8	57.1
(2014/03/05 17:05:02.00)	57.9	61.8	56.9
(2014/03/05 17:10:03.00)	57.7	63.9	56.6
(2014/03/05 17:15:02.00)	57.9	62.2	57
(2014/03/05 17:20:02.00)	58.6	70.2	57.5
(2014/03/05 17:25:03.00)	57.9	63.1	57.2
(2014/03/05 17:30:02.00)	58.3	66.1	57.1
(2014/03/05 17:35:02.00)	54.6	59.8	53.4
(2014/03/05 17:40:03.00)	55.3	63.2	54.2
(2014/03/05 17:45:03.00)	54.5	61.4	53.4
(2014/03/05 17:50:02.00)	53.9	55.9	53.4
(2014/03/05 17:55:02.00)	54	58.2	52.2
(2014/03/05 18:00:03.00)	53.1	56.1	52.1
(2014/03/05 18:05:03.00)	58.3	63.3	53.5
(2014/03/05 18:10:02.00)	58.3	61.6	57.6
(2014/03/05 18:15:03.00)	58.1	62.1	57.5
(2014/03/05 18:20:03.00)	57.9	61.4	57.2
(2014/03/05 18:25:02.00)	58.2	61.5	57.4
(2014/03/05 18:30:02.00)	58.3	61.6	57.6
(2014/03/05 18:35:03.00)	58.5	65.8	57.3
(2014/03/05 18:40:03.00)	58.2	61.3	57.6
(2014/03/05 18:45:02.00)	57.9	61.7	57.2
(2014/03/05 18:50:02.00)	58.6	67.1	57.3
(2014/03/05 18:55:03.00)	58.4	63.3	57.6
(2014/03/05 19:00:02.00)	58.2	63.4	57.5
(2014/03/05 19:05:02.00)	58.2	61.3	57.6
(2014/03/05 19:10:03.00)	58	61.7	57.1
(2014/03/05 19:15:03.00)	58.2	62.3	57.5
(2014/03/05 19:20:02.00)	58.6	65.4	57.9
(2014/03/05 19:25:02.00)	58	61.5	57.2
(2014/03/05 19:30:03.00)	57.7	61.1	56.9
(2014/03/05 19:35:02.00)	57.8	61.3	57.2
(2014/03/05 19:40:02.00)	58.8	65.1	57.6
(2014/03/05 19:45:03.00)	58	62.6	57.2

Date	LAeq	LAFmax	LA90
(2014/03/05 19:50:03.00)	58.2	62.4	57.4
(2014/03/05 19:55:02.00)	57.9	61.2	57.2
(2014/03/05 20:00:02.00)	58	61.6	57.3
(2014/03/05 20:05:03.00)	58.7	67.7	57.1
(2014/03/05 20:10:02.00)	58.3	63.6	57.3
(2014/03/05 20:15:02.00)	58.3	61.8	57.6
(2014/03/05 20:20:03.00)	57.9	61.9	57.2
(2014/03/05 20:25:03.00)	57.7	61.9	57
(2014/03/05 20:30:03.00)	58	61.4	57.2
(2014/03/05 20:35:02.00)	58.3	62.3	57.6
(2014/03/05 20:40:03.00)	58.4	66.7	57.2
(2014/03/05 20:45:03.00)	58	65.3	57.2
(2014/03/05 20:50:02.00)	58.4	61.6	57.6
(2014/03/05 20:55:03.00)	58.6	62	57.9
(2014/03/05 21:00:03.00)	58	61.8	57.4
(2014/03/05 21:05:02.00)	58.5	62.2	57.7
(2014/03/05 21:10:03.00)	58.3	61.8	57.6
(2014/03/05 21:15:04.00)	58.3	61.7	57.5
(2014/03/05 21:20:03.00)	58.3	61.3	57.6
(2014/03/05 21:25:03.00)	58	61.3	57.2
(2014/03/05 21:30:04.00)	58	61.9	53.8
(2014/03/05 21:35:04.00)	52.5	57.8	51.3
(2014/03/05 21:40:03.00)	54.3	66.5	50.7
(2014/03/05 21:45:03.00)	54.4	56.6	53.8
(2014/03/05 21:50:04.00)	54.8	57.8	53.9
(2014/03/05 21:55:03.00)	53.1	55.4	52.1
(2014/03/05 22:00:03.00)	53.7	60.9	51.8
(2014/03/05 22:05:04.00)	53.3	55.2	52.6
(2014/03/05 22:10:04.00)	56.7	61.3	52.9
(2014/03/05 22:15:03.00)	58	61.8	57.1
(2014/03/05 22:20:03.00)	58.1	61.7	57.3
(2014/03/05 22:25:04.00)	58.3	61.6	57.5
(2014/03/05 22:30:03.00)	58.2	62	57.4
(2014/03/05 22:35:03.00)	57.7	61.2	57
(2014/03/05 22:40:04.00)	58.1	61.5	57.4
(2014/03/05 22:45:04.00)	57.8	61.6	57.2
(2014/03/05 22:50:03.00)	57.9	61.9	57.1
(2014/03/05 22:55:03.00)	58.1	61.6	57.3
(2014/03/05 23:00:04.00)	57.3	60.8	56.4
(2014/03/05 23:05:03.00)	60.8	68.8	57.7
(2014/03/05 23:10:03.00)	58	63.8	56.6
(2014/03/05 23:15:04.00)	57.5	61.1	56.7

Date	LAeq	LAFmax	LA90
(2014/03/05 23:20:04.00)	57.7	61.6	56.8
(2014/03/05 23:25:03.00)	57.6	61.3	56.7
(2014/03/05 23:30:03.00)	57.7	61.6	57
(2014/03/05 23:35:04.00)	58.1	62.3	57.4
(2014/03/05 23:40:04.00)	58	61.2	57.2
(2014/03/05 23:45:04.00)	58.1	61.6	57.3
(2014/03/05 23:50:04.00)	58.2	61.8	57.4
(2014/03/05 23:55:04.00)	58.1	62	57.3

Date	LAeq	LAFmax	LA90
(2014/03/06 00:00:04.00)	57.5	62	56.6
(2014/03/06 00:05:02.00)	58.3	63.1	57.5
(2014/03/06 00:10:02.00)	58.3	62.5	57.5
(2014/03/06 00:15:02.00)	58.3	62.1	57.6
(2014/03/06 00:20:03.00)	58.6	62.1	57.9
(2014/03/06 00:25:03.00)	58.5	62.1	57.8
(2014/03/06 00:30:02.00)	58.1	61.4	57.4
(2014/03/06 00:35:02.00)	58.3	62.7	57.5
(2014/03/06 00:40:02.00)	58.4	62	57.7
(2014/03/06 00:45:02.00)	57.9	61.4	57.2
(2014/03/06 00:50:02.00)	58.1	62.3	57.4
(2014/03/06 00:55:03.00)	57.9	62	56.9
(2014/03/06 01:00:03.00)	58.1	61.7	57.2
(2014/03/06 01:05:02.00)	58.4	62	57.6
(2014/03/06 01:10:02.00)	58.3	62.2	57.6
(2014/03/06 01:15:03.00)	58.1	61.8	57.3
(2014/03/06 01:20:03.00)	57.9	61.7	57
(2014/03/06 01:25:02.00)	58.1	61.6	57.2
(2014/03/06 01:30:03.00)	57.5	61.8	49.2
(2014/03/06 01:35:03.00)	46.8	52.2	44.4
(2014/03/06 01:40:02.00)	51.1	54.1	49.7
(2014/03/06 01:45:02.00)	50.5	54.2	49.1
(2014/03/06 01:50:03.00)	50.1	57.2	49.1
(2014/03/06 01:55:03.00)	50.7	53.1	50
(2014/03/06 02:00:02.00)	49.4	53	44.8
(2014/03/06 02:05:02.00)	52	56.1	49.8
(2014/03/06 02:10:02.00)	56.9	61	51
(2014/03/06 02:15:02.00)	57	61.4	56.3
(2014/03/06 02:20:02.00)	57	61.6	56.2
(2014/03/06 02:25:03.00)	57.2	61.2	56.3
(2014/03/06 02:30:03.00)	58.1	61.6	57.1

Date	LAeq	LAFmax	LA90
(2014/03/06 02:35:02.00)	57.5	61.4	56.6
(2014/03/06 02:40:03.00)	58.2	62	57.2
(2014/03/06 02:45:03.00)	57.6	64.2	56.3
(2014/03/06 02:50:02.00)	57.3	62.1	56.3
(2014/03/06 02:55:02.00)	57.2	61.6	56.3
(2014/03/06 03:00:03.00)	57.4	61.8	56.5
(2014/03/06 03:05:03.00)	57	61	56.2
(2014/03/06 03:10:02.00)	57.4	61.2	56.7
(2014/03/06 03:15:02.00)	57.1	62.2	56.4
(2014/03/06 03:20:03.00)	57.5	62.3	56.6
(2014/03/06 03:25:02.00)	57.2	61.8	56.4
(2014/03/06 03:30:03.00)	57.5	62	56.7
(2014/03/06 03:35:03.00)	57.8	61.9	57
(2014/03/06 03:40:03.00)	57.7	61.1	56.9
(2014/03/06 03:45:02.00)	57.7	61.3	56.9
(2014/03/06 03:50:02.00)	57.7	61.4	56.9
(2014/03/06 03:55:03.00)	58.5	62.5	57.7
(2014/03/06 04:00:03.00)	57.3	61.8	56.6
(2014/03/06 04:05:02.00)	57.4	62.2	56.5
(2014/03/06 04:10:03.00)	57.3	61	56.6
(2014/03/06 04:15:03.00)	57.5	61.3	56.8
(2014/03/06 04:20:02.00)	57.5	62.1	56.8
(2014/03/06 04:25:02.00)	57.3	61.5	56.5
(2014/03/06 04:30:03.00)	57.5	62.1	56.4
(2014/03/06 04:35:03.00)	57.6	61.2	56.7
(2014/03/06 04:40:02.00)	57.3	62.2	56.6
(2014/03/06 04:45:02.00)	56.8	60.8	56.1
(2014/03/06 04:50:03.00)	57.3	61.7	56.6
(2014/03/06 04:55:02.00)	57.5	60.9	56.8
(2014/03/06 05:00:02.00)	56.8	60.9	56.1
(2014/03/06 05:05:03.00)	57.3	61.4	56.1
(2014/03/06 05:10:03.00)	57.4	61.7	56.5
(2014/03/06 05:15:02.00)	57.3	61.7	56.5
(2014/03/06 05:20:02.00)	57.6	61.5	56.8
(2014/03/06 05:25:03.00)	57.3	62	56.5
(2014/03/06 05:30:02.00)	56.2	61.3	50.7
(2014/03/06 05:35:02.00)	50.8	53.4	49.7
(2014/03/06 05:40:03.00)	51.1	53.4	50.1
(2014/03/06 05:45:03.00)	50.7	55.2	49.1
(2014/03/06 05:50:02.00)	49.5	52.7	46.4
(2014/03/06 05:55:02.00)	51	54.3	48.6
(2014/03/06 06:00:03.00)	48.2	51.2	47.1

Date	LAeq	LAFmax	LA90
(2014/03/06 06:05:02.00)	52.9	60.8	47.8
(2014/03/06 06:10:02.00)	57.2	62	52
(2014/03/06 06:15:03.00)	56.4	61.2	51.2
(2014/03/06 06:20:03.00)	59.1	67.2	56.8
(2014/03/06 06:25:02.00)	57.9	61.8	57.2
(2014/03/06 06:30:02.00)	58.5	65.4	57.7
(2014/03/06 06:35:03.00)	57.9	61.3	57.3
(2014/03/06 06:40:02.00)	58.5	62	57.6
(2014/03/06 06:45:02.00)	58.6	61.9	58
(2014/03/06 06:50:03.00)	58.1	61.9	57.5
(2014/03/06 06:55:03.00)	58.3	61.4	57.6
(2014/03/06 07:00:02.00)	58.6	73.4	57.8
(2014/03/06 07:05:03.00)	58.5	71.8	57.5
(2014/03/06 07:10:03.00)	57.9	62.3	57
(2014/03/06 07:15:02.00)	57.7	76.5	56.6
(2014/03/06 07:20:02.00)	58.3	77.5	57
(2014/03/06 07:25:03.00)	58.4	70.8	57.2
(2014/03/06 07:30:03.00)	58.5	76.4	56.8
(2014/03/06 07:35:02.00)	59.1	71.3	56.9
(2014/03/06 07:40:02.00)	61.6	87.6	57.6
(2014/03/06 07:45:03.00)	66.6	90.6	57.2
(2014/03/06 07:50:03.00)	62	84.9	57
(2014/03/06 07:55:02.00)	63.1	86.3	57.4
(2014/03/06 08:00:03.00)	73.3	87.3	56.9
(2014/03/06 08:05:03.00)	58.4	74.1	57.1
(2014/03/06 08:10:02.00)	60.4	73.1	57
(2014/03/06 08:15:03.00)	73.7	84.8	57.1
(2014/03/06 08:20:03.00)	64.1	85.6	56.7
(2014/03/06 08:25:03.00)	59.6	76.7	55.8
(2014/03/06 08:30:03.00)	60.6	78.2	56.3
(2014/03/06 08:35:04.00)	63.4	72.8	56.7
(2014/03/06 08:40:04.00)	61	75.6	56.8
(2014/03/06 08:45:03.00)	61.5	78.2	57.2
(2014/03/06 08:50:03.00)	58.8	80.7	56.4
(2014/03/06 08:55:04.00)	76.8	92	56.9
(2014/03/06 09:00:04.00)	59.7	79.9	56.3
(2014/03/06 09:05:05.00)	79.3	93.3	56.5
(2014/03/06 09:10:03.00)	84	97.1	58.6
(2014/03/06 09:15:03.00)	79.8	94	56.1
(2014/03/06 09:20:04.00)	72.5	83.9	56.5
(2014/03/06 09:25:04.00)	68.8	84.5	56.6
(2014/03/06 09:30:03.00)	72.8	88	54.2

Date	LAeq	LAFmax	LA90
(2014/03/06 09:35:03.00)	80.3	88	53.7
(2014/03/06 09:40:03.00)	76.7	85.2	53.3
(2014/03/06 09:45:03.00)	69.8	87.2	54.1
(2014/03/06 09:50:04.00)	66.6	88.2	54.6
(2014/03/06 09:55:03.00)	54.5	68.5	52.9
(2014/03/06 10:00:03.00)	53.8	65	52
(2014/03/06 10:05:03.00)	74.4	90.3	53.2
(2014/03/06 10:10:04.00)	74.3	88.5	57.1
(2014/03/06 10:15:04.00)	72.5	88.2	56.9
(2014/03/06 10:20:04.00)	59.5	78.1	57.3
(2014/03/06 10:25:03.00)	63	86.8	55.9
(2014/03/06 10:30:03.00)	63.9	79.5	56.3
(2014/03/06 10:35:04.00)	75.9	89.8	56.9
(2014/03/06 10:40:04.00)	74.7	85.5	57
(2014/03/06 10:45:04.00)	58.1	72.6	56.4
(2014/03/06 10:50:04.00)	60.5	78.9	56.3
(2014/03/06 10:55:04.00)	75.2	89.1	56.4
(2014/03/06 11:00:04.00)	76	89.5	56.5
(2014/03/06 11:05:03.00)	75.6	88	56
(2014/03/06 11:10:04.00)	59.4	82.8	55.7
(2014/03/06 11:15:04.00)	78.7	86.5	56.4
(2014/03/06 11:20:04.00)	72.7	89.1	56.5
(2014/03/06 11:25:03.00)	75.6	88.3	55.1
(2014/03/06 11:30:04.00)	57.6	66.4	55.8
(2014/03/06 11:35:04.00)	73.1	87.4	55.9
(2014/03/06 11:40:04.00)	72.7	82.4	55.2
(2014/03/06 11:45:04.00)	73.1	88.4	55.9
(2014/03/06 11:50:04.00)	68.2	88.7	55.9
(2014/03/06 11:55:04.00)	71	86.1	56
(2014/03/06 12:00:04.00)	70.2	86.5	56.2
(2014/03/06 12:05:04.00)	74	88.3	55.8
(2014/03/06 12:10:03.00)	57	64.8	55.8
(2014/03/06 12:15:04.00)	57	63.7	55.8
(2014/03/06 12:20:04.00)	56.8	67.1	55.7
(2014/03/06 12:25:04.00)	56.7	64.2	55.8
(2014/03/06 12:30:04.00)	57.3	62.9	56.2
(2014/03/06 12:35:03.00)	57.7	64.6	56.4
(2014/03/06 12:40:04.00)	57.3	66.5	56
(2014/03/06 12:45:03.00)	70.8	87.1	56.1
(2014/03/06 12:50:04.00)	73.3	87.3	55.9
(2014/03/06 12:55:04.00)	71.2	87.6	56.4
(2014/03/06 13:00:04.00)	70.3	84.9	55.6

Date	LAeq	LAFmax	LA90
(2014/03/06 13:05:04.00)	74	86	55.7
(2014/03/06 13:10:04.00)	70.6	78.7	56.8
(2014/03/06 13:15:03.00)	71.5	85.8	57.2
(2014/03/06 13:20:04.00)	73.7	87.1	56.7
(2014/03/06 13:25:04.00)	71.2	84.1	56.4
(2014/03/06 13:30:04.00)	73.2	89.9	54.5
(2014/03/06 13:35:04.00)	75.6	89.2	52
(2014/03/06 13:40:03.00)	71.9	86.7	56.7
(2014/03/06 13:45:04.00)	74.9	88.9	56.1
(2014/03/06 13:50:04.00)	73.9	87.7	56.3
(2014/03/06 13:55:04.00)	74.5	87.3	56.7
(2014/03/06 14:00:04.00)	67.1	84.4	55.2
(2014/03/06 14:05:04.00)	63	85.4	55.6
(2014/03/06 14:10:04.00)	76.3	89.4	57.2
(2014/03/06 14:15:04.00)	71.5	89.1	56.2
(2014/03/06 14:20:04.00)	66.6	80.6	55.9
(2014/03/06 14:25:04.00)	72.5	81.5	57.4
(2014/03/06 14:30:04.00)	65.6	76.5	55.9
(2014/03/06 14:35:03.00)	62.5	82	55.9
(2014/03/06 14:40:04.00)	63.7	77.5	56.1
(2014/03/06 14:45:04.00)	63.3	79.8	56.5
(2014/03/06 14:50:04.00)	64.8	78.6	56.2
(2014/03/06 14:55:04.00)	63	78.8	55.5
(2014/03/06 15:00:04.00)	58.6	78.6	55.4
(2014/03/06 15:05:04.00)	60	73.3	56.2
(2014/03/06 15:10:04.00)	71.5	88.1	56.3
(2014/03/06 15:15:04.00)	70.6	88.3	56.2
(2014/03/06 15:20:04.00)	66	84.9	56.3
(2014/03/06 15:25:04.00)	59.7	77.9	56.3
(2014/03/06 15:30:04.00)	60.1	77	56.6
(2014/03/06 15:35:04.00)	60.3	79.4	56.4
(2014/03/06 15:40:04.00)	58.8	76	56.2
(2014/03/06 15:45:04.00)	61	76	56.2
(2014/03/06 15:50:04.00)	65.5	73.2	56.7
(2014/03/06 15:55:04.00)	60.4	78	56.8
(2014/03/06 16:00:04.00)	59.4	79	57.1
(2014/03/06 16:05:04.00)	58.8	73.8	57.4
(2014/03/06 16:10:04.00)	60.6	79.3	57.3
(2014/03/06 16:15:04.00)	59.8	80.9	57.2
(2014/03/06 16:20:04.00)	58.9	76.7	57.2
(2014/03/06 16:25:04.00)	63.6	89	56.7
(2014/03/06 16:30:04.00)	57.8	66.9	56.6

Date	LAeq	LAFmax	LA90
(2014/03/06 16:35:04.00)	58.3	76.6	57
(2014/03/06 16:40:02.00)	58.7	81.4	56.9
(2014/03/06 16:45:02.00)	58.3	75.5	57
(2014/03/06 16:50:02.00)	58	69.3	56.9
(2014/03/06 16:55:04.00)	57.3	62.5	56.6
(2014/03/06 17:00:03.00)	57.7	63	56.9
(2014/03/06 17:05:03.00)	60.7	75.1	57.1
(2014/03/06 17:10:03.00)	61.9	77.2	57.5
(2014/03/06 17:15:03.00)	57.9	62.2	57.1
(2014/03/06 17:20:04.00)	57.9	61.7	57.3
(2014/03/06 17:25:03.00)	58.1	61.1	57.5
(2014/03/06 17:30:03.00)	55.6	61.2	54.6
(2014/03/06 17:35:03.00)	54.6	58	54
(2014/03/06 17:40:04.00)	55.4	61.4	54.8
(2014/03/06 17:45:04.00)	54.2	63	52.1
(2014/03/06 17:50:04.00)	58.3	68.8	56.8
(2014/03/06 17:55:03.00)	57.2	60.9	56.5
(2014/03/06 18:00:03.00)	57.1	63.4	56.5
(2014/03/06 18:05:04.00)	57.6	63.5	56.7
(2014/03/06 18:10:04.00)	57.6	61.4	57
(2014/03/06 18:15:04.00)	57.5	62.1	56.7
(2014/03/06 18:20:03.00)	57.2	61.3	56.7
(2014/03/06 18:25:04.00)	57.3	61	56.6
(2014/03/06 18:30:04.00)	58.7	73.3	56.6
(2014/03/06 18:35:04.00)	57.2	60.8	56.4
(2014/03/06 18:40:04.00)	57.5	60.7	57
(2014/03/06 18:45:03.00)	57.2	61	56.5
(2014/03/06 18:50:04.00)	57.6	64	56.9
(2014/03/06 18:55:04.00)	57.3	63.9	56.6
(2014/03/06 19:00:03.00)	56.9	60.8	56.2
(2014/03/06 19:05:04.00)	56.6	60.8	55.9
(2014/03/06 19:10:04.00)	57.3	60.6	56.7
(2014/03/06 19:15:04.00)	57.4	62.6	56.7
(2014/03/06 19:20:04.00)	57.3	61.3	56.6
(2014/03/06 19:25:04.00)	58.2	61	57.6
(2014/03/06 19:30:04.00)	57.9	61.1	57.3
(2014/03/06 19:35:04.00)	57.9	64	57.2
(2014/03/06 19:40:04.00)	58	66.6	57.3
(2014/03/06 19:45:04.00)	58	61.1	57.4
(2014/03/06 19:50:04.00)	57.8	61.3	57.1
(2014/03/06 19:55:04.00)	56.9	61.5	56
(2014/03/06 20:00:04.00)	57.1	61.7	56.4

Date	LAeq	LAFmax	LA90
(2014/03/06 20:05:04.00)	58.1	66.8	56.8
(2014/03/06 20:10:04.00)	57.1	63.8	56.3
(2014/03/06 20:15:04.00)	57.3	63.6	56.6
(2014/03/06 20:20:04.00)	57.3	60.5	56.6
(2014/03/06 20:25:04.00)	57.3	63.7	56.5
(2014/03/06 20:30:04.00)	57.9	62.3	57.1
(2014/03/06 20:35:04.00)	57.5	61.1	56.8
(2014/03/06 20:40:04.00)	57.6	61.1	56.9
(2014/03/06 20:45:04.00)	57.8	61.6	57.1
(2014/03/06 20:50:04.00)	57.8	61.9	57.1
(2014/03/06 20:55:04.00)	57.6	61.1	57
(2014/03/06 21:00:04.00)	57.1	61.4	56.3
(2014/03/06 21:05:04.00)	56.8	61.5	56.2
(2014/03/06 21:10:04.00)	58	61.3	57.2
(2014/03/06 21:15:04.00)	58	61.4	57.3
(2014/03/06 21:20:04.00)	57.8	61	57.2
(2014/03/06 21:25:04.00)	57.4	61.4	56.6
(2014/03/06 21:30:04.00)	53.9	56.5	53
(2014/03/06 21:35:04.00)	53.2	65.4	52.5
(2014/03/06 21:40:04.00)	52.8	56.8	52.2
(2014/03/06 21:45:04.00)	53.7	55.9	52.9
(2014/03/06 21:50:04.00)	53.1	56.1	51.7
(2014/03/06 21:55:04.00)	52.3	54.8	51.6
(2014/03/06 22:00:04.00)	52.2	54.3	51.5
(2014/03/06 22:05:04.00)	56.3	61.1	52.3
(2014/03/06 22:10:04.00)	58.1	65.3	57.1
(2014/03/06 22:15:04.00)	57.7	60.7	57.1
(2014/03/06 22:20:04.00)	57.7	60.7	57.1
(2014/03/06 22:25:04.00)	57.9	61.2	57.2
(2014/03/06 22:30:04.00)	57.5	60.9	56.8
(2014/03/06 22:35:04.00)	57.1	60.6	56.2
(2014/03/06 22:40:04.00)	57	60.9	56.4
(2014/03/06 22:45:04.00)	57.2	61.1	56.5
(2014/03/06 22:50:04.00)	56.9	60.7	56.2
(2014/03/06 22:55:04.00)	56.4	60.6	55.5
(2014/03/06 23:00:04.00)	56.4	60.5	55.6
(2014/03/06 23:05:05.00)	56.5	60.6	55.8
(2014/03/06 23:10:04.00)	57.1	60.6	56.3
(2014/03/06 23:15:04.00)	57.2	61.1	56.5
(2014/03/06 23:20:04.00)	56.8	60.8	56
(2014/03/06 23:25:04.00)	56.9	60.9	56
(2014/03/06 23:30:04.00)	56.2	60.6	55.3

Date	LAeq	LAFmax	LA90
(2014/03/06 23:35:04.00)	56.3	61	55.4
(2014/03/06 23:40:04.00)	56.8	61.4	55.9
(2014/03/06 23:45:04.00)	56.9	60.6	56.1
(2014/03/06 23:50:04.00)	56.7	60.6	55.9
(2014/03/06 23:55:04.00)	57.1	61	56.2

Date	LAeq	LAFmax	LA90
(2014/03/07 00:00:04.00)	56.9	60.4	56
(2014/03/07 00:05:02.00)	57.6	61.2	56.6
(2014/03/07 00:10:02.00)	58.3	61.6	57.6
(2014/03/07 00:15:02.00)	58.1	62.4	57.4
(2014/03/07 00:20:03.00)	57.9	61.7	57.2
(2014/03/07 00:25:02.00)	58.3	61.5	57.8
(2014/03/07 00:30:02.00)	57.4	61	56.5
(2014/03/07 00:35:02.00)	57.1	60.7	56.3
(2014/03/07 00:40:03.00)	57.7	61.7	57
(2014/03/07 00:45:03.00)	56.9	60.4	56.2
(2014/03/07 00:50:03.00)	56.8	60.9	55.9
(2014/03/07 00:55:02.00)	57	62.3	56
(2014/03/07 01:00:02.00)	56.4	60.8	55.5
(2014/03/07 01:05:02.00)	56.9	61.8	56
(2014/03/07 01:10:02.00)	57	60.6	56.1
(2014/03/07 01:15:03.00)	56.5	61	55.5
(2014/03/07 01:20:02.00)	57.1	61	56
(2014/03/07 01:25:02.00)	57.2	61	53.5
(2014/03/07 01:30:02.00)	52.7	55	51.4
(2014/03/07 01:35:02.00)	51.6	53.6	50.6
(2014/03/07 01:40:03.00)	52.1	55.2	50.5
(2014/03/07 01:45:03.00)	53	55	51.5
(2014/03/07 01:50:02.00)	51.1	59.9	50.6
(2014/03/07 01:55:02.00)	53.1	68.7	48.4
(2014/03/07 02:00:02.00)	50.6	52.6	48.5
(2014/03/07 02:05:03.00)	56.2	63.1	47.1
(2014/03/07 02:10:03.00)	56.4	61.6	55.5
(2014/03/07 02:15:02.00)	56.9	60.8	56
(2014/03/07 02:20:02.00)	56.1	61	55
(2014/03/07 02:25:02.00)	56.7	61	55.9
(2014/03/07 02:30:02.00)	56.9	60.6	56.1
(2014/03/07 02:35:03.00)	57.2	61	56.5
(2014/03/07 02:40:02.00)	57.2	61.4	56.5

Date	LAeq	LAFmax	LA90
(2014/03/07 02:45:02.00)	59.1	72.7	56.6
(2014/03/07 02:50:02.00)	57.3	61.4	56.6
(2014/03/07 02:55:02.00)	57	61.6	56.2
(2014/03/07 03:00:03.00)	56.7	60.5	55.9
(2014/03/07 03:05:03.00)	57.1	60.6	56.3
(2014/03/07 03:10:02.00)	56.6	60.5	55.9
(2014/03/07 03:15:02.00)	57.3	61.3	56.6
(2014/03/07 03:20:02.00)	57.1	60.8	56.4
(2014/03/07 03:25:03.00)	56.8	60.7	56
(2014/03/07 03:30:03.00)	56.6	61.4	55.7
(2014/03/07 03:35:02.00)	59	70.5	56.1
(2014/03/07 03:40:02.00)	57.7	61.8	56.9
(2014/03/07 03:45:02.00)	57.3	61.2	56.6
(2014/03/07 03:50:02.00)	57.4	61	56.5
(2014/03/07 03:55:03.00)	57.6	60.7	56.9
(2014/03/07 04:00:02.00)	57.7	61.4	57.1
(2014/03/07 04:05:02.00)	57.4	60.8	56.7
(2014/03/07 04:10:03.00)	56.7	61.1	55.9
(2014/03/07 04:15:03.00)	56.9	62	56
(2014/03/07 04:20:03.00)	56.7	60.7	55.8
(2014/03/07 04:25:03.00)	57.5	61.2	56.8
(2014/03/07 04:30:02.00)	57.1	61.2	56.3
(2014/03/07 04:35:02.00)	57.1	60.9	56.3
(2014/03/07 04:40:02.00)	56.7	61.3	55.9
(2014/03/07 04:45:03.00)	57.1	60.6	56.3
(2014/03/07 04:50:03.00)	57.3	62	56.5
(2014/03/07 04:55:02.00)	57.3	61.4	56.5
(2014/03/07 05:00:02.00)	56.2	62.2	55.4
(2014/03/07 05:05:02.00)	56.8	60.7	55.9
(2014/03/07 05:10:02.00)	57.1	61	56.2
(2014/03/07 05:15:03.00)	57	60.5	56.2
(2014/03/07 05:20:03.00)	56.8	61.1	55.8
(2014/03/07 05:25:02.00)	55.1	60.2	47.7
(2014/03/07 05:30:03.00)	49.2	53.8	44.7
(2014/03/07 05:35:02.00)	51.5	56.8	49.6
(2014/03/07 05:40:03.00)	52.4	54.7	51.7
(2014/03/07 05:45:04.00)	51.3	53.9	49.8
(2014/03/07 05:50:02.00)	50.4	52.3	49.8
(2014/03/07 05:55:02.00)	51	53.5	50.3
(2014/03/07 06:00:02.00)	51	53.8	50.2
(2014/03/07 06:05:03.00)	56.9	60.9	56.1
(2014/03/07 06:10:03.00)	57.5	60.9	56.5

Date	LAeq	LAFmax	LA90
(2014/03/07 06:15:02.00)	57.5	61.2	56.8
(2014/03/07 06:20:03.00)	57.6	61	56.9
(2014/03/07 06:25:03.00)	57.1	61.5	56.2
(2014/03/07 06:30:03.00)	57.8	61.6	57.1
(2014/03/07 06:35:03.00)	57.1	61	56.3
(2014/03/07 06:40:03.00)	57	61.8	56.3
(2014/03/07 06:45:03.00)	56.9	60.8	56.1
(2014/03/07 06:50:03.00)	56.6	61.3	56
(2014/03/07 06:55:03.00)	56.6	60.7	55.8
(2014/03/07 07:00:03.00)	56.6	60.7	55.5
(2014/03/07 07:05:04.00)	56.7	61.9	55.9
(2014/03/07 07:10:02.00)	57.1	61.9	56.3
(2014/03/07 07:15:03.00)	57	61.5	56.4
(2014/03/07 07:20:03.00)	57.8	61.4	57
(2014/03/07 07:25:03.00)	57	60.4	56.1
(2014/03/07 07:30:03.00)	56.9	60.5	56.1
(2014/03/07 07:35:02.00)	57.3	61.2	56.7
(2014/03/07 07:40:03.00)	56.9	70.2	56.1
(2014/03/07 07:45:03.00)	56.6	67.2	55.6
(2014/03/07 07:50:03.00)	59.5	80.6	56.2
(2014/03/07 07:55:03.00)	57.7	76.3	56.2
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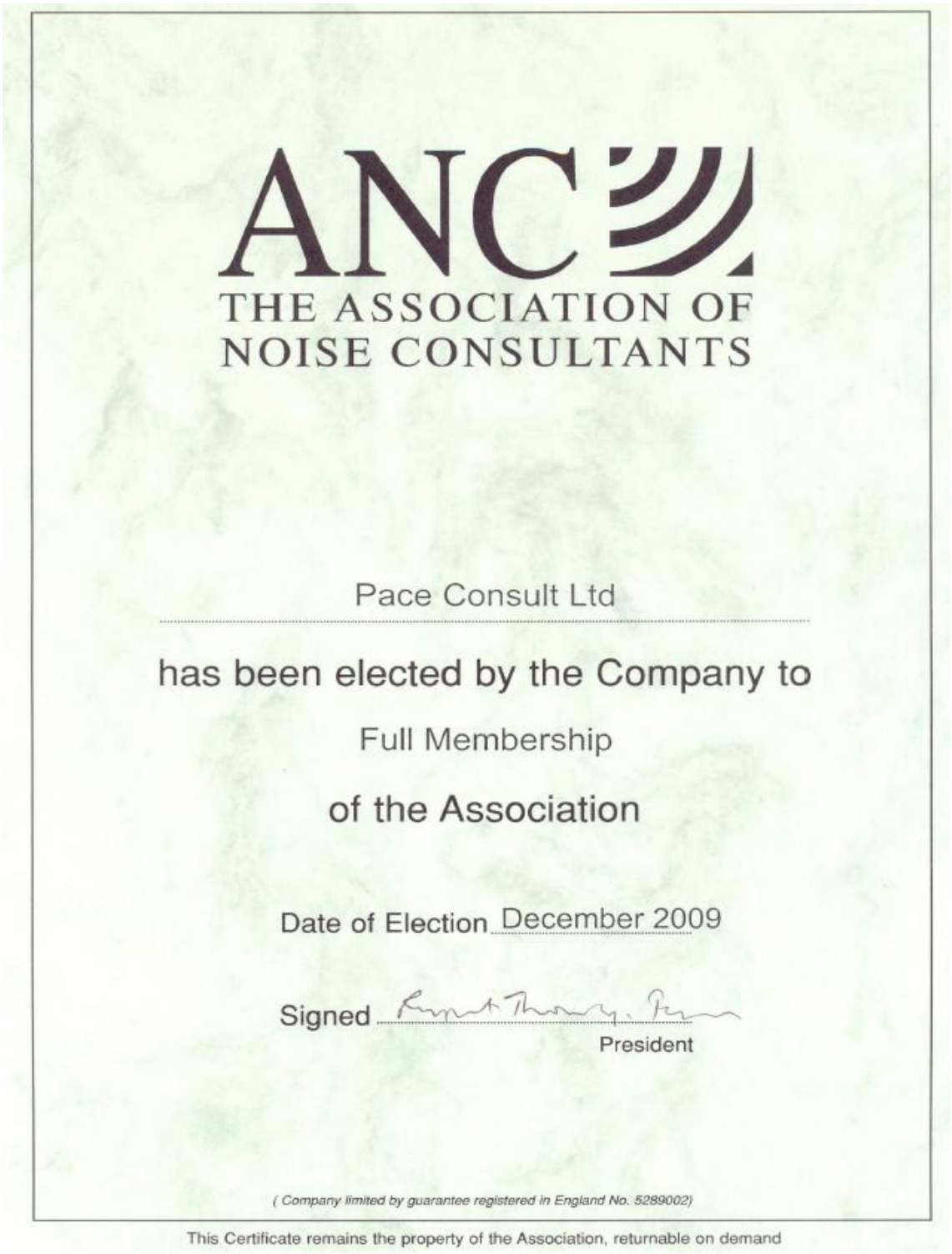
(2014/03/07 08:05:03.00)	57.4	67.7	56.4
(2014/03/07 08:10:03.00)	57.2	65.8	55.9
(2014/03/07 08:15:03.00)	57.3	67.2	56.3
(2014/03/07 08:20:03.00)	57.5	66	56.1
(2014/03/07 08:25:03.00)	57.2	69.9	55.5
(2014/03/07 08:30:03.00)	58.9	83.1	56.6
(2014/03/07 08:35:03.00)	57.7	72.8	56
(2014/03/07 08:40:03.00)	57.6	67.8	56.3
(2014/03/07 08:45:04.00)	57.2	71.3	55.8
(2014/03/07 08:50:04.00)	57.2	68.3	56.2
(2014/03/07 08:55:03.00)	57.9	70	56.2
(2014/03/07 09:00:03.00)	57	65	55.5
(2014/03/07 09:05:03.00)	57.4	72.5	55.7
(2014/03/07 09:10:04.00)	58.1	75.4	55.9
(2014/03/07 09:15:04.00)	61.6	77.5	56.6
(2014/03/07 09:20:03.00)	61.7	82.8	56.3
(2014/03/07 09:25:03.00)	65.8	82.8	53.9
(2014/03/07 09:30:03.00)	65.7	85.7	54.4
(2014/03/07 09:35:03.00)	55.9	68.1	53.8
(2014/03/07 09:40:04.00)	69.3	91.4	53.6

Date	LAeq	LAFmax	LA90
(2014/03/07 09:45:03.00)	63.8	81.8	53.6
(2014/03/07 09:50:03.00)	56	81	53.7
(2014/03/07 09:55:03.00)	54.3	60.6	53.2
(2014/03/07 10:00:03.00)	56.9	75.3	54.4
(2014/03/07 10:05:04.00)	58.5	76.2	56.8
(2014/03/07 10:10:04.00)	58.3	62.7	56.9
(2014/03/07 10:15:03.00)	58.4	69.3	57.1
(2014/03/07 10:20:03.00)	58.4	63.5	57.2
(2014/03/07 10:25:03.00)	63.5	85.1	57.2
(2014/03/07 10:30:04.00)	61.5	84.2	57.2
(2014/03/07 10:35:04.00)	60	76.2	57.3
(2014/03/07 10:40:03.00)	61.4	80.8	56.9
(2014/03/07 10:45:03.00)	58.5	72.5	56.6
(2014/03/07 10:50:03.00)	59.6	69.3	56.9
(2014/03/07 10:55:03.00)	58.9	77.3	56.8
(2014/03/07 11:00:04.00)	57.9	77.8	56.1
(2014/03/07 11:05:03.00)	60.1	84.3	56.5
(2014/03/07 11:10:03.00)	66.1	79.1	56.1
(2014/03/07 11:15:03.00)	63.6	82.7	55.8
(2014/03/07 11:20:04.00)	59.4	71.7	56.4
(2014/03/07 11:25:04.00)	57.2	68.8	55.9
(2014/03/07 11:30:04.00)	59	75.3	55.1
(2014/03/07 11:35:03.00)	60	74.8	55.9
(2014/03/07 11:40:03.00)	61.6	87.4	56.5
(2014/03/07 11:45:03.00)	61.4	78.7	56.1
(2014/03/07 11:50:04.00)	56.9	71.5	55.6
(2014/03/07 11:55:04.00)	56.5	68	55.6
(2014/03/07 12:00:03.00)	56.5	63	55.4
(2014/03/07 12:05:04.00)	56.9	63.4	56
(2014/03/07 12:10:04.00)	57.2	72.7	56.1
(2014/03/07 12:15:03.00)	60.4	79.8	56.6
(2014/03/07 12:20:04.00)	57.8	62.8	57.2
(2014/03/07 12:25:04.00)	58.1	78.6	56.3
(2014/03/07 12:30:03.00)	57	62.1	56.2
(2014/03/07 12:35:03.00)	58.1	72.3	56
(2014/03/07 12:40:03.00)	58.6	70.1	55.9
(2014/03/07 12:45:04.00)	57	68.9	55.7
(2014/03/07 12:50:04.00)	56.9	68.7	55.8
(2014/03/07 12:55:04.00)	57	63.4	56
(2014/03/07 13:00:03.00)	57.8	71.8	56.6
(2014/03/07 13:05:03.00)	58.2	67.9	56.6
(2014/03/07 13:10:04.00)	59.2	72	56.9

Date	LAeq	LAFmax	LA90
(2014/03/07 13:15:04.00)	57.9	68.9	56.8
(2014/03/07 13:20:04.00)	58.7	73.2	56.8
(2014/03/07 13:25:04.00)	57.6	81.5	54.1
(2014/03/07 13:30:03.00)	56.4	68.1	55.1
(2014/03/07 13:35:03.00)	55.4	67.9	54.5
(2014/03/07 13:40:04.00)	58.3	76.4	55
(2014/03/07 13:45:03.00)	59.1	75.3	57.4
(2014/03/07 13:50:04.00)	59.7	74.7	56.9
(2014/03/07 13:55:04.00)	65.2	82.6	57.6

Appendix 2 – ANC Accreditation



ANC

THE ASSOCIATION OF NOISE CONSULTANTS

Pace Consult Ltd

has been elected by the Company to

Full Membership

of the Association

Date of Election December 2009

Signed

President

(Company limited by guarantee registered in England No. 5289002)

This Certificate remains the property of the Association, returnable on demand