Our Ref: 35834/HA

ALLAWAY ACOUSTICS
LIMITED

Client: Aura Consulting (UK) Ltd
288 Bishopsgate, London,
EC2M 4QP

Project: Lincoln's Inn, 2 New Square, London

Existing Environmental Noise Levels

Date of Survey: 7th-8th February 2012

Prepared By: Chris Swiejkowski BSc/MSc AMIOA
Checked By: Andy Smith MIOA

ALLAWAY ACOUSTIC
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Lincoln's Inn, 2 New Square, London
Existing Environmental Noise Levels

1. Introduction

1.1 Prior to the installation of new building services plant at this site, we have carried out an environmental noise survey to establish the existing minimum background noise levels.

1.2 This report describes the survey and details the results obtained.

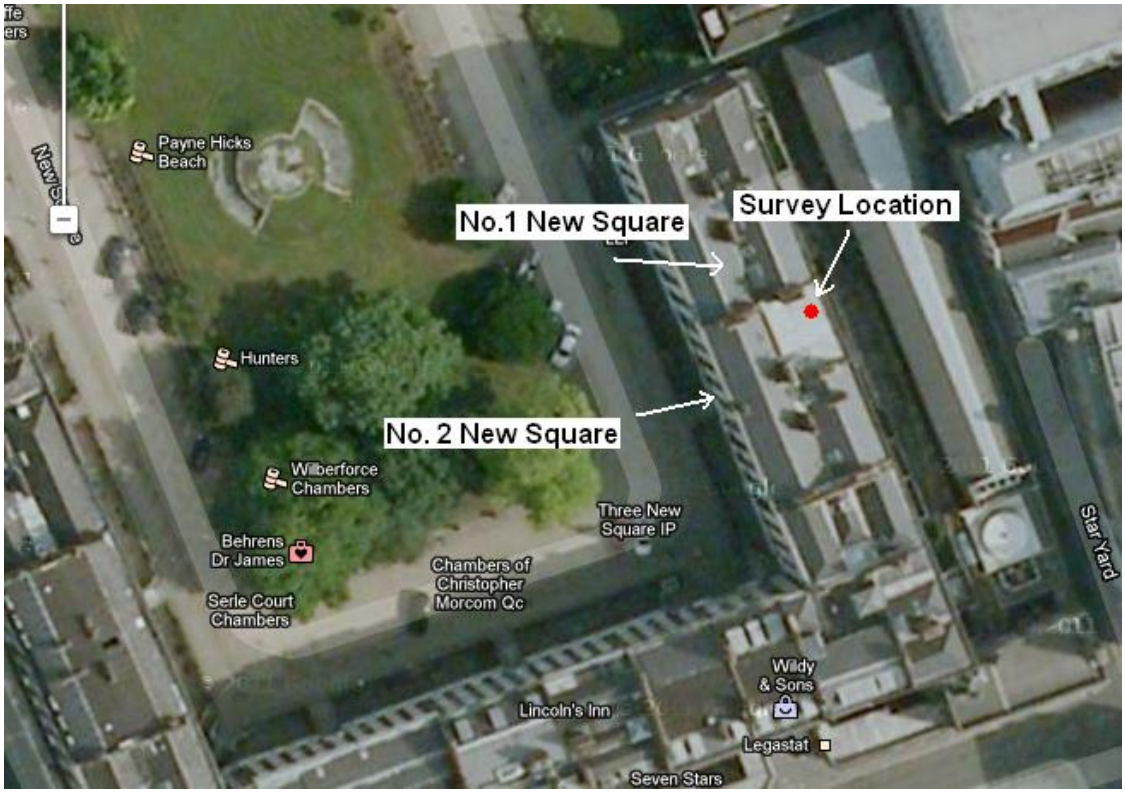
1.3 On the basis of the survey results, a target noise level will be determined for the proposed future plant.

2. Site Description

2.1 The site is located at No. 2 New Square, London. The building is surrounded by New Square to the west and adjacent buildings to the north, south and to the east (see site plan).

2.2 We understand that the area is mixed commercial and residential with the closest affected window to be at 3rd floor of No. 1 New Square (approximately 5m from the proposed plant location) - (see site plan).

2.3 The plant will have the capability to operate 24-hours.



2.3.1 Site plan

3. Survey

3.1 The survey was carried out between the hours of 13:00pm on Tuesday 7th February 2012 and 13:00pm on Wednesday 8th February 2012.

3.2 The weather during the survey period was cool with occasional winds and no rain. This was deemed not to have any significant effect on the measured noise levels.

3.3 To the best of our knowledge there were no roadworks or other unusual influences on traffic flow within the vicinity.

3.4 Noise levels were measured for 15-minute periods at roof level of No. 2 New Square building (see site plan).

3.5 Of the parameters measured, the L_{A90} gives the closest representation of the background level, as it is the level exceeded for 90% of the measurement period. The L_{AEQ} is an energy-averaged value, and the L_{A10} is indicative of traffic noise.

3.6 In addition to the A-weighted levels referred to above, representative octave-band spectra were also recorded so that the frequency distribution of the noise could be assessed.

4. Instrumentation

4.1 All measurements were obtained using a Norsonic NOR131 Sound Level Meter (s/n 1312779). This instrument conforms to IEC60651 and 60804 Type 1 specifications and to IEC61260 and 61672-1:2002 Class 1 specifications.

4.2 Before commencing the readings, the meter was checked for correct calibration with both the internal reference signal and an acoustic calibrator. The calibration was rechecked after the survey with no change noted.

4.3 To minimise environmental effects, the microphone was fitted with a windshield at all times.

5. Results

5.1 Full details of the results obtained are attached to this Report.

5.2 The minimum background (L90) noise level was 47dB(A) during the measurement period.

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6. Discussion

6.1 In order that plant noise does not increase existing noise levels it must by at least 10dB(A) lower than the measured background.

6.2 To this end, we would recommend that a limit of 37dB(A) be set as the plant noise limit. This limit should apply to the nearest noise sensitive window at 3rd floor of No. 1 New Square (approximately 5m from proposed plant location)

6.3 Suppression of any tonal components from the plant is also important, as this can increase the potential disturbance.

6.4 Plant assessment and acoustic recommendations will follow within separate cover.

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Chris Swiejkowski BSc/MSc AMIOA
09 March 2012

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Andy Smith MIOA

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SCHEDULE OF RESULTS

Date of Survey: 7th-8th February 2012

RE: Lincoln's Inn, 2 New Square, London

Table 1 – Leq

	Octave Band Centre Frequency								
Time	**63 Hz**	**125 Hz**	**250 Hz**	**500 Hz**	**1.0 k**	**2.0 k**	**4.0 k**	**8.0 k**	**dB(A)**
12:58	61.4	62.6	64.7	59.7	56.7	53.7	50.2	49.1	62.9
13:13	59.0	54.0	54.2	51.1	46.9	41.2	33.2	24.8	52.3
13:28	59.6	54.8	55.4	52.5	49.0	42.1	35.4	28.4	53.8
13:43	61.5	55.6	58.4	53.7	48.8	42.0	33.6	25.0	54.8
13:58	60.1	55.3	54.8	52.4	48.8	43.5	38.9	32.8	53.8
14:13	59.2	54.2	53.8	52.3	52.3	50.0	48.8	42.5	57.3
14:28	58.4	54.8	53.6	51.0	50.9	48.5	46.9	40.9	55.9
14:43	66.5	61.7	60.1	57.3	51.2	43.2	34.9	28.1	57.8
14:58	59.8	54.1	53.7	49.8	46.9	42.8	36.9	29.6	52.1
15:13	61.0	56.1	54.5	50.4	46.5	41.0	33.5	24.0	52.1
15:28	59.3	53.9	53.6	50.0	46.4	40.9	34.0	26.4	51.6
15:43	63.0	56.0	55.7	52.9	49.7	41.8	31.5	21.6	54.2
15:58	60.0	57.3	58.0	55.8	51.8	44.2	33.6	23.4	56.6
16:13	60.6	55.0	56.1	52.4	47.3	40.0	30.3	20.9	53.3
16:28	60.5	56.2	54.9	50.7	46.5	40.2	31.3	22.0	52.1
16:43	60.5	55.4	54.7	50.4	45.9	40.4	33.8	26.4	51.9
16:58	60.5	57.3	57.2	55.2	50.1	41.5	31.5	23.3	55.6
17:13	60.5	56.8	55.5	51.4	47.5	40.0	29.8	21.4	52.8
17:28	61.4	56.8	57.0	53.5	48.7	40.7	30.7	22.4	54.4
17:43	60.1	57.2	56.3	54.1	49.7	41.2	30.1	21.3	54.8
17:58	60.6	57.4	56.5	53.6	49.6	40.9	29.8	21.0	54.6
18:13	61.5	57.6	58.5	55.1	50.2	41.2	29.6	21.0	55.9
18:28	60.9	56.0	55.1	52.2	48.1	40.2	29.2	22.6	53.2
18:43	61.6	58.7	59.2	57.3	52.5	43.0	30.6	22.0	57.6
18:58	61.0	56.1	55.8	52.5	49.0	40.6	29.4	20.6	53.8
19:13	61.2	57.8	59.4	56.7	51.5	41.5	28.9	20.6	57.0
19:28	60.0	55.7	56.3	53.4	48.5	39.6	28.4	20.3	54.0
19:43	59.8	56.0	54.9	51.4	47.7	39.7	28.2	20.3	52.7
19:58	59.1	55.2	55.6	51.7	47.0	39.5	29.2	20.7	52.7
20:13	59.2	54.6	53.7	49.6	46.3	39.0	28.7	20.7	51.3
20:28	59.2	54.8	54.2	50.1	47.0	39.0	28.0	20.1	51.8
20:43	60.0	55.1	54.0	49.4	46.0	38.5	28.0	20.3	51.2

20:58	59.6	54.5	54.3	50.0	48.2	41.3	31.5	24.1	52.5
21:13	58.9	55.0	54.2	50.3	46.9	38.5	27.5	20.2	51.8
21:28	59.3	54.4	54.2	49.3	45.7	37.9	27.4	21.1	51.1
21:43	61.8	55.8	54.6	49.6	45.9	38.4	28.1	20.6	51.4
21:58	61.5	55.7	54.0	49.4	46.0	38.3	28.2	20.6	51.2
22:13	62.6	58.1	56.1	51.6	48.4	44.9	38.7	27.1	54.1
22:28	59.9	54.9	53.8	49.1	45.6	38.0	27.6	20.2	50.9
22:43	60.5	55.0	54.0	49.2	45.8	38.1	27.8	21.3	51.0
22:58	60.9	55.7	54.6	50.0	45.9	38.0	27.7	20.2	51.5
23:13	60.4	55.1	55.8	50.2	45.9	38.3	28.0	20.1	52.0
23:28	60.8	57.4	55.8	51.4	46.8	37.8	26.9	20.1	52.6
23:43	59.9	54.6	54.0	51.5	47.1	38.3	27.9	20.5	52.2
23:58	60.3	54.3	53.4	49.1	45.7	38.0	27.7	20.3	50.8
00:13	59.3	54.0	53.4	48.9	45.6	38.0	28.2	20.7	50.7
00:28	59.0	54.1	53.4	49.1	45.5	38.2	28.6	22.6	50.7
00:43	60.0	55.2	54.2	49.8	45.7	37.8	27.6	20.0	51.2
00:58	59.5	53.6	52.9	48.7	45.4	38.0	28.1	20.2	50.4
01:13	59.2	53.5	53.3	48.8	45.4	37.9	27.7	20.1	50.5
01:28	59.0	53.5	52.9	48.7	45.2	37.7	27.7	20.2	50.3
01:43	58.5	53.5	53.0	48.7	45.2	37.7	27.7	20.2	50.3
01:58	59.9	53.8	53.0	48.7	45.3	38.1	28.4	20.7	50.4
02:13	61.5	54.6	53.2	48.8	45.2	38.0	28.1	20.5	50.5
02:28	58.6	53.5	53.0	48.7	45.2	37.9	27.9	20.3	50.3
02:43	59.0	53.6	52.9	48.8	45.3	38.3	29.6	20.2	50.4
02:58	59.0	53.9	53.4	48.7	45.4	38.1	28.0	20.2	50.5
03:13	59.0	52.4	51.7	47.0	42.2	34.8	25.7	19.2	48.2
03:28	58.7	52.0	51.6	46.7	41.0	33.3	25.1	19.1	47.6
03:43	57.9	51.6	51.3	46.5	41.5	34.1	25.7	19.1	47.6
03:58	58.9	52.1	52.0	46.8	41.2	33.2	25.6	20.8	47.9
04:13	62.4	53.8	51.9	47.0	41.3	33.5	26.1	20.0	48.2
04:28	60.1	52.6	51.6	46.9	41.9	34.5	26.3	19.8	48.1
04:43	57.9	51.9	51.9	46.9	41.4	33.6	25.4	19.4	48.0
04:58	60.2	53.5	52.4	47.3	42.3	35.1	26.5	19.2	48.7
05:13	60.5	52.9	51.9	47.4	42.2	35.0	26.3	19.1	48.5
05:28	59.9	52.7	52.5	47.6	42.5	35.3	26.5	19.3	48.9
05:43	60.0	53.1	52.4	47.6	43.0	36.1	27.2	20.0	49.0
05:58	60.3	53.2	52.4	47.8	43.8	38.5	30.2	20.6	49.6
06:13	60.2	53.5	52.9	47.9	43.4	36.2	27.4	20.2	49.4
06:28	62.2	54.2	52.7	48.4	45.2	39.5	30.1	21.5	50.4
06:43	60.3	55.1	55.4	51.7	47.2	39.4	29.1	20.7	52.8
06:58	59.9	54.2	53.5	50.0	45.6	38.7	30.0	21.9	51.1
07:13	62.3	56.3	55.7	52.5	47.5	39.4	29.8	21.1	53.2
07:28	62.0	55.6	55.6	52.2	47.6	40.3	30.4	22.0	53.2
07:43	63.9	56.6	55.3	51.7	47.1	40.3	31.2	22.5	52.8
07:58	63.7	57.6	56.6	53.7	48.6	41.8	34.1	24.3	54.5
08:13	63.0	57.0	56.0	53.4	51.0	45.3	38.1	28.6	55.5

08:28	63.6	57.4	56.1	53.2	49.8	45.5	41.3	37.1	55.2
08:43	63.0	57.6	57.0	53.9	50.6	49.6	49.3	46.1	57.6
08:58	62.1	56.7	56.7	53.6	49.3	43.2	36.3	27.5	54.7
09:13	62.6	57.7	56.7	53.1	50.4	46.7	46.0	41.5	56.1
09:28	63.0	56.3	55.7	52.2	50.2	44.7	41.5	35.6	54.8
09:43	63.4	57.8	55.8	53.4	50.4	47.0	46.1	42.9	56.1
09:58	62.9	56.2	55.9	53.7	52.0	50.3	49.3	44.6	57.8
10:13	64.1	56.1	55.5	52.1	51.2	51.2	38.8	28.7	56.7
10:28	62.1	55.6	54.6	51.2	48.3	44.1	39.2	33.6	53.5
10:43	64.0	56.6	55.1	51.9	49.5	45.6	41.6	35.8	54.6
10:58	63.9	56.0	54.0	50.3	47.3	43.3	38.6	32.7	52.7
11:13	67.6	64.3	64.0	62.0	57.9	52.5	44.9	36.7	63.1
11:28	64.7	58.3	57.2	54.1	50.2	45.7	46.2	41.6	56.3
11:43	63.6	55.7	54.4	51.3	48.8	45.3	45.2	40.5	54.5
11:58	62.3	56.0	56.8	54.4	50.5	44.2	36.6	27.8	55.5
12:13	63.5	56.5	55.6	52.9	50.6	45.3	39.8	30.5	55.1
12:28	61.9	54.6	53.6	50.1	48.1	42.1	34.0	25.4	52.4
12:43	63.6	60.8	63.5	59.3	54.7	48.5	39.6	28.8	60.5
12:58	61.8	55.4	56.2	53.2	52.7	46.5	37.1	30.5	56.4
13:13	66.3	66.2	66.1	63.4	63.8	60.1	54.7	51.7	67.7
13:28	59.3	55.5	54.8	53.6	50.9	45.5	38.2	31.2	55.3

Table 2 – L10

	Octave Band Centre Frequency								
Time	**63 Hz**	**125 Hz**	**250 Hz**	**500 Hz**	**1.0 k**	**2.0 k**	**4.0 k**	**8.0 k**	**dB(A)**
12:58	62.8	57.2	56.3	52.5	48.9	43.5	36.2	27.8	54.3
13:13	61.4	55.5	55.4	53.0	48.9	43.6	36.0	27.6	54.3
13:28	61.7	56.5	57.4	54.6	50.7	44.8	38.6	32.0	55.6
13:43	63.9	57.7	57.0	54.1	50.0	44.5	35.2	25.3	55.2
13:58	62.3	57.0	56.1	53.4	50.2	46.0	38.7	29.7	55.4
14:13	61.4	55.6	55.2	55.0	56.3	54.1	52.8	46.5	60.8
14:28	60.8	55.9	54.7	53.5	55.9	53.7	51.9	44.9	60.3
14:43	63.8	58.9	60.0	55.7	50.3	44.3	40.1	34.4	57.0
14:58	62.0	55.1	54.8	51.0	48.8	44.4	39.5	30.3	53.5
15:13	63.8	57.9	55.6	51.7	48.5	43.4	35.4	25.1	53.8
15:28	61.5	55.2	54.7	51.0	47.7	42.9	34.6	23.5	52.7
15:43	64.5	57.8	56.5	52.5	50.2	44.6	34.2	23.3	54.7
15:58	62.2	57.2	56.7	53.3	49.0	43.6	34.6	24.2	54.4
16:13	62.6	56.5	56.2	52.6	48.4	42.2	32.2	21.9	53.9
16:28	62.9	58.3	55.9	51.7	47.6	42.2	33.2	23.0	53.3
16:43	62.6	57.2	56.3	51.5	47.2	41.0	32.4	22.7	53.1
16:58	62.9	58.2	57.4	53.2	49.5	42.7	32.7	23.2	54.6
17:13	62.9	58.6	56.8	52.2	48.4	41.3	31.4	22.4	53.7
17:28	63.8	58.2	57.0	53.6	49.1	42.4	32.4	23.5	54.6

17:43	62.5	58.1	57.4	54.1	50.0	42.6	32.1	22.3	55.2
17:58	63.0	58.5	58.4	55.3	51.0	42.9	31.7	22.1	56.2
18:13	63.3	59.7	59.7	56.4	51.4	42.7	31.1	22.2	57.3
18:28	62.6	57.6	56.7	53.5	49.3	41.5	30.5	21.5	54.4
18:43	63.8	60.1	59.6	57.7	52.2	43.4	32.2	22.6	57.8
18:58	62.2	57.2	56.8	53.5	49.4	42.0	31.0	21.5	54.6
19:13	63.4	59.9	59.7	56.8	52.0	42.2	30.5	21.3	57.6
19:28	62.3	57.3	57.1	53.8	49.1	41.1	29.7	21.0	54.5
19:43	61.6	56.6	56.0	52.4	48.9	41.1	29.6	21.0	53.6
19:58	61.1	56.5	56.2	52.5	48.4	40.9	30.5	21.2	53.8
20:13	61.0	55.8	54.8	50.4	47.3	40.5	29.8	21.1	52.0
20:28	60.9	55.8	55.2	50.3	47.3	40.4	29.2	20.8	52.1
20:43	61.7	56.6	55.1	50.2	46.9	39.8	29.2	21.0	51.9
20:58	61.2	55.6	55.7	51.5	49.2	43.0	33.1	21.9	54.4
21:13	60.7	56.3	54.9	50.1	47.0	39.8	28.1	20.8	51.8
21:28	60.8	55.5	55.4	50.1	46.5	38.7	27.6	21.0	51.8
21:43	64.1	57.2	55.6	50.4	46.8	39.4	29.1	21.1	52.4
21:58	62.5	56.7	55.0	50.2	46.7	39.2	28.8	21.1	51.9
22:13	64.9	58.7	56.0	51.7	48.6	42.4	34.4	23.8	54.5
22:28	61.4	56.2	55.0	49.9	46.3	38.9	28.3	20.7	51.5
22:43	62.0	56.3	55.1	50.0	46.5	39.0	28.4	21.0	51.7
22:58	63.6	56.5	55.1	50.3	46.5	38.6	27.7	20.6	52.2
23:13	62.2	56.9	56.7	51.1	46.8	39.3	28.5	20.6	52.7
23:28	63.7	59.3	56.9	50.8	46.5	38.2	27.3	20.5	53.0
23:43	61.5	55.6	54.7	50.0	46.4	38.6	27.5	20.6	51.5
23:58	61.3	55.3	54.5	50.0	46.4	38.7	28.3	20.8	51.4
00:13	60.7	55.1	54.5	49.6	46.3	39.1	28.7	21.0	51.2
00:28	60.4	55.2	54.4	49.6	46.1	38.7	28.9	21.3	51.2
00:43	61.4	56.3	55.2	50.8	46.5	38.5	28.3	20.7	52.2
00:58	60.8	54.6	54.0	49.5	46.0	38.4	28.5	20.8	50.9
01:13	60.5	54.6	54.4	49.5	46.0	38.4	28.2	20.7	51.1
01:28	59.9	54.5	54.0	49.4	45.8	38.3	28.2	20.7	50.8
01:43	59.7	54.6	54.1	49.4	45.7	38.2	28.1	20.8	50.7
01:58	61.3	54.9	54.1	49.4	45.8	38.6	28.4	20.9	50.9
02:13	62.6	55.5	54.3	49.6	45.8	38.6	28.5	21.0	51.0
02:28	59.7	54.5	54.1	49.4	45.7	38.5	28.4	20.8	50.8
02:43	60.3	54.6	54.0	49.5	45.9	39.2	29.0	20.9	50.9
02:58	60.2	55.1	54.4	49.5	45.9	38.6	28.5	20.8	51.0
03:13	60.2	53.6	52.9	48.4	44.7	37.5	27.0	20.0	50.0
03:28	60.2	53.3	52.8	47.6	41.5	33.7	25.6	19.7	48.4
03:43	59.6	52.7	52.3	47.4	42.3	35.1	26.1	19.8	48.3
03:58	59.6	53.1	53.1	47.6	41.8	33.7	25.5	19.9	48.6
04:13	63.8	54.6	53.0	47.9	42.0	34.2	26.1	20.1	48.9
04:28	61.6	53.6	52.7	47.8	42.4	34.6	26.0	20.0	48.7
04:43	59.2	53.0	53.0	47.7	42.2	34.2	25.8	19.7	48.6
04:58	61.0	55.1	53.7	48.2	43.1	36.3	27.2	19.9	49.5

05:13	62.4	54.2	53.0	48.2	42.9	36.1	27.4	19.9	49.1
05:28	61.4	53.9	53.7	48.4	43.3	36.5	27.4	19.9	49.6
05:43	61.6	54.7	53.7	48.4	43.7	37.4	28.3	19.9	49.9
05:58	61.8	54.3	53.5	48.7	44.9	40.1	32.1	20.9	50.6
06:13	60.8	54.6	54.1	48.7	44.1	37.2	28.2	20.7	50.1
06:28	63.3	55.1	53.8	49.5	46.9	42.0	32.7	21.9	51.9
06:43	62.2	57.1	56.0	51.1	47.8	41.7	30.7	21.2	53.1
06:58	61.5	55.4	54.9	51.4	47.6	40.2	30.3	21.4	52.7
07:13	63.9	58.3	57.2	54.8	50.3	41.9	31.5	21.5	55.6
07:28	63.5	57.7	57.4	54.5	49.5	42.3	31.7	22.2	55.3
07:43	64.6	57.9	56.6	53.5	49.4	42.5	33.2	22.9	54.8
07:58	65.9	59.8	58.3	56.3	51.4	44.0	35.2	25.6	57.1
08:13	65.1	59.0	57.7	55.0	53.1	47.4	38.2	28.1	57.8
08:28	64.7	59.2	57.6	55.2	52.0	47.0	39.3	29.3	57.4
08:43	64.3	59.0	57.6	54.5	54.1	54.2	54.8	51.7	62.2
08:58	63.8	58.6	58.3	55.9	51.4	44.7	36.9	27.2	56.9
09:13	64.5	59.8	57.4	53.4	52.4	49.8	47.7	41.2	59.2
09:28	64.7	57.8	56.5	52.9	51.9	47.0	42.0	31.5	56.9
09:43	65.4	59.0	57.3	55.5	52.9	51.8	52.0	46.8	60.5
09:58	64.7	57.8	57.6	56.4	55.4	54.3	54.5	50.2	61.7
10:13	65.8	57.5	57.1	53.3	51.7	47.5	38.5	27.0	56.8
10:28	64.2	57.3	55.7	52.3	49.3	47.2	43.0	35.1	55.1
10:43	65.3	58.0	56.2	52.4	50.1	48.7	47.5	42.3	56.1
10:58	64.8	56.9	55.2	51.1	48.7	45.9	40.7	31.1	54.4
11:13	69.2	66.5	65.5	62.7	58.0	51.3	47.4	40.4	64.3
11:28	66.6	58.8	57.5	54.6	52.1	50.0	52.0	46.6	59.4
11:43	64.8	57.1	55.2	52.2	51.2	48.3	43.8	35.2	57.3
11:58	64.3	57.3	56.6	52.1	49.8	44.9	36.6	26.5	54.7
12:13	64.4	57.4	56.8	54.2	52.0	46.6	40.1	33.0	56.6
12:28	63.5	55.7	54.7	51.1	49.6	43.4	35.4	27.6	53.5
12:43	64.4	58.4	60.0	57.7	54.7	48.1	38.2	27.8	60.0
12:58	63.9	57.2	59.2	55.8	56.6	50.5	39.1	30.6	59.9
13:13	68.8	60.4	60.9	58.9	58.3	54.7	48.9	40.1	62.5
13:28	61.2	56.9	55.7	54.6	51.7	46.4	40.2	35.0	55.9

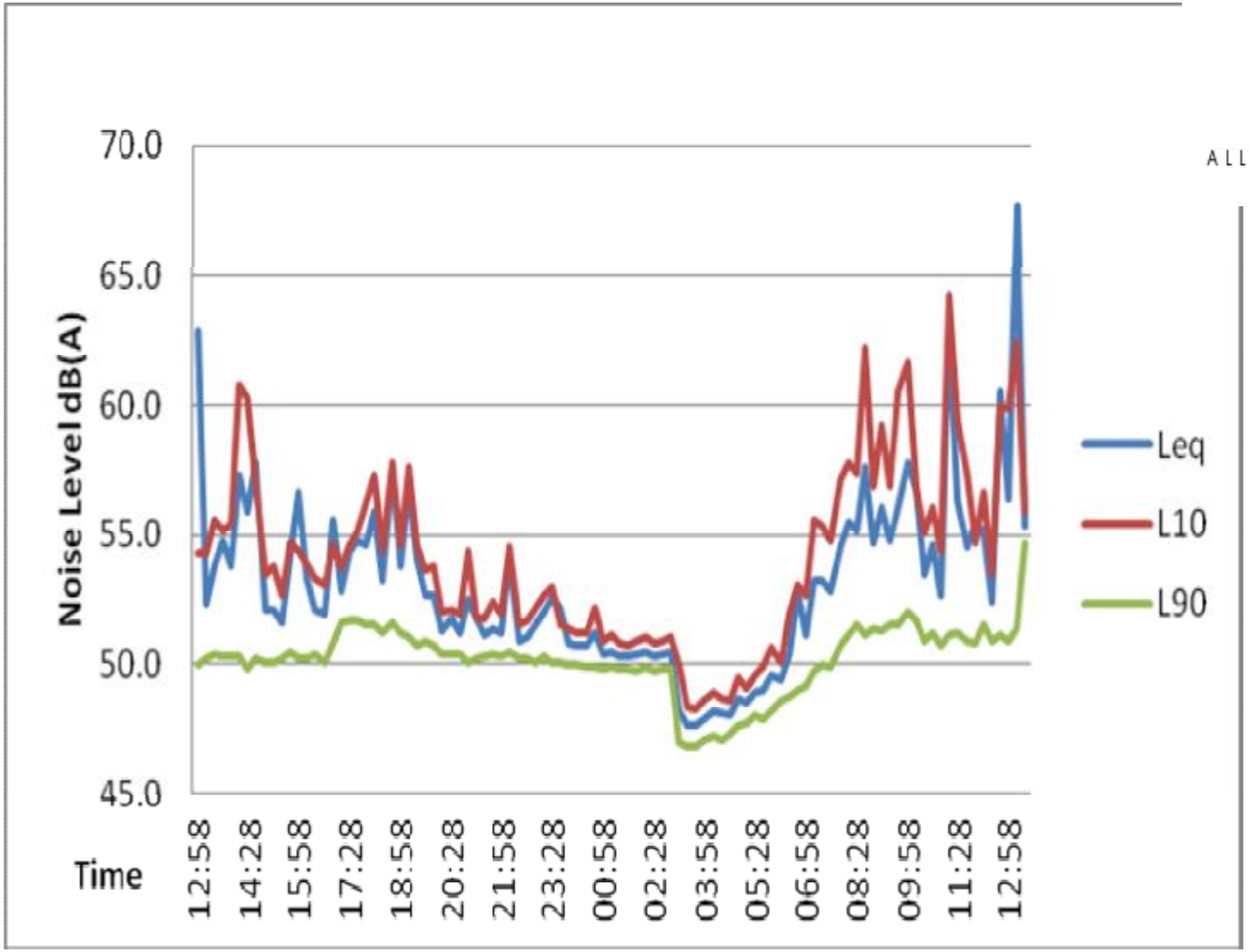
Table 3 – L90

	Octave Band Centre Frequency								
Time	**63 Hz**	**125 Hz**	**250 Hz**	**500 Hz**	**1.0 k**	**2.0 k**	**4.0 k**	**8.0 k**	**dB(A)**
12:58	54.5	52.1	52.1	48.5	44.2	37.3	28.1	19.5	50.0
13:13	55.0	52.0	52.4	48.6	44.5	37.6	28.5	19.7	50.2
13:28	55.6	52.5	52.5	48.8	44.6	37.6	28.5	20.0	50.4
13:43	56.4	52.6	52.3	48.8	44.5	37.7	29.0	20.3	50.3
13:58	55.8	52.5	52.7	48.6	44.4	37.6	28.8	20.1	50.3
14:13	55.3	52.5	52.3	48.8	44.6	37.9	29.2	20.3	50.3
14:28	54.9	52.1	52.0	48.3	44.1	37.1	28.3	19.9	49.8
14:43	55.5	52.4	52.6	48.8	44.4	37.5	28.3	19.7	50.2
14:58	56.2	52.5	52.4	48.5	44.3	37.5	28.3	19.9	50.1
15:13	55.9	52.5	52.3	48.6	44.4	37.2	28.0	19.7	50.1
15:28	55.3	52.2	52.4	48.7	44.5	37.5	28.1	19.5	50.2
15:43	56.4	52.8	52.7	48.8	44.8	37.7	28.1	19.5	50.5
15:58	55.9	52.6	52.5	48.7	44.6	37.6	28.2	19.7	50.2
16:13	56.0	52.6	52.6	48.6	44.4	37.3	27.6	19.3	50.2
16:28	56.6	53.1	52.9	48.9	44.5	37.3	27.5	19.4	50.4
16:43	56.3	53.0	52.8	48.7	43.9	36.4	27.0	19.2	50.1
16:58	56.8	53.7	53.4	49.3	45.0	37.8	27.8	19.9	50.8
17:13	57.0	54.2	53.7	49.8	46.2	38.7	28.0	20.0	51.6
17:28	56.9	54.0	53.7	50.0	46.5	38.7	28.1	20.2	51.7
17:43	56.9	54.2	53.7	50.0	46.5	38.7	28.0	20.0	51.7
17:58	56.8	53.9	53.6	49.8	46.2	38.3	27.4	19.4	51.5
18:13	57.0	53.9	53.6	49.8	46.1	38.2	27.2	19.3	51.5
18:28	56.7	53.8	53.2	49.5	46.0	38.0	27.1	19.2	51.2
18:43	56.8	53.9	53.6	50.0	46.4	38.5	27.4	19.4	51.6
18:58	56.6	53.7	53.4	49.5	46.1	38.0	26.9	19.2	51.2
19:13	57.1	53.8	53.1	49.2	45.8	37.7	26.9	19.2	51.0
19:28	56.7	53.4	52.9	49.1	45.5	37.6	26.8	19.1	50.7
19:43	56.5	53.5	52.9	49.2	45.7	37.7	26.7	19.1	50.9
19:58	56.2	53.3	52.9	49.0	45.4	37.6	26.8	19.1	50.7
20:13	56.6	53.3	52.4	48.5	45.2	37.4	26.8	19.4	50.4
20:28	56.5	53.2	52.6	48.5	45.1	37.2	26.6	19.2	50.4
20:43	56.8	53.3	52.7	48.4	45.0	37.1	26.6	19.3	50.4
20:58	56.5	52.9	52.4	48.3	44.7	36.8	26.3	19.3	50.1
21:13	56.3	53.2	52.4	48.3	44.9	36.8	26.3	19.3	50.2
21:28	56.1	52.9	52.8	48.5	44.7	36.6	26.2	19.3	50.3
21:43	56.8	53.3	52.9	48.5	44.9	37.0	26.5	19.3	50.4
21:58	56.6	53.5	52.5	48.3	45.0	37.1	26.6	19.3	50.3

22:13	56.9	53.5	52.6	48.6	45.1	37.2	26.6	19.3	50.5
22:28	56.8	53.1	52.5	48.3	44.8	36.9	26.4	19.2	50.2
22:43	56.6	53.2	52.4	48.4	44.9	36.8	26.3	19.1	50.2
22:58	56.7	52.9	52.2	48.3	44.9	36.9	26.3	19.1	50.1
23:13	56.2	52.9	52.5	48.6	44.9	36.9	26.3	19.0	50.3
23:28	56.3	52.7	52.3	48.2	44.7	36.7	26.2	19.1	50.1
23:43	56.3	53.0	52.2	48.2	44.8	36.8	26.2	19.1	50.1
23:58	56.4	52.7	52.2	48.2	44.7	36.8	26.4	19.1	50.0
00:13	56.2	52.6	52.2	48.1	44.8	36.8	26.5	19.2	50.0
00:28	56.0	52.6	52.1	48.0	44.6	36.8	26.6	19.1	49.9
00:43	56.1	52.6	52.0	48.0	44.7	36.7	26.4	19.2	49.9
00:58	55.7	51.9	51.7	47.9	44.7	37.2	27.2	19.4	49.8
01:13	55.7	52.0	51.9	48.0	44.7	37.2	27.1	19.3	49.9
01:28	55.9	52.1	51.7	47.9	44.6	37.1	27.2	19.5	49.8
01:43	55.8	52.0	51.7	47.8	44.6	37.1	27.2	19.5	49.8
01:58	56.0	52.1	51.7	47.8	44.5	37.3	27.3	19.4	49.7
02:13	55.8	52.4	51.8	48.0	44.6	37.4	27.4	19.5	49.9
02:28	55.6	52.0	51.7	47.9	44.5	37.2	27.3	19.5	49.7
02:43	55.9	52.2	51.7	48.0	44.6	37.4	27.5	19.6	49.8
02:58	55.9	52.3	51.8	48.0	44.6	37.3	27.2	19.5	49.8
03:13	54.8	50.6	50.3	45.8	40.3	32.1	24.2	18.1	47.0
03:28	55.2	50.3	50.1	45.7	39.9	31.9	24.1	18.0	46.8
03:43	55.0	50.2	50.0	45.6	40.1	31.9	24.1	18.1	46.8
03:58	54.9	50.5	50.6	45.9	40.2	32.1	24.2	18.2	47.1
04:13	55.4	50.6	50.4	46.0	40.4	32.4	24.4	18.2	47.2
04:28	55.4	50.5	50.3	45.9	40.5	32.3	24.3	18.2	47.1
04:43	55.1	50.4	50.7	46.0	40.6	32.5	24.4	18.1	47.3
04:58	55.7	51.0	50.7	46.3	41.0	33.2	24.9	18.2	47.6
05:13	55.7	50.6	50.6	46.6	41.3	33.4	25.0	18.0	47.7
05:28	55.9	50.7	51.1	46.7	41.4	33.7	25.2	18.0	48.0
05:43	56.1	51.0	50.9	46.6	41.7	34.1	25.2	18.1	47.9
05:58	56.3	51.4	51.0	46.8	42.1	34.7	26.4	19.1	48.2
06:13	56.6	51.7	51.3	47.0	42.5	34.9	26.3	19.3	48.6
06:28	57.1	51.9	51.4	47.2	42.9	35.5	26.6	19.3	48.8
06:43	57.1	52.0	52.0	47.4	43.0	35.5	26.5	19.1	49.0
06:58	57.2	52.3	51.8	47.5	43.3	36.2	27.4	19.5	49.2
07:13	58.0	53.2	52.5	48.2	43.9	36.7	27.5	19.5	49.7
07:28	57.7	52.9	52.8	48.4	43.8	36.9	27.7	19.6	50.0
07:43	57.8	53.3	52.4	48.3	44.2	37.4	28.1	19.7	49.9
07:58	58.6	54.3	53.3	48.9	44.8	38.1	28.9	20.0	50.7
08:13	58.8	54.2	53.4	49.4	45.3	38.8	29.5	20.6	51.1
08:28	58.8	54.2	53.3	49.5	46.0	39.7	30.5	20.8	51.5
08:43	58.9	54.2	53.2	49.2	45.3	38.9	29.8	20.6	51.1
08:58	58.6	54.1	53.2	49.3	46.0	39.5	30.1	20.6	51.4
09:13	58.9	54.1	53.1	49.3	45.9	39.1	29.8	20.4	51.3
09:28	58.7	53.9	53.1	49.3	46.4	39.5	30.0	20.5	51.5

09:43	59.2	54.3	53.0	49.5	46.2	39.6	30.0	20.7	51.5
09:58	59.9	54.2	53.4	49.9	46.6	41.0	32.2	21.6	52.0
10:13	60.8	54.1	53.2	49.7	46.2	40.6	32.2	21.4	51.7
10:28	58.4	53.6	52.6	49.1	45.4	39.6	30.2	20.9	50.9
10:43	58.6	53.5	53.1	49.3	45.6	39.9	30.3	20.7	51.2
10:58	58.3	53.2	52.5	49.0	45.2	38.7	29.6	20.6	50.7
11:13	59.0	53.7	53.0	49.3	45.5	39.2	30.0	20.7	51.1
11:28	58.8	53.5	53.0	49.5	45.5	39.1	30.3	20.9	51.2
11:43	58.9	53.2	52.6	49.0	45.4	39.5	30.8	21.1	50.9
11:58	58.2	53.2	52.8	48.9	45.2	38.8	29.8	20.6	50.8
12:13	58.5	53.6	52.8	49.4	46.2	39.8	30.5	20.9	51.5
12:28	58.0	52.8	52.4	48.9	45.7	39.2	30.2	21.0	50.9
12:43	58.1	53.1	52.7	49.1	46.0	39.2	30.0	20.7	51.1
12:58	58.0	53.2	52.6	49.2	45.7	39.3	30.1	20.8	50.9
13:13	58.6	53.7	53.0	49.5	46.4	40.0	30.7	21.1	51.4
13:28	56.8	54.2	53.7	52.6	50.2	44.9	36.0	24.2	54.7

Notes; All readings sound pressure level dB re: $2x10^{-5}$ Nm^{-2}.



Char. 1. Ambient noise levels.

ALLAWAY ACOUSTICS
LIMITED

ACOUSTIC TERMINOLOGY

DECIBEL (dB) - The Decibel is a logarithmic unit used to express ratios of quantities such as sound pressure level or sound power. The logarithmic nature of the unit means that decibel values cannot be added or subtracted in the usual way.

dBA or LA - The A weighted scale is used to take account of the fact that the human ear is more sensitive to sounds at high frequencies than sounds at low frequencies. "A" weighted sound pressure level (sound level) measurements correspond roughly to the subjective impression of loudness of the average listener.

LAEQ - The LAEQ index is used as a method of averaging temporally or spatially varying sound levels. At a given position, it may be defined as the notional sound level which contains the same amount of acoustical energy as the actual (time varying) sound level over the same measurement period. The LAEQ is gaining acceptance for many types of noise assessment, and is now referred to within BS4142 (used to assess the likelihood of justifiable environmental noise complaints), and also within the Noise at Work Regulations 1989.

LAMAX - The LAMAX is the maximum sound pressure level (sound level) recorded during any given measurement period.

LA10 - The LA10 is the sound level that is exceeded for 10% of the measurement period and is commonly used to describe road traffic noise, since it has been found to correlate reasonably well with complaint thresholds.

LA90 - The LA90 is the sound level that is exceeded for 90% of the measurements period, and is generally considered to describe the background noise, since it inherently excludes the sounds of transient events.