

ARR/C/2411.03

24th May 2023

The Washhouse, 19 Shudehill, M4 2AF

Verification report for the noise impact of the
operating “Secret Bar” and assessment of the
proposed additional area.

Prepared for :-

The Washhouse Manchester Ltd
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M21 9EL

Prepared by :-

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1.0 **SUMMARY**

The area surrounding the proposed development is already extremely busy with road traffic, mechanical equipment, pedestrians and bars, some of them open until well into the early hours.

The Washhouse is a "Secret Bar" and, by design and branding, is visually and aurally hidden from the outside world. It is table service drink and the music inside is background music only. Outside, front and back, the impact is essentially zero.

Internally, we can confirm that all windows, doors, etc. are in good condition and well fitted. The sound system is simply a set of small speakers to provide background music which runs at a set level and does not change. There general noise is from the making of the cocktails behind the bar and customers' voices. It is not at all boisterous, but even if it was, it is inconceivable that there would be any significant impact.

The proposed second floor bar appears to be more or less identical in design and purpose and doors, windows, etc. are in good condition well fitted. The sound system is the same as the first floor bar. We understand that the shell construction is identical to lower floors, as one would naturally expect. There are no floors above it. Again, the impact can be expected to be essentially zero.



A R Raymond



P J Durell

2.0 INTRODUCTION

ADC was asked to carry out a verification assessment of the currently operating “Secret Bar” and, by reasonable inference, assess the proposed new bar at the second floor level.

3.0 PLANNING CONDITIONS

The basis of this assessment is Planning Condition 3 of Decision reference 129840/FO/2021.

3) The approved use shall be implemented (fit out) and operated in accordance with the noise levels and management measures which form the basis for the assessment as specified within the ADC Acoustics Noise Impact Assessment dated 25th March 2021

The noise levels used for the assessment shall be set and subsequently controlled to ensure noise levels do not exceed those used under the assessment.

The above noise management scheme shall be completed prior to occupation. A post completion report to verify that all of the specified noise levels within the above ADC Report are being met shall be submitted and agreed in writing by the City Council as local planning authority within the following timescales:

(a) Ground floor of 19 Shudehill: within 3 months of the lockdown measures associated with the Covid19 pandemic having been eased

(b) 1st and 2nd floors of 19 Shudehill and 2nd floor of 21-21 Shudehill: prior to the extended use commencing or within 3 months of the lockdown measures associated with the Covid19 pandemic having been eased (which ever is the later).

and any non compliance suitably mitigated in accordance with an agreed scheme prior to occupation.

Thereafter the premises shall operate in accordance with the approved noise levels and management measures

Where entertainment noise is proposed the LAeq (entertainment noise) shall be controlled to 10dB below the LA90 (without entertainment noise) in each octave band at the facade of the nearest noise sensitive location, and internal noise levels at structurally adjoined residential properties in the 63Hz and 125Hz octave frequency bands shall be controlled so as not to exceed (in habitable rooms) 47dB and 41dB, respectively.

For the avoidance of doubt should if higher music levels are required in the future than as specified in the above report then an updated assessment and recommendations will be required.

Reason - To safeguard the amenities of the occupiers of the building and occupiers of nearby properties, pursuant to policies SP1 and DM1 of the Core Strategy

This report primarily covers the first half of the condition. From the 5th paragraph, where entertainment noise is referred to, we can essentially ignore as no entertainment noise takes place. However, we discuss the background music in the context of the assumptions of the original report.

4.0 SURVEY DETAILS

4.1 Site Times and Personnel

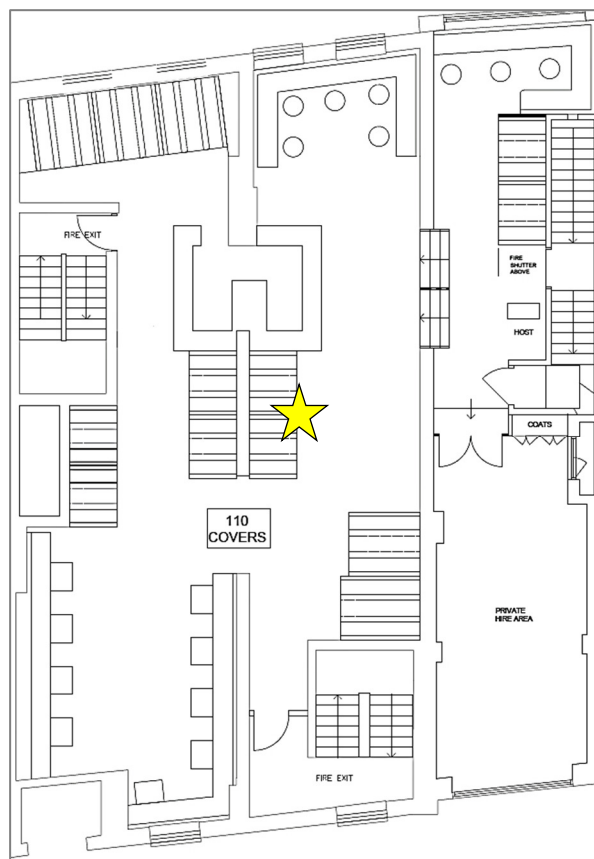
The site survey was carried out by Mark Pimlett of ADC Acoustics on the afternoon of Friday 12th May 2023. This was a time we were advised would be reasonably busy but when we would be unlikely to draw attention to the work and affect behaviour.

4.2 Instrumentation

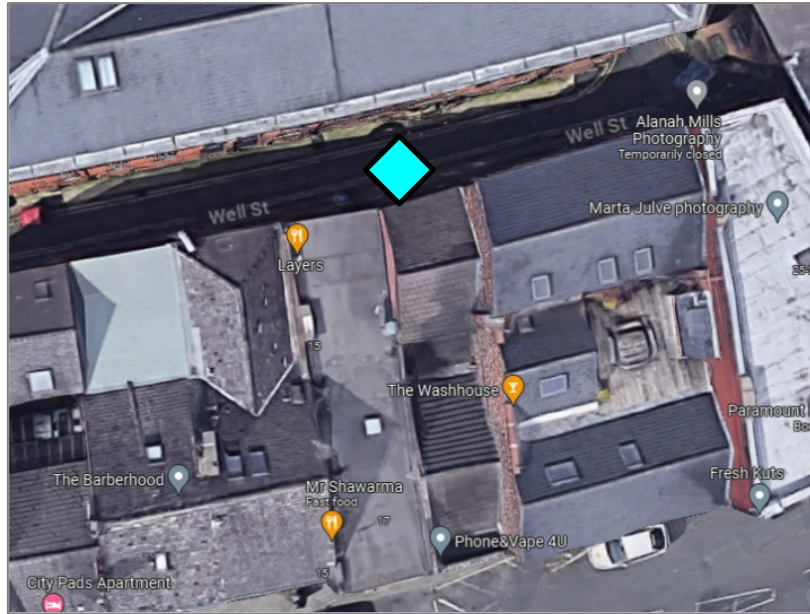
Instrumentation used was a Rion NL-52. This is a Class I sound level meter which holds a current calibration certificate and which was field-calibrated as necessary with no drift noted. The meter was set up to measure continuous 1 minute samples (in the bar area) and 5 minute samples (in the rear alley), all in terms of dB L_{eq} , dB L_{max} and dB L_{90} in overall A-weighted terms, and in octave bands across the frequency range. See Definition of Acoustic Terms in Appendix 1.

4.3 Measurement Positions

The public areas were reconnoitred for some time and the levels of conversation and background music were constant throughout. A representative central position near the bar was chosen for the measurements, as shown by the yellow star on the following plan.



In addition some measurements were also made centrally in the rear alley, as shown by the pale blue square below:-



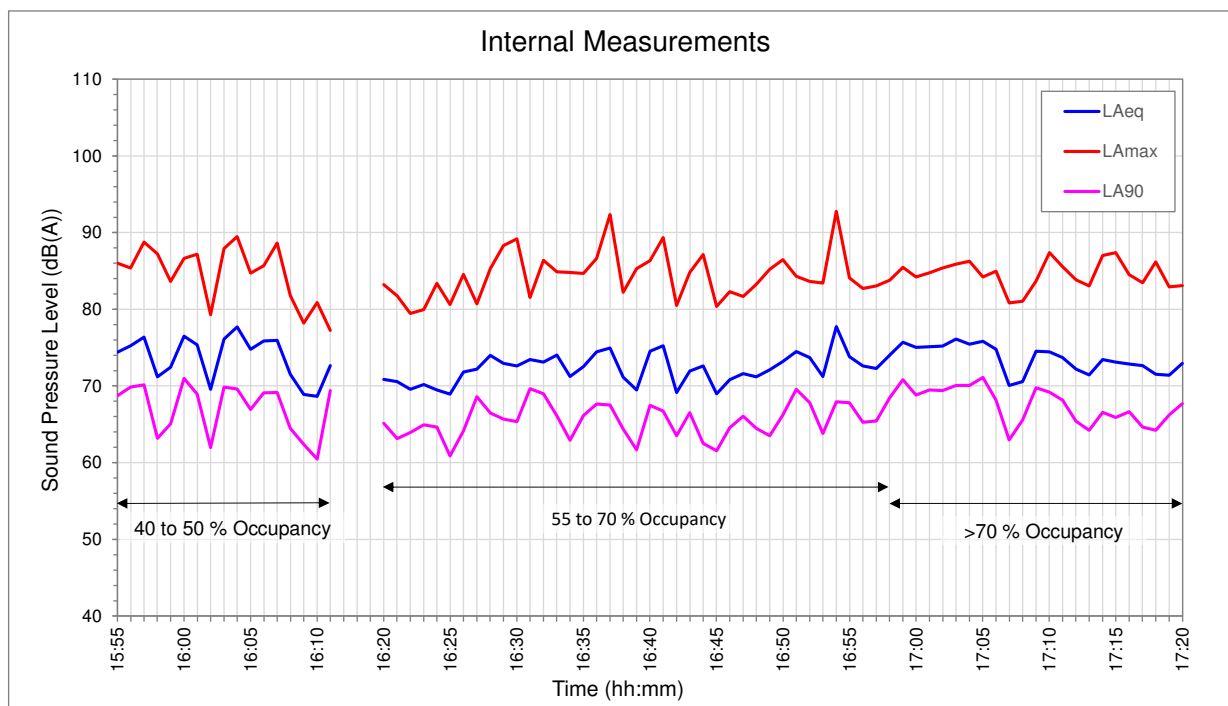
4.4 Survey Conditions

All guests are seated at pre-booked tables. The measurements were made in conditions of around 40% occupancy at the start to over 70% occupancy by the end. We were advised that conditions were normal and representative and that it is not the sort of place that ever gets rowdy. The sound system is background music only, and is at a fixed level which does not change as the evening progresses. Indeed, the system was inspected and appeared to be designed only for background music with small loudspeakers located in corner positions.

5.0 RESULTS AND DISCUSSIONS

5.1 Internal Noise Levels

Basic results were are shown graphically as follows:-



Full Details are Shown in Appendix 2. A Summary is as follows:-

<i>40 to 50 % Occupancy</i>	<i>Index</i>	<i>dB(A)</i>
Log Average	Leq	75
	Lmax	85
	L90	67
Highest 1 Minute Period	Leq	78
	Lmax	83
	L90	64

<i>55 to 70 % Occupancy</i>	<i>Index</i>	<i>dB(A)</i>
Log Average	Leq	73
	Lmax	86
	L90	66
Highest 1 Minute Period	Leq	78
	Lmax	93
	L90	68

<i>> 70 % Occupancy</i>	<i>Index</i>	<i>dB(A)</i>
Log Average	Leq	74
	Lmax	85
	L90	68
Highest 1 Minute Period	Leq	76
	Lmax	86
	L90	70

We can see that these levels are nowhere near the boisterous bar levels assumed in the report, which are reproduced below for reference:-

<i>Boisterous Bar Levels</i>	<i>Index</i>	<i>dB(A)</i>
Internal	Leq	86
	Lmax	101

A general inspection confirmed that windows, doors, etc. were in good condition and well fitted. We understand that original ground floor bar is currently not in use.

5.2 External Noise Levels

To the front, the area constantly bustles with people and there is no perceptible noise from within the venue. This of course makes sense with the branding as a “Secret Bar”. The noise impact is essentially zero. There is no outside drinking and the impact of a few smokers is likely to be negligible.

To the rear, the alley was noisy with mechanical equipment not associated with the Washhouse, as it has always been since our very first assessment. Measured levels were very steady around the figures shown below (full details in Appendix 2). Without the bustle of people and traffic, it is a lot quieter than the front but there was still no perceptible impact from within.

<i>Rear Alley</i>	<i>Index</i>	<i>dB(A)</i>
Log Average	Leq	59
	Lmax	68
	L90	57

6.0 PROPOSED SECOND FLOOR BAR

ADC was asked to assess the proposed new bar at the second floor level, by reasonable inference from the existing first floor operation.

The proposed bar appears to be more or less identical in design and purpose. Doors, windows, etc. are in good condition and well fitted. The sound system is the same as the first floor bar and set up for background music only. We understand that the shell construction is identical to lower floors, as one would naturally expect. There are no floors above it.

There is no reason why the same initial assumptions of the original reports cannot be applied here. However, it will of course have the same “Secret Bar” branding and nature and more or less identical to the first floor in all respects.

Again, the impact can be expected to be essentially zero.

7.0 CONCLUSIONS/RECOMMENDATIONS

Internally, we can confirm that all windows, doors, etc. are in good condition and well fitted. The sound system is simply a set of small speakers to provide background music which runs at a set level and does not change. There general noise is from the making of the cocktails behind the bar and customers’ voices. It is not at all boisterous, but even if it was, it is inconceivable that there would be any significant impact.

The proposed second floor bar appears to be more or less identical in design and purpose and doors, windows, etc. are in good condition well fitted. The sound system is the same as the first floor bar. We understand that the shell construction is identical to lower floors, as one

would naturally expect. There are no floors above it. Again, the impact can be expected to be essentially zero.

We can very confidently conclude that Condition 3 is met by some margin.

We can also conclude that the proposed second floor bar can be expected to have the same negligible impact.

Appendix 1

Definition of Acoustic Terms

The Decibel

The decibel is the basic unit of noise measurement and is denoted dB. Technically, it is a means of expressing the difference in noise level between the measured noise and a standard level of noise. Most often the threshold of human hearing is used as the standard reference but is really should be stated. The threshold of human hearing is a sound pressure of $20\mu\text{Pa}$ or a sound power of 1pW .

A sound pressure level or SPL should be expressed in dB(re. $20\mu\text{Pa}$). A sound power level or SWL should be expressed in dB(re. 1pW). If the reference levels are omitted, it will often (but not always) be safe to assume that they are referenced to the threshold of human hearing.

A-Weighting and dB(A)

The human hearing system responds differently to different frequencies. The A-weighting system takes account of this by emphasising mid and high frequencies more than low frequencies to given an overall level. An A-Weighted noise level, therefore, reflects the way normal, healthy hearing would perceive the overall level of the noise. The basic unit is dB(A), although other systems of expressing an A-weighted level are discussed below.

Other weighting systems, such as C-Weighting, denoted dB(C), reflect the human hearing system's response at higher noise levels.

Equivalent Continuous Sound Level, L_{eq}

This is a kind of mean noise level.

The unit is dB L_{eq} . For A-weighted levels the unit is dB(A) L_{eq} or, in more modern units, dB L_{Aeq} . The Noise at Work Regulations use $L_{\text{eq(s)}}$ which refers to a sample level.

Maximum Level, L_{max}

This is the maximum level reached (usually for a fraction of a second) in the measurement period.

The unit is dB L_{max} . For A-weighted levels the unit is dB(A) L_{max} or, in more modern units, dB L_{Amax} .

Statistical (Percentile) Levels, L_n

During a measurement of fluctuating noise, it is often useful to establish the levels exceeded for a percentage of the time. L_n is the index representing the level exceeded for $n\%$ of the measurement period.

The unit is dB L_n . For A-weighted levels, the unit is dB(A) L_n or, in more modern units, dB L_{An} .

Common examples are as follows :-

dB L_{A90} is the A-weighted level exceeded for 90% of the time and is often used to describe the underlying background noise.

dB L_{A50} is the A-weighted level exceeded for 50% of the time. Mathematically, it is the median, another kind of average.

dB L_{A10} is the A-weighted level exceeded for 10% of the time and has traditionally been used to describe the intermittent highs in the noise climate such as passing cars or aircraft.

Frequency Analysis

Here the audible frequency range is divided up into bands and the noise level is expressed in each frequency band from low pitches to high pitches.

Octave Band analysis is where the frequency range is divided into 8 bands from 63 Hz to 8kHz, or sometimes into 10 bands from 31.5 Hz to 16kHz.

1/3 Octave Band analysis provides more detailed subdivision into 24 bands from 50 Hz to 10kHz, or sometimes into 30 bands from 20Hz to 20kHz.

Narrow Band analysis takes this further with the possibility of many thousands of bands, possibly only 1Hz wide, or even less.

In all types of frequency analysis, the level in each band can be expressed in terms of L_{eq} , L_{max} , L_n , etc. as defined above.

Appendix 2

Measurements in Full

First Floor Bar

<i>40 to 70 % Occupancy</i>	<i>Index</i>	<i>dB(A)</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>
15:55	Leq	74	68	79	72	71	70	66	60	53
	Lmax	86	73	85	80	81	84	76	70	60
	L90	69	64	73	67	67	63	60	53	46
15:56	Leq	75	67	78	74	73	71	67	60	54
	Lmax	85	73	87	81	82	83	76	69	65
	L90	70	49	54	66	68	66	62	54	45
15:57	Leq	76	71	82	81	71	69	66	59	55
	Lmax	89	83	90	89	81	86	80	70	69
	L90	70	52	67	76	66	62	60	53	45
15:58	Leq	71	70	75	71	69	65	62	59	57
	Lmax	87	77	87	83	89	79	74	67	67
	L90	63	63	66	60	61	58	54	51	48
15:59	Leq	72	72	75	73	71	66	63	60	57
	Lmax	84	80	83	81	83	78	74	68	67
	L90	65	50	62	65	64	59	56	52	46
16:00	Leq	77	76	78	76	73	72	68	64	62
	Lmax	87	80	84	82	80	84	80	70	69
	L90	71	72	74	73	68	64	62	60	57
16:01	Leq	75	75	77	75	72	70	67	65	62
	Lmax	87	80	83	82	82	83	81	73	71
	L90	69	64	69	69	66	63	60	59	56
16:02	Leq	70	67	75	72	67	63	59	55	54
	Lmax	79	74	82	80	78	73	70	64	62
	L90	62	60	67	62	60	56	51	48	40
16:03	Leq	76	70	77	78	73	71	66	62	56
	Lmax	88	76	88	87	85	84	77	76	73
	L90	70	61	71	75	67	63	58	53	43
16:04	Leq	78	70	76	78	75	73	69	65	58
	Lmax	89	79	86	88	84	87	80	77	72
	L90	70	55	68	71	67	65	60	57	50
16:05	Leq	75	73	74	78	72	69	66	61	58
	Lmax	85	82	87	86	83	79	74	69	69
	L90	67	54	63	70	64	62	57	51	41
16:06	Leq	76	73	75	77	73	70	68	64	60
	Lmax	86	82	87	87	82	80	76	75	75
	L90	69	66	68	71	66	64	60	56	51
16:07	Leq	76	70	72	75	73	71	68	63	58
	Lmax	89	78	83	81	86	85	81	76	71
	L90	69	64	66	70	66	64	61	57	52
16:08	Leq	72	66	71	73	68	67	62	58	54
	Lmax	82	73	79	79	75	79	73	68	65
	L90	64	55	66	67	63	59	54	47	39
16:09	Leq	69	59	71	71	65	64	60	56	50
	Lmax	78	70	78	79	74	72	71	68	63
	L90	62	48	53	66	61	56	52	48	40
16:10	Leq	69	68	64	66	65	64	61	58	54
	Lmax	81	75	73	76	75	76	73	73	73
	L90	60	53	54	59	58	55	53	48	41
16:11	Leq	73	67	67	70	70	69	65	59	54
	Lmax	77	71	72	75	76	73	68	65	62
	L90	69	65	65	66	67	64	63	56	45

55 to 70 % Occupancy	Index	dB(A)	63	125	250	500	1k	2k	4k	8k
16:20	Leq	71	71	69	72	67	66	63	57	51
	Lmax	83	77	76	81	81	76	78	71	60
	L90	65	66	63	66	62	60	56	51	44
16:21	Leq	71	69	66	72	68	66	62	58	52
	Lmax	82	76	76	81	76	75	70	77	70
	L90	63	54	58	65	61	58	54	48	40
16:22	Leq	70	70	70	71	67	64	60	55	52
	Lmax	79	77	80	78	78	74	72	66	62
	L90	64	60	62	66	62	58	55	49	43
16:23	Leq	70	71	69	72	66	65	62	57	54
	Lmax	80	75	76	80	75	75	73	69	64
	L90	65	66	64	68	62	59	56	52	49
16:24	Leq	69	71	68	70	66	64	61	60	55
	Lmax	83	75	76	77	74	74	74	80	71
	L90	65	68	64	66	61	60	56	52	49
16:25	Leq	69	71	69	68	66	64	61	56	54
	Lmax	81	79	80	76	79	76	71	69	65
	L90	61	66	63	62	59	55	52	47	41
16:26	Leq	72	69	70	67	67	67	64	62	61
	Lmax	85	75	76	76	80	80	77	77	72
	L90	64	49	63	62	60	59	55	54	57
16:27	Leq	72	69	70	69	68	69	62	58	59
	Lmax	81	74	77	81	77	76	73	68	67
	L90	69	51	65	64	65	66	56	54	56
16:28	Leq	74	64	69	73	71	71	63	58	57
	Lmax	85	73	76	81	83	83	73	67	64
	L90	67	49	63	67	64	62	57	54	48
16:29	Leq	73	70	71	71	69	69	65	61	60
	Lmax	88	76	77	83	80	81	84	81	73
	L90	66	62	59	66	63	61	55	54	57
16:30	Leq	73	58	61	68	69	69	64	60	60
	Lmax	89	72	71	80	80	89	71	69	64
	L90	65	47	54	61	62	61	56	55	57
16:31	Leq	73	67	68	69	70	70	64	61	61
	Lmax	82	74	76	77	76	79	73	69	66
	L90	70	54	56	63	67	67	58	56	57
16:32	Leq	73	70	71	71	70	69	65	60	61
	Lmax	86	74	79	79	77	78	84	75	65
	L90	69	65	66	66	66	66	56	56	57
16:33	Leq	74	70	71	69	69	69	68	65	62
	Lmax	85	76	77	80	80	79	79	75	72
	L90	66	65	65	63	61	61	58	56	58
16:34	Leq	71	65	66	69	69	66	63	59	54
	Lmax	85	75	75	83	86	76	74	70	66
	L90	63	54	57	60	60	59	55	52	46
16:35	Leq	73	70	70	72	70	68	64	59	54
	Lmax	85	76	78	82	85	77	75	69	65
	L90	66	57	64	66	64	61	57	54	50
16:36	Leq	74	66	69	73	73	70	65	60	57
	Lmax	87	75	78	84	83	84	77	73	70
	L90	68	49	61	67	67	62	57	55	52
16:37	Leq	75	68	72	73	74	69	66	62	58
	Lmax	92	81	82	85	94	78	83	74	70
	L90	68	57	66	68	65	62	58	56	53
16:38	Leq	71	68	74	71	69	66	62	58	54
	Lmax	82	74	82	80	78	79	74	68	62
	L90	64	64	66	63	62	60	55	53	49

<i>55 to 70 % Occupancy</i>	<i>Index</i>	<i>dB(A)</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>
16:39	Leq	70	62	68	66	67	64	63	57	54
	Lmax	85	78	75	75	83	79	80	70	67
	L90	62	53	61	62	60	56	53	48	44
16:40	Leq	75	72	70	71	71	70	68	61	56
	Lmax	86	80	78	85	82	81	81	73	67
	L90	67	56	64	65	65	63	60	55	52
16:41	Leq	75	74	70	72	72	70	69	62	56
	Lmax	89	79	76	80	89	81	84	74	63
	L90	67	70	67	68	63	61	59	55	52
16:42	Leq	69	70	68	68	65	64	62	57	54
	Lmax	81	76	75	75	76	73	76	69	66
	L90	64	52	58	63	59	59	56	52	49
16:43	Leq	72	73	70	71	67	68	65	61	57
	Lmax	85	82	76	78	77	81	75	79	74
	L90	67	70	67	68	61	61	59	55	53
16:44	Leq	73	72	70	70	70	68	65	60	55
	Lmax	87	78	75	78	84	83	80	74	65
	L90	63	53	62	65	60	55	53	52	52
16:45	Leq	69	66	70	72	65	64	60	56	52
	Lmax	80	74	79	81	77	75	72	69	62
	L90	62	52	60	63	59	56	53	50	44
16:46	Leq	71	68	73	71	68	66	62	57	52
	Lmax	82	81	80	78	81	77	74	71	62
	L90	65	64	68	66	62	58	56	52	46
16:47	Leq	72	69	73	73	69	67	63	58	53
	Lmax	82	74	78	80	76	79	73	70	65
	L90	66	64	69	67	63	61	57	53	48
16:48	Leq	71	68	73	70	69	66	63	57	52
	Lmax	83	76	80	77	83	79	73	66	61
	L90	64	64	68	64	63	59	56	52	46
16:49	Leq	72	70	71	69	69	67	65	61	55
	Lmax	85	75	78	81	85	78	76	74	71
	L90	64	55	64	62	61	59	55	50	44
16:50	Leq	73	70	71	71	73	67	64	60	56
	Lmax	86	76	78	79	88	79	73	69	66
	L90	66	53	58	63	64	61	59	55	52
16:51	Leq	75	72	72	75	72	69	66	63	58
	Lmax	84	77	79	83	80	80	75	73	74
	L90	70	67	67	70	67	63	62	59	55
16:52	Leq	74	72	72	74	70	69	65	61	57
	Lmax	84	79	80	81	80	81	74	70	64
	L90	68	67	66	69	65	62	59	56	53
16:53	Leq	71	58	62	69	70	66	63	57	51
	Lmax	83	70	73	77	82	80	74	67	61
	L90	64	48	51	62	62	59	56	51	43
16:54	Leq	78	70	70	73	76	73	70	64	58
	Lmax	93	78	80	83	90	90	84	78	69
	L90	68	53	58	65	65	63	60	55	51
16:55	Leq	74	72	73	73	72	68	65	61	59
	Lmax	84	78	80	80	84	78	75	70	66
	L90	68	68	68	69	65	61	59	58	55
16:56	Leq	73	72	72	70	69	69	65	60	57
	Lmax	83	82	79	76	77	79	77	70	66
	L90	65	66	66	65	62	60	57	55	52
16:57	Leq	72	69	71	69	69	68	64	59	57
	Lmax	83	75	77	76	78	81	74	67	62
	L90	65	60	61	63	62	61	58	55	52

> 70 % Occupancy	Index	<i>dB(A)</i>	63	125	250	500	1k	2k	4k	8k
16:58	Leq	74	68	70	69	71	70	67	61	57
	Lmax	84	75	77	78	80	79	79	69	63
	L90	68	51	58	63	67	64	61	56	50
16:59	Leq	76	69	71	70	72	72	69	63	59
	Lmax	85	75	77	79	80	82	79	72	70
	L90	71	55	63	65	67	67	64	59	53
17:00	Leq	75	68	70	70	73	71	68	62	57
	Lmax	84	81	77	80	83	79	77	72	68
	L90	69	49	58	63	67	64	62	57	47
17:01	Leq	75	55	68	70	73	70	68	63	57
	Lmax	85	65	79	79	84	80	77	68	67
	L90	69	47	57	63	66	64	63	58	52
17:02	Leq	75	67	72	71	73	71	68	62	57
	Lmax	85	73	78	81	85	80	77	70	69
	L90	69	52	62	67	67	64	63	58	52
17:03	Leq	76	67	72	71	73	72	69	63	58
	Lmax	86	72	79	79	84	82	78	71	67
	L90	70	55	67	67	67	65	64	58	52
17:04	Leq	75	68	71	71	73	71	68	63	58
	Lmax	86	80	78	81	81	84	76	73	68
	L90	70	56	61	66	67	65	63	59	52
17:05	Leq	76	71	73	72	73	71	69	64	58
	Lmax	84	76	79	77	82	81	75	70	71
	L90	71	66	70	69	68	66	64	59	54
17:06	Leq	75	70	73	71	71	70	68	64	59
	Lmax	85	80	79	83	81	78	78	77	72
	L90	68	64	67	65	64	63	62	57	53
17:07	Leq	70	68	69	66	68	65	63	58	54
	Lmax	81	75	77	78	78	77	72	69	66
	L90	63	57	60	61	61	58	56	51	46
17:08	Leq	71	71	70	67	69	66	63	58	55
	Lmax	81	76	76	76	78	77	73	70	62
	L90	66	68	65	61	64	61	57	53	51
17:09	Leq	75	67	68	71	72	70	67	62	56
	Lmax	84	76	77	82	81	79	77	71	65
	L90	70	57	60	66	68	65	62	56	48
17:10	Leq	74	64	66	72	72	70	67	61	58
	Lmax	87	73	76	81	88	82	75	69	66
	L90	69	57	59	64	67	65	62	58	51
17:11	Leq	74	70	69	68	71	69	67	62	59
	Lmax	86	76	77	78	83	82	77	74	74
	L90	68	67	65	63	66	63	61	57	55
17:12	Leq	72	67	68	68	70	68	65	59	55
	Lmax	84	74	76	76	83	79	77	68	63
	L90	65	52	58	61	64	60	57	52	45
17:13	Leq	71	68	68	68	69	67	64	58	52
	Lmax	83	76	76	78	78	79	77	67	71
	L90	64	50	58	61	63	59	56	51	41
17:14	Leq	73	72	73	72	71	69	65	58	54
	Lmax	87	76	77	79	81	85	77	66	64
	L90	67	70	69	67	64	61	58	53	50
17:15	Leq	73	71	72	70	70	69	65	59	54
	Lmax	87	76	76	79	80	86	76	70	63
	L90	66	67	66	66	64	61	57	53	46
17:16	Leq	73	71	71	71	70	69	65	59	56
	Lmax	84	76	84	87	78	79	76	72	74
	L90	67	53	56	62	65	63	58	53	45
17:17	Leq	73	71	72	69	70	68	65	61	55
	Lmax	83	81	78	76	79	81	73	69	65
	L90	65	63	66	64	63	59	55	52	47
17:18	Leq	72	68	74	69	68	67	64	58	52
	Lmax	86	81	81	77	80	84	79	71	65
	L90	64	63	67	63	62	59	56	52	47
17:19	Leq	71	67	75	70	69	66	63	59	53
	Lmax	83	74	82	75	78	76	73	78	68
	L90	66	63	69	66	64	61	57	53	48
17:20	Leq	73	68	75	70	71	68	65	60	55
	Lmax	83	76	80	79	83	77	74	71	65
	L90	68	62	68	65	66	63	60	55	49

First Floor Bar Summaries

40 to 50 % Occupancy	Index	dB(A)	63	125	250	500	1k	2k	4k	8k
Log Average	Leq	75	71	76	76	71	69	66	61	57
	Lmax	85	77	79	80	82	81	76	72	69
	L90	67	64	66	65	65	63	60	55	50
Highest 1 Minute Period	Leq	78	70	76	78	75	73	69	65	58
	Lmax	83	76	76	78	78	79	77	67	71
	L90	64	50	58	61	63	59	56	51	41

55 to 70 % Occupancy	Index	dB(A)	63	125	250	500	1k	2k	4k	8k
Log Average	Leq	73	70	70	71	70	68	65	60	57
	Lmax	86	77	78	80	84	81	78	74	68
	L90	66	63	64	66	63	61	57	54	52
Highest 1 Minute Period	Leq	78	70	70	73	76	73	70	64	58
	Lmax	93	78	80	83	90	90	84	78	69
	L90	68	53	58	65	65	63	60	55	51

> 70 % Occupancy	Index	dB(A)	63	125	250	500	1k	2k	4k	8k
Log Average	Leq	74	69	71	70	71	69	66	61	56
	Lmax	85	77	79	80	82	81	76	72	69
	L90	68	63	65	65	66	63	61	56	50
Highest 1 Minute Period	Leq	76	67	72	71	73	72	69	63	58
	Lmax	86	72	79	79	84	82	78	71	67
	L90	70	55	67	67	67	65	64	58	52

Rear Alley

Rear Alley	Index	dB(A)	63	125	250	500	1k	2k	4k	8k
17:30	Leq	58	63	59	61	55	52	47	43	35
	Lmax	72	67	70	69	72	66	63	56	51
	L90	56	61	58	59	52	50	45	41	32
17:35	Leq	59	65	60	64	54	53	48	43	35
	Lmax	64	71	66	69	61	56	56	53	44
	L90	58	63	59	63	53	52	46	42	33
17:40	Leq	59	65	61	62	55	54	50	46	39
	Lmax	71	72	68	69	65	64	64	63	58
	L90	57	62	59	58	54	51	47	42	32
17:45	Leq	59	63	61	60	56	55	50	44	37
	Lmax	68	67	66	63	65	63	62	50	49
	L90	58	61	60	59	55	53	48	42	33
17:50	Leq	58	64	60	59	55	53	48	44	35
	Lmax	65	72	67	65	64	60	55	52	39
	L90	56	61	58	58	54	52	46	42	34
17:55	Leq	57	62	59	59	54	51	46	43	34
	Lmax	58	63	61	60	55	52	46	43	35
	L90	56	60	57	58	53	50	46	42	34

Rear Alley	Index	dB(A)	63	125	250	500	1k	2k	4k	8k
Log Average	Leq	59	64	60	61	55	53	49	44	36
	Lmax	68	70	67	67	66	62	60	57	51
	L90	57	61	59	59	53	52	46	42	33