

SANDY BROWN

Consultants in Acoustics, Noise & Vibration

18194-R01-A

29 November 2019

Madame Jojo's

Noise impact assessment

London, Manchester, Edinburgh, Birmingham, Belfast, Stevenage

Sandy Brown Associates LLP
Registered in England & Wales

No. OC 307504

post@sandybrown.com
www.sandybrown.com

Registered Office: 55 Charterhouse Street, London EC1M 6HA

SANDY BROWN

Consultants in Acoustics, Noise & Vibration

Version	Date	Comments	Author	Reviewer
A	29 Nov 19		Taís Zacharias	Robert Burrell
B	2 Dec 19	Updated plans	Taís Zacharias	Robert Burrell

Summary

Sandy Brown has been commissioned by Soho Estates Limited to provide acoustic advice in relation to the proposed licence application of the Madame Jojo's entertainment venue.

The key acoustic issues arising from the operation of the venue are noise breakout from the venue itself and noise generated by patrons as they queue to access the venue.

As part of the assessment an environmental noise survey was carried out to determine the existing external sound levels in the area around the venue against which noise from the venue could be compared.

An assessment has been carried out to determine the level of sound transmission from the club, breaking out of the entrance lobby. The calculated noise level is unlikely to be audible at street level and would therefore not impact any of the surrounding residences.

An assessment has been carried out to determine the impact of noise from people queuing outside the venue. The calculated noise level from people talking outside the building is 6 dB lower than the existing ambient noise level on the less busy nights (e.g. Sunday and Monday), and around 10-14 dB quieter than the existing ambient noise levels on busy nights (e.g. Friday and Saturday).

Some management of noise from people queuing will be required by the door staff to minimise the impact to the surrounding neighbors.

Contents

1	Introduction	5
2	Site description	5
3	Noise survey	7
4	Guidance and criteria	10
5	Noise breakout from the club	12
6	Noise from queuing.....	15
8	Conclusion.....	16
	Appendix A	17
	Survey details	17
	Appendix B	19
	Results of unattended measurements at Location L	19

1 Introduction

Sandy Brown has been commissioned by Soho Estates Limited to provide acoustic advice in relation to the proposed licence application of the Madame Jojo's entertainment venue.

The key acoustic issues arising from the operation of the venue are noise breakout from the venue itself and noise generated by patrons as they queue to access the venue.

As part of the assessment an environmental noise survey was carried out to determine the existing external sound levels in the area around the venue against which noise from the venue could be compared.

This report presents the method and results from the noise survey, a discussion of the potential noise issues along with appropriate noise limit criteria, and assessments of the noise breakout from the venue and from queuing patrons.

2 Site description

2.1 The venue and its surrounding

The Madame Jojo's venue is located within the Walkers Court development, with the main space located at basement level, and the pedestrian entrance along Brewer Street.

The surrounding area has a mix of residential accommodation, offices, retail units, bars and clubs. Figure 1, shows the location of the venue (highlighted in yellow) in relation to its surroundings, including other bars and clubs (highlighted in red) and the location at which noise monitoring was carried out (highlighted in green).



Figure 1 Aerial view of site (courtesy of Google Earth Pro)

2.2 Adjacent premises

2.2.1 Residential premises

The closest residential accommodation to the venue are:

- 1 Brewer Street – Flats 1-7
- 5 Brewer Street -Levels 1-3
- 11 Brewer Street - Levels 1-5
- There are other residential apartments at 13,16, 20, 22 Brewer Street

The residences at 5 Brewer Street were constructed as part of the Walkers Court redevelopment. These residences will directly overlook the Madame Jojo's entrance. The facade design of the residential units of the Walkers Court development took into consideration the noise climate at the site noting the surrounding bars and clubs.

2.2.2 Bars / clubs

Within the area surrounding the venue are a number of other bars and clubs. A selection of these venues and their latest opening times are listed below:

- The Box, 11-12 Walker's Court, open till 4am
- SophistiCats, 5 Brewer Street, opens till 3am
- El Camion, 25-27 Brewer Street, open, till 3am
- The Yard Bar, 57 Rupert Street, open till 12am
- Freedom Bar, 60-66 Wardour St, opens till 3am
- Village Soho 81 Wardour Street, open till 3am
- Soho Residence, 83 - 85 Wardour Street, open till 3am

3 Noise survey

3.1 Method

Unattended noise monitoring was undertaken at the site over 4 days. The unattended measurements were taken over 5 minute periods between 16:20 on 15 November 2019 and 15:15 on 19 November 2019. The equipment was installed by Robert Burrell and Taís Zacharias, and collected by Taís Zacharias.

The measurements were taken at the facade on 10 Brewer Street. Noise levels at this location are considered reasonably representative of the those at the nearest residences to the Madame Jojo's entrance on Brewer Street.

The measurement position used during the survey is indicated in Figure 1, denoted by the letter 'L'. A photograph showing the measurement location is provided in Figure 2.



Figure 2 Unattended logger position

Details of the equipment used and the noise indices measured are provided in Appendix A.

3.3 Weather conditions

During the unattended noise measurements, weather reports for the area indicated that the temperature varied between:

- 6°C and 9°C on Friday, 15 of November, with occurrence of light rain
- 1°C and 8°C on Saturday, 16 of November, no rain occurred
- 0°C and 8°C on Sunday, 17 of November, no rain occurred
- -2°C and 8°C on Monday 18 of November, no rain occurred
- -2°C and 8°C on Tuesday, 19 of November, no rain occurred.

These weather conditions are considered suitable for obtaining representative measurements.

Whilst the weather conditions are unlikely to have affected the measurements, the temperature is likely to have an impact on the noise climate within the area. During summer months it is expected that greater footfall and outdoor congregation would occur than during the colder autumn and winter months.

3.4 Observations

The dominant noise source observed at the site during the survey was pedestrians. Other noise sources consisted in construction sites on various locations and road traffic along Wardour Street.

From previous surveys undertaken in the area as part of the Walkers Court development, the dominant noise sources in the evenings includes people talking outside of the various bars and clubs, typically within external smoking areas.

3.5 Noise measurement results

A graph showing the results of the unattended measurements is provided in Appendix B.

Daytime, evening and night-time ambient noise levels measured during the unattended survey are presented in Table 1.

Table 1 Ambient noise levels measured during the unattended survey

Date	Daytime (07:00-19:00)	Evening (19:00-23:00)	Night (23:00 - 07:00)
	$L_{Aeq, 12 \text{ hour}}$ (dB)	$L_{Aeq, 4 \text{ hour}}$ (dB)	$L_{Aeq, 8 \text{ hour}}$ (dB)
Friday 15 November 2019	-	69	69
Saturday 16 November 2019	68	73	71
Sunday 17 November 2019	63	66	63
Monday 18 November 2019	67	66	65

SANDY BROWN

Consultants in Acoustics, Noise & Vibration

The sound levels were greater on Friday and Saturday, which are understood to be due to crowds at other venues located around the site. On these days the existing ambient noise levels in the evening ranged between L_{Aeq} 69-73 dB, with night time noise levels ranging between L_{Aeq} 69-71 dB.

On the Sunday and Monday nights which are understood to be less busy nights the existing ambient noise levels in the evening were L_{Aeq} 66 dB, with night time noise levels ranging between L_{Aeq} 63-65 dB

The data shows that Brewer Street currently has high existing noise levels particularly in the weekend evenings and nights.

Measured minimum background sound levels are given in Table 2.

Table 2 Minimum background sound levels measured during the unattended survey

Date	Daytime (07:00-19:00)	Evening (19:00-23:00)	Night (23:00 - 07:00)
	$L_{A90,5min}$ (dB)	$L_{A90,5min}$ (dB)	$L_{A90,5min}$ (dB)
Friday 15 November 2019	59 *	63	50
Saturday 16 November 2019	52	67	50
Sunday 17 November 2019	50	55	49
Monday 18 November 2019	51	58	49
Tuesday 19 November 2019	52 *	-	-

[1] Measurement not made over full period due to monitoring start and end time.

The lowest background sound levels measured during the survey were $L_{A90,5min}$ 50 dB during the daytime, $L_{A90,5min}$ 55 dB during the evening and $L_{A90,5min}$ 49 dB at night.

4 Guidance and criteria

4.1 IOA Good Practice Guide on the Control of Noise from Pubs and Clubs

The Institute of Acoustics 'Good Practice Guide on the Control of Noise from Pubs and Clubs' (2003) states:

For premises where entertainment takes place on a regular basis, music and associated sources should not be audible inside noise-sensitive property at any time.

For the purposes of this document, noise may be considered not audible or inaudible when it is at a low enough level such that it is not recognisable as emanating from the source in question and it does not alter the perception of the ambient noise environment that would prevail in the absence of the source in question.

People congregating at and around pubs, clubs and similar venues, can lead to raised voices and shouting. Rowdy behaviour of this nature is most likely to occur around the end of entertainment events, or at closing time.

This problem normally arises at the end of an event, as closing time approaches and just afterwards. Posting notices close to the exit doors and in car parks, requesting patrons to leave and disperse quietly, may improve the situation. Relaying a similar message through a PA system, where this is practicable, will reinforce such requests. Potential problems from rowdy behaviour should be taken into account when considering the acceptability of proposed locations and the design of new premises.

In situations where noise-sensitive premises overlook the main entrance/exit, the use of alternative entrance/exit routes, possibly onto a rear or side street, or a car park, may also help to minimise disturbance. Door staff can also assist in minimising disturbance by actively managing entrances and exits.

Noise breakout from venues is typically controlled by the building envelope, the use of lobbied doorsets on entrances and exits, as well as internal planning of the venue including speaker layouts avoiding transmission up the entrances and exits.

Noise breakout from people queueing can be controlled by management of patrons to avoid queuing where possible through the use of pre-purchased ticketing and external door staff ensuring people outside are reasonably controlled.

4.2 Walkers Court Planning Condition PP14

Whilst Licencing is separate from Planning, the Planning Conditions imposed upon the development have been set to ensure that the surrounding residences are protected from noise from internal activities, which include noise from the operation of Madame Jojo's.

Planning Condition 14 of the Walkers Court development states:

“Where noise emitted from the proposed internal activity in the development will not contain tones or will not be intermittent, the 'A' weighted sound pressure level from the internal activity within the use hereby permitted, when operating at its noisiest, shall not at any time exceed a value of 10 dB below the minimum external background noise, at a point 1 m outside any window of any residential and other noise sensitive property, unless and until a fixed maximum noise level is approved by the City Council. The background level should be expressed in terms of the lowest $L_{A90,15mins}$ during the permitted hours of use. The activity-specific noise level should be expressed as L_{AeqTm} and shall be representative of the activity operating at its noisiest.

Where noise emitted from the proposed internal activity in the development will contain tones or will be intermittent, the 'A' weighted sound pressure level from the internal activity within the use hereby permitted, when operating at its noisiest, shall not at any time exceed a value of 15 dB below the minimum external background noise, at a point 1 m outside any window of any residential and other noise sensitive property, unless and until a fixed maximum noise level is approved by the City Council. The background level should be expressed in terms of the lowest $L_{A90,15mins}$ during the permitted hours of use. The activity-specific noise level should be expressed as L_{AeqTm} and shall be representative of the activity operating at its noisiest.”

As part of the planning application a noise survey was undertaken by Acoustic Logic. The lowest measured background noise levels during this survey were $L_{A90,15min}$ 49 dB during the daytime, $L_{A90,15min}$ 53 dB during the evening and $L_{A90,15min}$ 48 dB at night. As a comparison, these levels are little lower than those measured by Sandy Brown in November 2019.

Based on the previous measured noise levels and the Condition 14 criteria, noise levels from the club should not exceed $L_{Aeq,Tm}$ 33 dB at 1 m outside of the residential and other noise sensitive property. This criterion assumes noise breakout may be tonal or intermittent.

5 Noise breakout from the club

5.1 Proposed layout

Madame Jojo's is to be located within the basement of the Walkers Court development, which can be seen within Figure 3 with the venue highlighted in yellow.

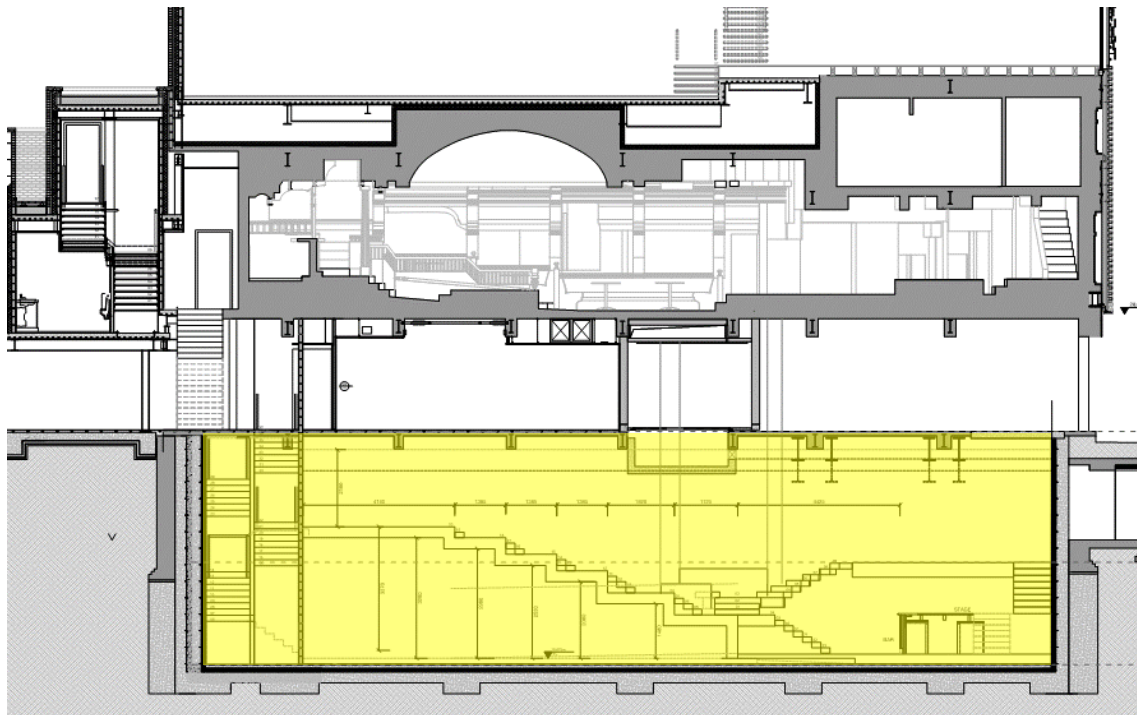


Figure 3 Section through the Walkers Court development including Madame Jojo's at basement level

The internal layout of the venue includes a stage to the south of the venue, with areas of seating in front of the stage and raked seating to the north of the venue.

To the east of the stage, located on the mezzanine level, is the box office and internal entrance area of the club. Between this box office and the street level are three door sets which will act as an acoustic lobby. The door sets will have a set sound insulation performance as part of the design and specification of the venue.

The sound system will be designed to focus the sound on the areas of seating, minimising sound transmitted into the box office area to allow for better communication and to minimise noise breakout through the stairwell and entrance.

The basement and ground floor levels are shown in Figure 4 and Figure 5 respectively. The layout of the Madame Jojo's is subject to change as part of the on-going design, however, the acoustic lobby principle will be incorporated within any design.

SANDY BROWN

Consultants in Acoustics, Noise & Vibration

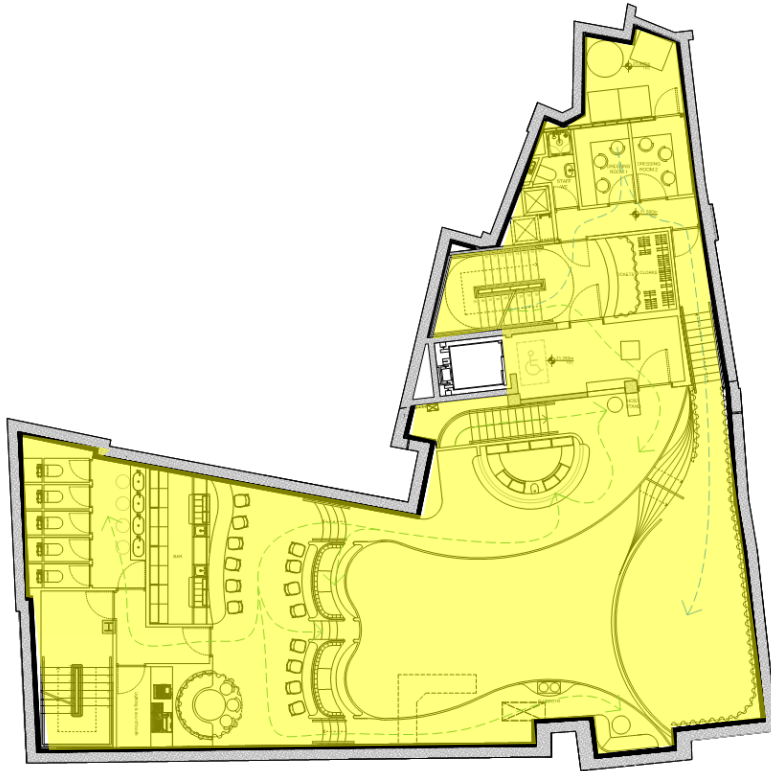


Figure 4 Plan showing the current proposed basement layout of Madame Jojo's

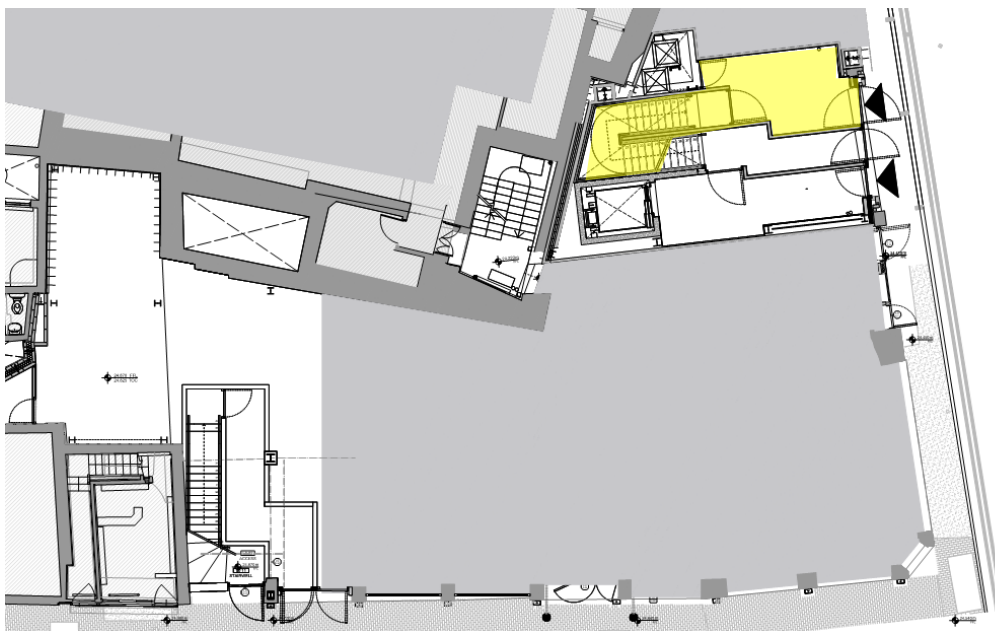


Figure 5 Plan showing the current proposed ground floor layout including the Madame Jojo's entrance

It should be noted that whilst the Walkers Court development contains residential apartments, the design of the development included vibration isolation of these apartments to minimise any sound transfer from both Madame Jojo’s and The Box which is the venue located above Madame Jojo’s, within the Walkers Court development.

5.2 Typical noise levels

Noise levels within bars and clubs can vary. Noise measurements have been carried out within The Box. It is understood that the noise level within the Madame Jojo’s will be equivalent to the show levels measured in The Box.

The noise levels measured within the Box are given in Table 3. The overall noise level is L_{Aeq} 102 dB, which is typical for clubs and music venues. The table also shows that there are reasonable levels of low-frequency sound, subjectively called bass.

Table 3 Measured sound pressure levels

	Octave band centre frequency (Hz)								
	63	125	250	500	1k	2k	4k	8k	(A)
Sound pressure level, L_{Aeq} (dB)	102	105	105	100	95	90	85	85	102

The above noise levels have been used for the purpose of the assessment.

5.3 Assessment

An assessment has been carried out to determine the level of sound transmission from the club, breaking out of the entrance lobby.

The assessment assumes that at any one time two of the three door sets will be closed at any one time and that the doors provide an acoustic performance of at least R_w 35 dB. This performance is achieved by a standard fire rated solid core timber door.

The assessment also assumes that the sound pressure level within the box office space is limited to L_{Aeq} 92 dB as this will be off axis from the directivity of the club sound system.

The calculated noise level incident on the nearest residential facade at 11 Brewer Street, approximately 8 m from the entrance, is L_{Aeq} 27 dB.

This meets the $L_{Aeq,Tm}$ 33 dB limit set by the planning condition. At this level music from within the club is unlikely to be audible at street level and would therefore not impact any of the surrounding residences.

Due to the distance from the exit lobby to the residences and the additional doors that form the exit lobby, the noise level contribution from this path will be significantly lower than from the entrance lobby.

6 Noise from queuing

6.1 Proposal for queuing

It is proposed that the venue will operate with an element of pre-booking and ticketing to minimise the need for external queuing.

Where queuing does occur, prior to normal opening hours, or where a large group turns up at a single time, it is estimated that the queue will be up to 30 people. The queues will be formed either to the left or the right hand side of the entrance, depending on a number of safety and security factors.

6.2 Assessment

To predict the source noise levels to the nearest noise sensitive receptors an assessment has been carried out. The assessment has been based on the following assumptions:

- Up to 15 people (half the queue) will be speaking simultaneously
- Worst affected premises is 10 Brewer Street, which is approximately 8 m away

The typical sound power level for speech is L_{WA} 70 dB. Based on 15 people talking simultaneously and a distance correction of 8 m, the calculated noise level at the residential facade is L_{Aeq} 59 dB.

The calculated noise level from people talking outside the building is 6 dB lower than the existing ambient noise level on the less busy nights (e.g. Sunday and Monday), and around 10-14 dB quieter than the existing ambient noise levels on busy nights (e.g. Friday and Saturday).

As the queues are most likely to occur on the busier nights, when there are more people within the surrounding area the impact of the queuing is even less likely to be noticeable.

It is expected door staff will ensure anyone shouting is warned about causing disturbance or asked to leave the area.

8 Conclusion

The key acoustic issues arising from the operation of the venue are noise breakout from the venue itself and noise generated by patrons as they queue to access the venue.

As part of the assessment an environmental noise survey was carried out to determine the existing external sound levels in the area around the venue against which noise from the venue could be compared.

The lowest background sound levels from the noise survey were $L_{A90,5min}$ 50 dB during the daytime, $L_{A90,5min}$ 55 dB during the evening and $L_{A90,5min}$ 49 dB at night.

The sound levels were greater on Friday and Saturday, which are understood to be due to the crowds at other venues located around the site. On these days the existing ambient noise levels in the evening ranged between L_{Aeq} 69-73 dB, with night time noise levels ranging between L_{Aeq} 69-71 dB.

On the Sunday and Monday nights which are understood to be less busy nights the existing ambient noise levels in the evening were L_{Aeq} 66 dB, with night time noise levels ranging between L_{Aeq} 63-65 dB

An assessment has been carried out to determine the level of sound transmission from the club, breaking out of the entrance lobby. The calculated noise level incident on the worst affected residential facade is L_{Aeq} 27 dB. This meets the $L_{Aeq,Tm}$ 33 dB limit set by the planning condition and is at a level that is unlikely to be audible at street level and would therefore not impact any of the surrounding residences.

An assessment has been carried out to determine the impact of noise from people queuing outside the venue. The calculated noise level incident on the worst affected residential facade from people queuing is L_{Aeq} 59dB

The calculated noise level from people talking outside the building is 6 dB lower than the existing ambient noise level on the less busy nights (e.g. Sunday and Monday), and around 10-14 dB quieter than the existing ambient noise levels on busy nights (e.g. Friday and Saturday).

Some management of noise from people queuing will be required by the door staff to minimise the impact to the surrounding neighbors.

SANDY BROWN

Consultants in Acoustics, Noise & Vibration

Appendix A

Survey details

Equipment

The noise measurements were taken using a Rion NL-52 sound level meter.

Calibration details for the equipment used during the survey are provided in Table 4.

Table 4 Equipment calibration data

Equipment description	Type/serial number	Manufacturer	Calibration expiry	Calibration certification number
Sound level meter	NL-52/00375679	Rion	9 Jul 21	TCRT19/1541
Microphone	UC-59/11168	Rion	9 Jul 21	TCRT19/1541
Pre-amp	NH-25/65806	Rion	9 Jul 21	TCRT19/1541
Calibrator	SV30A/10576	Svan	9 Jul 21	TCRT19/1539

[1] Calibration of the meter used for the measurement is traceable to national standards. Calibration certificate for the sound level meter used in this survey is available upon request.

Calibration checks were carried out on the meter and its measurement chain at the beginning and end of the survey. No significant calibration deviation occurred.

Noise indices

Noise indices recorded included the following:

- $L_{Aeq,T}$ The A-weighted equivalent continuous sound pressure level over a period of time, T.
- $L_{AFmax,T}$ The A-weighted maximum sound pressure level that occurred during a given period, T, with a fast time weighting.
- $L_{A90,T}$ The A-weighted sound pressure level exceeded for 90% of the measurement period. Indicative of the background sound level.

Sound pressure level measurements are normally taken with an A-weighting (denoted by a subscript 'A', eg L_{A90}) to approximate the frequency response of the human ear.

A more detailed explanation of these quantities can be found in BS7445: Part 1: 2003 *Description and measurement of environmental noise, Part 1. Guide to quantities and procedures.*

Appendix B

Results of unattended measurements at Location L

SANDY BROWN

Consultants in Acoustics, Noise & Vibration

Madame Jojo's, Walkers Court
Results of noise logging survey at LOCATION L
15 November 2019 to 19 November 2019

