

ACOUSTIC TECHNICAL NOTE

Reference:	[REDACTED]
From:	[REDACTED]
Date:	24 July 2023
Project:	Lant Street Wine, SE1
Subject:	Proposed Capacity Increase

1.0 INTRODUCTION

Following discharge of Condition 4 of the planning permission for the use of the front part of the ground floor of no 59 Lant Street as a wine bar (Sui generis) in connection with the existing use of no 61 Lant Street as a wine shop (Use Class E(a)) as a result of the RBA Acoustics measurement and assessment report dated 25 May 2022, it is now proposed to increase the maximum capacity of the premises from 32 patrons to 120 patrons. The proposed 120 patron capacity is below the 133 capacity which we are advised would be permitted for the venue based upon premises size.

For the sake of clarity, aside from the capacity change, there is no change to the proposed hours nor nature of trading.

Officers of London Borough of Southwark have requested an acoustic assessment be undertaken of the implications of the proposed capacity increase to 120 patrons and this report seeks to provide the relevant information.

2.0 BACKGROUND

The relevant planning and licensing conditions for the low-key bar area at the Lant Street wine premises in the previous approval contained a requirement for the floor separating the commercial area and the residential flat directly above to be commensurate with providing minimum level of airborne sound insulation of 55dB $D_{nT,w} + C_{tr}$. In addition, there is a requirement to ensure that noise transfer from the ground floor usage into the residential flat does not exceed a level of 25dB L_{Aeq} .

Following extensive acoustic treatment works to the floor separating the two areas, acoustic testing undertaken in May 2022, indicated the following performance level.

Table 1 – Separating Floor Airborne Sound Insulation

Test	Source Room - Location	Receive Room	$D_{nT,w} + C_{tr}$ (dB)
1	Warehouse	Flat 1	55

At the time of our May 2022 assessment, the premises was not trading and it was therefore necessary to make an assessment based upon database information for a similar venue. In the absence of any nationally agreed “standard” noise levels for bars and restaurants, our calculations of noise transfer were based upon typical venue noise levels as set out in the 2013 draft version of the Institute of Acoustics “*Good Practice Guide on the Control of Noise from Places of Entertainment*”.

This document has yet to be formally published but contains a significant amount of useful information regarding bars, pubs and clubs and also outlines “*typical indicative levels of noise found in entertainment and other commercial venues*” as below:

Table 2 – Indicative Noise Level from Restaurants, Bars and Clubs

Source	dBA (L _{eq,T})	63	125	250	500	1k	2k	4k
Quiet Restaurant	67	60	60	60	65	65	55	50
Busy Restaurant	80	60	70	75	75	75	75	70

The above levels are considered to be a reasonable representation of the likely noise conditions within a low key bar with minimal background music. For the majority of the time, noise levels are likely to represent a ‘Quiet Restaurant’, but our analyses has also considered the ‘Busy Restaurant’ scenario for the sake of completeness.

Based upon the predicted acoustic performance of the separating floor structure, and using standard calculation procedures, our analyses predict the following resultant noise levels within the 1st floor residential apartment:

- Quiet Restaurant - 11dBA L_{eq}
- Busy Restaurant - 22dBA L_{eq}

An example calculation (for the Busy Restaurant scenario) is as below:

	Octave Band Centre Frequency								dBA	Source
	63	125	250	500	1k	2k	4k	8k		
Venue Noise Level (L _{eq})	60	70	75	75	75	75	70	70	80	Busy Restaurant
Element Performance	32	44	49	54	62	68	64	66		Measured
Resultant Noise Level within Flat above	28	26	26	21	13	7	6	4	22	

As can be seen from the above, noise levels for both the Quiet and Busy Restaurant are compliant with the required 25dBA L_{eq}.


3.0 CAPACITY INCREASE

As can be seen from the above, our calculations suggested that there is some “headroom” of around 3dB between the 25dBA Condition requirement and the anticipated “worst case” 22dBA noise transmission predicted for the Busy Restaurant scenario.

The Institute of Acoustics “*Good Practice Guide on the Control of Noise from Places of Entertainment*” (which was used as a basis for determining the likely internal noise levels within the premises) does not give any indication on the degree of occupancy for which the indicated noise levels are applicable. As such, it is not possible to draw any direct correlation between these numbers and the implications of the proposed capacity increase.

However, an article published in the Noise and Health Journal in November 2014 [Noise in restaurants: Levels and mathematical model To WM, Chung A - Noise Health \(noiseandhealth.org\)](#) did look into the relationship between the geometrical and operational parameters and measured noise levels. We have therefore given consideration to the findings of this document in the sections below.

The report also identifies that typical noise within a premises does vary dependent upon the ceiling height and given the high ceilings within the wine bar, this should be a material consideration. Table 1 from the above referenced article states the following:

Noise & Health 

A Quarterly Inter-disciplinary International Journal

Table 1: The measured background noise levels in restaurants

Type	Number	Floor area (m ²)	Height (m)	Time period	Occupancy	L _{eq,1-h} (dBA)
Chinese	1	600	3.5	Breakfast	High	78.3
				Lunch	High	79.2
				Dinner	Medium	70.0
	2	1750	4.0	Breakfast	High	75.0
				Lunch	High	73.5
				Dinner	Medium	71.7
	3	3000	2.5	Breakfast	High	79.3
				Lunch	High	77.7
				Dinner	High	73.0
	4	5000	2.4	Lunch	Low	67.6
				Dinner	Medium	75.3
	5	2025	2.7	Breakfast	High	70.1
				Lunch	High	72.1
				Dinner	Medium	71.5
	Fast food	1	1500	4.5	Breakfast	Medium
Lunch					Medium	71.5
Dinner					Low	69.1
2		2450	3.0	Breakfast	Medium	69.5
				Lunch	High	76.9
				Dinner	Medium	75.0
3		130	3.5	Breakfast	Medium	75.2
				Lunch	High	79.1
				Dinner	High	78.5
Western	1	800	4.0	Lunch	High	75.9
				Dinner	Medium	71.3
	2	600	2.5	Lunch	High	82.6
				Dinner	Low	72.0
	3	700	2.5	Lunch	Low	66.7
				Dinner	Medium	73.0
	4	1050	2.5	Lunch	Medium	75.2
				Dinner	Medium	74.6

Given the size of the floor area within the Lant Street premises, with a ceiling of 3.15m and an overall floor area of 112m² the most relevant values in the table above would be:

Chinese Food – Floor Area 600m² – Height 3.5m – High Occupancy – 79.2 dBA L_{eq}.

Fast Food – Floor Area 130m² – Height 3.5m – High Occupancy – 79.1 dBA L_{eq}.

Western Food - Floor Area 600m² - Height 2.5m – High Occupancy – 82.6 dBA L_{eq}.

In each of the above scenarios we have taken the highest (worst case) noise levels for each situation.

Comparing the above worst-case values with those used in our original assessment, it can be seen that for 2 or the 3 situations, the High Occupancy noise levels as measured are actually below those assumed previously. This would therefore suggest that our original assessment was reflective of a higher occupancy than the 32 considered at the time and in fact the change of capacity to 120 would lead to no increase to the predicted noise transfer to the property above.

If we were to adopt the “Western Food” noise levels, this would lead to an increase in source noise of just below 3dBA from our original calculations and hence a corresponding increase of 3dB to the resultant predicted levels in the flat above. This would therefore increase the predicted noise transfer from 22dBA to 25dBA L_{eq} which would remain in line with the requirement of the Condition. We would however note that this prediction is, in fact, likely to over-estimate noise in the premises as the venue size used in the study is some over 4 times as large as Lant Street Wine and the ceiling height is significantly lower than at Lant Street.

In light of the above, we therefore consider that noise transfer into the flat directly above Lant Street Wine will remain in line with the required 25dBA L_{eq} criterion even if the desired capacity increase to 120 is approved.

4.0 OTHER CONSIDERATIONS

From discussions with the premises operator, we understand that the venue has been traded every Thursday and Friday evening since September 2022. To the best of our knowledge, there has only been one complaint made regarding noise and this was received on 18 February 2023 relating to the number of patrons smoking externally. Officers of London Borough of Southwark attended and were satisfied that the majority of smokers were in fact related to the nearby Gladstone public house.

Following discussion with officers of the LBS noise team, we understand other complaints from local residents were made as follows:

Date	Reason for Complaint	Officer Comments	RBA Comments
18th Feb '23	Alleged breach of hours to 00:15	Unknown	Does not relate to the issue of capacity increase.
19th Feb '23	Alleged patron numbers and other conditions not complied with	Unknown	No specific comment regarding noise issues and hence not relevant to this application.
29th March '23	Alleged breach of premises licence complaint to Licensing team	Unknown	Complaint refers to the above noted dates and so not relevant to this application.
1st April '23	Alleged loud music and people noise	Noise team officers visited at 23:45 but no longer an issue when got there.	Complaint not witnessed.
20 th May '23	Alleged noise from persons	No nuisance witnessed.	Investigation of complaint indicated no nuisance.

As can be seen from the above, although a small number of complaints have been made regarding the premises operation, no noise nuisance has been witnessed by Local Authority Officers when visiting the premises.