

PEAK acoustics

Noise Assessment Report

Rev. 0 19/06/2019

Noise Impact Assessment

Project Reference Number: PA851

Report Reference Number: MD0305191NR

Client: Sammons Architectural Ltd

Site: 25-27 Getliffes Yard, Leek, Staffordshire, ST13 6HU

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Project Information

Peak Acoustics have been commissioned to undertake the assessment detailed within this report. Below is a summary of pre-commencement requirements and comments as communicated to Peak Acoustics by involved parties. This information forms the basis of the assessment and report.

Client Contact	Rich Gilman, Sammons Architectural Ltd
Client Requirement	A noise impact assessment is required for a change of use planning application for conversion of an existing vacant Class A1 retail premises into a Class A4 licensed bar.
Site details as communicated by client.	This application seeks permission to extend the existing establishment 'Leek Bar & Grill' (22 - 24 Getliffes Yard, Derby Street, Leek) into an adjacent empty retail unit at 25-27 Getliffes Yard.
Selected Methodology	In order to assess the noise impact on the nearest noise sensitive receptor, Peak Acoustics will refer to BS8233:2014 and WHO Guidelines.
Local Authority Contact	Case Officer: Ben Hurst, Staffordshire Moorlands District Council benjamin.hurst@staffsmoorlands.gov.uk
Local Authority Guidance/Unitary Development Plans/Unique or bespoke standards	Comment dated 18th April 2019 from Refusal of Planning Permission of Application no: SMD/2019/0054 which proposed an open façade and fixed furniture in the courtyard areas specifically for wine bar patrons. "*1. The development would introduce a new use that has the potential to generate significantly more noise near to the adjacent noise sensitive properties. There is a high probability of this causing harm to the amenity of the residential neighbours (sic). The application does not include any evidence to demonstrate that noise would be less than anticipated or that noise 'break out' could be reduced with suitable mitigation. The development would therefore conflict with policies SD4 and and DC1 of the Staffordshire Moorlands Core Strategy and Section 12 'Achieving well-designed places' and Section 15 'conserving natural environment' para. 180 of the National Planning Policy Framework (NPPF).*"

Assessment Summary

A noise assessment has been undertaken to assess the potential noise impact arising from the change of use of the existing vacant Class A1 retail premises (previously used as a wedding shop) into a Class A4 licensed bar, which would form an extension to the existing adjacent licenced premise known as Leek Bar and Grill (22-24 Getliffes Yard), relying as it will on the infrastructure (toilets/storage etc) of the existing premises to function.

A previous application was submitted depicting the wine bar as a predominantly outdoor venture, with an open façade achieved with bi-folding doors making use of a covered external area already owned and licenced by the Applicant (22-24 Getliffes Yard) for dining and drinking. This application was refused partly on the grounds of noise. No noise impact assessment accompanied the original application.

There are no longer any proposals to change the use of the external courtyard. This assessment therefore focuses only on noise due to activities taking place inside the ground floor of 25-27 Getliffes Yard and the following potential impacts:

(a) Noise breakout into the covered courtyard;

(b) Noise breakout through the rear roof and skylights to the neighbouring residential building at 30 Ford Street;

(c) Noise egress through the party wall to the adjacent residential building at 29 York Street.

It has been determined that no adverse impact is likely to arise due to the proposals and the likelihood of complaints is considered to be low, provided the mitigation recommendations as proposed are considered.

1. Noise Sensitive Locations

1.1 The nearest noise sensitive receptors have been identified as 29 York Street, which lies adjacent to the courtyard at the end of Getliffes Yard, and 30 Ford Street, which is situated immediately to the rear of 25-27 Getliffes Yard, as illustrated in figures 1-3 below.

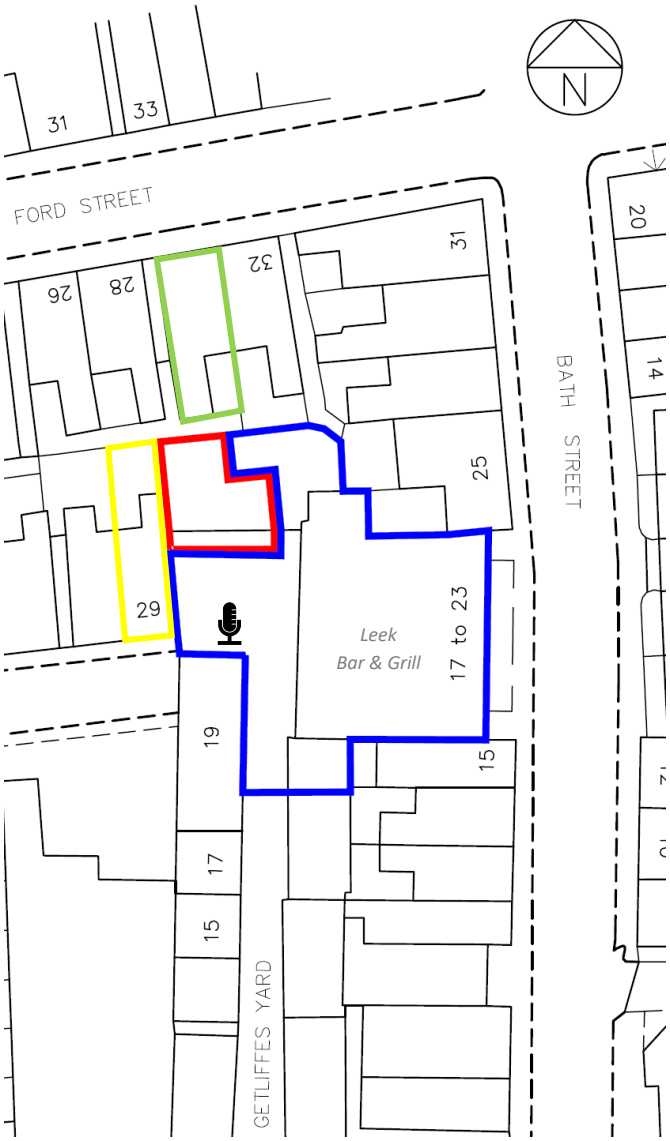




Figure 1: Site Plan

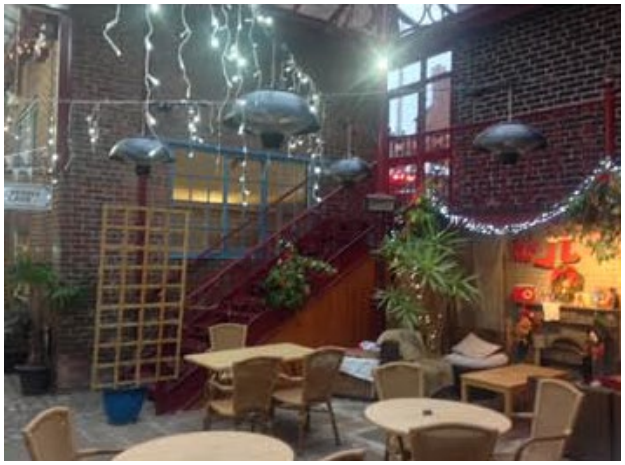


Figure 2: Courtyard View to York Street



Figure 3: York Street View to Courtyard

2. Existing Context

2.1 29 York Road lies adjacent to the existing Leek Bar and Grill covered courtyard dining area, which is sunk down from the level of York Street by some 2.5m.

2.2 The dwelling at 29 York Road and the ground floor proposed wine bar area of 25-27 Getliffes Yard do not share any lateral adjacency except at basement level (it is only assumed that a basement exists), and even here the party wall only overlaps by some 700mm.

2.3 A gate, used only as fire escape access, connects York Road to the Courtyard, via an opening of approximately 2m. There are stairs down to the courtyard level.

2.4 The courtyard is used by Leek Bar and Grill which has a licence to operate between 9am and 12am midnight. Their current opening hours are 9am and 12am midnight, and the company has operated in this way since approximately three years ago. It is understood that the use has not been the subject of any historical complaints.

2.5 The current use is mainly restaurant dining with background music, with an occasional special event having live acoustic-style amplified music for entertainment. It is understood that it is unusual for diners to remain in the courtyard beyond approximately 2200 hours. Bar use is typically inside only.

3. Environmental Noise Survey Summary

3.1 Measurements were undertaken using a calibrated class 1 sound level meter. Full equipment details can be found in **Appendix B**.

3.2 The calibrator reference level was 114.0dB. Full calibration details can be found in **Appendix D**.

3.3 Meteorological conditions are detailed in **Appendix C**.

4. Measured Noise Levels

7.1 Background sound measurements were obtained at the position shown in Figure 1 on page 6 between 12:00 on Friday 24th and 10:00 on Tuesday 28th May 2019. The measurements are shown graphically in Appendix E and are summarised in Table 1 below.

Period	T	dB $L_{Aeq,T}$	Average dB $L_{A90,T}$
Daytime	0700 – 2300	62	54
Night-time	2300 - 0700	51	46

Table 1: Measured Sound Levels across time T

7.2 The microphone was positioned so as to collect data representative of the reverberant noise levels within the covered courtyard area.

5. Assessment 1: Courtyard

5.1 In order to have any significant difference in noise levels at the front façade of 29 York Street, through breakout from the restaurant/wine bar into the courtyard area, a doubling of custom would be required, and/or significant changes would need to be made the way the restaurant operates in terms of entertainment provided.

5.2 No such changes are planned or anticipated and therefore any additional noise breakout into the courtyard area would be considered to be marginal of significance.

6. Assessment 2: Rear Roof

6.1 For the area at the rear of the premises, it is proposed to expose the sloping ceiling and install two new glazed rooflights. The construction of the roof and the glazing must be designed to ensure that patron and music noise is controlled to suitable levels outside of neighbouring properties, especially during the night-time, and a music limiter should be considered in order to ensure that appropriate limits can be met.

6.2 Without any specific guidance from the Local Authority, to avoid the likelihood of complaints occurring is it proposed to set a criterion at 10dB below the average L_{A90} background noise level at the nearest receptor position (the rear of 30 Ford Road). The average background noise level measured between 2300 and 0100 hours on Monday 27th – Tuesday 28th May 2019 (when the restaurant was definitely closed) was 48 dB. It should be noted that where the noise survey was undertaken, the courtyard area provides some shelter from the external environment and background noise levels are actually expected to be higher than this at the facades of the receptor locations. This allows for a robust assessment.

6.3 The target criterion to be achieved at 1m outside the rear of the premises, achieved by a combination of the roof, rooflights and the use sound limiters, is therefore 38dB. At this sound level, allowing 10-15dB reduction for an open window, the corresponding sound level inside a neighbouring window within one meter from the rear of the premises would be expected to be around 23-28dB at most, which is within the desirable limits set out in BS8233:2014 for bedrooms during the night-time. It must be stressed, however, that the rooflights should generally remain closed whenever amplified music is playing, and should always be closed after 2300 hours to avoid the likelihood of complaints occurring.

6.4 In order to achieve the above criterion with the rooflights closed and amplified music playing, the reverberant noise level within the wine bar would need to be limited to around 82dB, including music noise. Music noise levels at this volume are not anticipated, but installation of a noise limiter may be recommended to provide some assurance of this.

6.5 This calculation takes into account the construction of the rear room including a pitched tiled roof with two approx. 1m x 1m double-glazed rooflights and allows for consideration of the internal dimensions of the wine bar. The calculations involve some assumptions concerning the construction of the rear room and pitched roof. A detailed specification for the control of music noise can be undertaken at a later date, if required, once the full construction details (including glazing specification for the rooflights), and positions of loudspeakers, are known.

7. Assessment 2: Party Wall

7.1 Due to the different ground levels at the site, the dwelling at 29 York Road and the ground floor proposed wine bar area of 25-27 Getliffes Yard do not share any lateral adjacency except at basement level (it is assumed for the purpose of the assessment that a basement does exist but this has not been confirmed), and even here the party wall only overlaps by some 700mm.

7.2 The greatest likelihood of any adverse impact would be the potential for transfer of lower-frequency music noise through the wall during night-time hours. It is considered unlikely that the occupants of 29 York Street use any basement space a bedroom, but in order to reduce any impact to the lowest possible practicable level, the following advice should be considered:

(a) Any speakers mounted on the party wall should be acoustically isolated from the structure of the building;

(b) A music noise limiter should be installed in accordance with the advice set out in Section 6 above. Particular consideration should be made at the point of commissioning to controlling the sound levels at the 63Hz and 125Hz octave band frequencies specifically, under the guidance of an acoustics specialist.

7.3 Calculations indicate that if music noise levels were limited to 82dB as recommended in Section 7 above, the sound ingress through the masonry party wall into the neighbouring building would be at most around 28dB which is below the desirable limit set out in BS8233:2014 for bedrooms during the night-time. Music noise levels at this volume are not anticipated, but installation of a noise limiter could provide assurance of this.

7.4 The calculations involve some assumptions concerning the construction of the party wall. In order to provide an accurate prediction of any noise transfer, sound insulation testing of the party wall could be undertaken, but it should be noted that this would require access to both sides of the wall.

8. Conclusion

8.1 A noise assessment has been undertaken to assess the potential noise impact arising from the change of use of the existing vacant Class A1 retail premises (previously used as a wedding shop) into a Class A4 licensed bar, which would form an extension to the existing adjacent licenced premise known as Leek Bar and Grill (22-24 Getliffes Yard), relying as it will on the infrastructure (toilets/storage etc) of the existing premises to function.

8.2 The following potential impacts have been considered:

(a) Noise breakout into the covered courtyard;

(b) Noise breakout through the rear roof and skylights to the neighbouring residential building at 30 Ford Street;

(c) Noise egress through the party wall to the adjacent residential building at 29 York Street.

8.3 It has been determined that no adverse impact is likely to arise due to the proposals and the likelihood of complaints is considered to be low, provided the mitigation recommendations as proposed are considered.

9. Measurement Uncertainty

The monitoring equipment is subject to a 1dB error margin, however calibration before and after measurements allows the drift within the margin to be monitored and thus demonstrates that minimal drift occurred throughout the measurements.

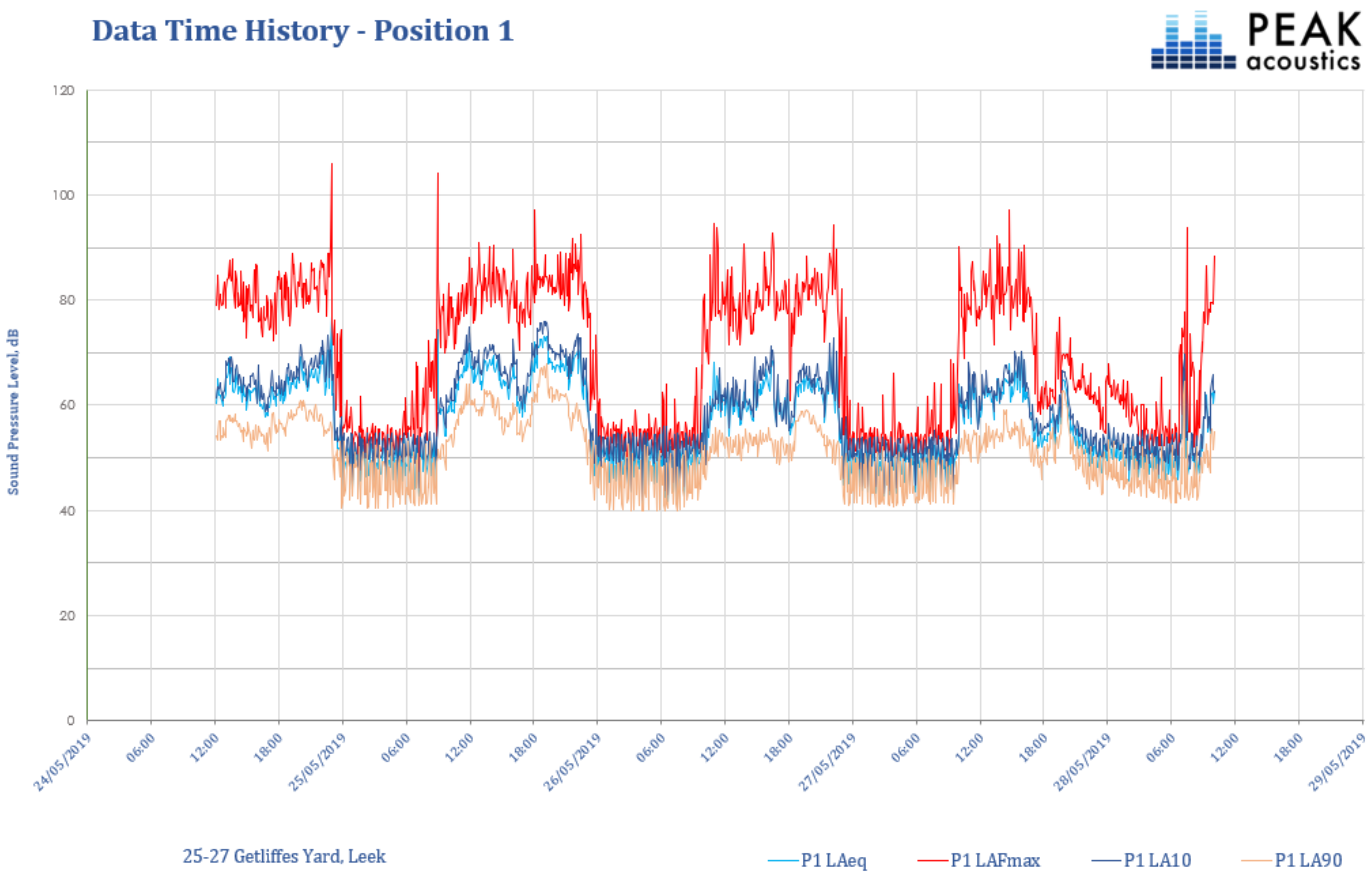
Appendix A - Background Measurement Details					
Measurement	Kit	Start Date	Start Time	End Date	End Time
M1	A4	24/05/2019	12:00	28/05/2019	10:00

Appendix B - Equipment Details					
Kit	Equipment	Make	Model	Class	Serial Number
A4	Sound Meter	Svantek	971	1	60688
A4	Pre-Amp	Svantek	SV18	1	62781
A4	Calibrator	Svantek	SV31	1	90273

Appendix C - Meteorology Details						
Measurement	Temp C	Wind Speed m/s	Wind Direction	Humidity %	Precipitation mm	Cloud Cover (Oktas)
M1	10-15	4	NW	60-80	0	4/8

Appendix D - Calibration Details					
Equipment	Calibrator Ref Level (dB)	Level Before (dB)	Deviation Before (dB)	Level After (dB)	Deviation After (dB)
M1	114.0	113.5	0.5	114.0	0.0

Appendix E – Noise Measurement Details



PEAK acoustics



Let us introduce ourselves

Peak Acoustics formed in 2011, we are a fully accredited specialist consultancy and testing organisation.

We are a diverse team of Acoustic Consultants, Specialist Engineers and Building Compliance Technicians, with a network spanning the UK. We are proud to offer our services nationally, with no job too big or small.

We provide Acoustic Consultancy, Building Compliance Testing and Energy Services.

Additional Services

We offer an extensive range of services in the sectors of Acoustic Consultancy, Building Compliance & Energy Efficiency. We are able to put together custom packages combining multiple services which saves both time and money for you.

Building Compliance

- **Sound Insulation Testing**
- **Air Tightness Testing**
- **Ventilation Testing**
- **Water Efficiency Calculations**
- **Sound Insulation Specification**

Energy Efficiency

- **SAP Calculations**
- **EPC's**
- **SBEM Calculations**
- **Energy Statements**
- **Sustainability Statements**
- **MEES Regulations**
- **Commercial EPC's**

Acoustic Consultancy

- **Noise Assessment for planning conditions**
- **Construction site noise monitoring**
- **Noise at work assessments**
- **Noise & Vibration Impact Assessments**

Peace of mind

We are accredited and registered by all the relevant major UK authorities to provide the services we offer. Peak Acoustics is UKAS accredited for sound insulation testing, ATTMA registered for Air Leakage Testing. and our Energy team are all Domestic On-Completion Energy Assessors.

OUR ADDED VALUE

We combine our detailed knowledge of building regulations with our technical understanding of building physics, acoustics and environmental sciences to maximise development quality. Our work ensures appropriate strategies and studies are prepared to demonstrate to demonstrate to local authorities how proposed developments will be of high quality and generate acceptable impact on the surrounding environment.

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