NOTICE OF REVIEW

UNDER SECTION 43A(8) OF THE TOWN AND COUNTRY PLANNING (SCOTLAND) ACT 1997 (AS AMENDED)IN RESPECT OF DECISIONS ON LOCAL DEVELOPMENTS

THE TOWN AND COUNTRY PLANNING (SCHEMES OF DELEGATION AND LOCAL REVIEW PROCEDURE) (SCOTLAND) REGULATIONS 2013

IMPORTANT: Failure to supply all the relevant information could invalidate your notice of review.

Use BLOCK CAPITALS if completing in manuscript

Applicant(s)

Name Mark Deans

Address 64 Weensland Road, Hawick

Postcode TD9 9NX

Contact Telephone 1 [redacted]
Contact Telephone 2
E-mail* [redacted]

Agent *(if any)*

Name

Address

Postcode

Contact Telephone 1
Contact Telephone 2
E-mail*

Mark this box to confirm all contact should be through this representative: ☐

	Yes	No
* Do you agree to correspondence regarding your review being sent by e-mail?	☑	☐

Planning authority Scottish Borders Council

Planning authority's application reference number 17/01368/FUL

Site address Deans' Bar, 3 Orrock Place, Hawick, TD9 0HQ

Description of proposed development: Variation of condition 4 of planning permission 16/00753/FUL to reinstate 2 no windows in lieu of air conditioning units (original application 20/06/16).

Date of application 22/09/17 Date of decision (if any) 10/12/18

Note: this notice must be served on the planning authority within three months of the date of the decision notice or from the date of expiry of the period allowed for determining the application.

Nature of application

1. Application for planning permission (including householder application) ☐
2. Application for planning permission in principle ☐
3. Further application (including development that has not yet commenced and where a time limit has been imposed; renewal of planning permission; and/or modification, variation or removal of a planning condition) ☑
4. Application for approval of matters specified in conditions ☐

Reasons for seeking review (tick one box)

1. Refusal of application by appointed officer ☑
2. Failure by appointed officer to determine the application within the period allowed for determination of the application ☐
3. Conditions imposed on consent by appointed officer ☐

Review procedure

The Local Review Body will decide on the procedure to be used to determine your review and may at any time during the review process require that further information or representations be made to enable them to determine the review. Further information may be required by one or a combination of procedures, such as: written submissions; the holding of one or more hearing sessions; and/or inspecting the land which is the subject of the review case.

Please indicate what procedure (or combination of procedures) you think is most appropriate for the handling of your review. You may tick more than one box if you wish the review to be conducted by a combination of procedures.

1. Further written submissions ☑
2. One or more hearing sessions ☑
3. Site inspection ☑
4. Assessment of review documents only, with no further procedure ☐

If you have marked box 1 or 2, please explain here which of the matters (as set out in your statement below) you believe ought to be subject of that procedure, and why you consider further submissions or a hearing are necessary:

I believe my business is being treated unfairly.

Site inspection

In the event that the Local Review Body decides to inspect the review site, in your opinion:

	Yes	No
1. Can the site be viewed entirely from public land?	☑	☐
2 Is it possible for the site to be accessed safely, and without barriers to entry?	☐	☑

If there are reasons why you think the Local Review Body would be unable to undertake an unaccompanied site inspection, please explain here: Building would be locked

Statement

You must state, in full, why you are seeking a review of your application. Your statement must set out all matters you consider require to be taken into account in determining your review. Note: you may not have a further opportunity to add to your statement of review at a later date. It is therefore essential that you submit with your notice of review, all necessary information and evidence that you rely on and wish the Local Review Body to consider as part of your review.

If the Local Review Body issues a notice requesting further information from any other person or body, you will have a period of 14 days in which to comment on any additional matter which has been raised by that person or body.

State here the reasons for your notice of review and all matters you wish to raise. If necessary, this can be continued or provided in full in a separate document. You may also submit additional documentation with this form.

Please see attached supporting statement.

Have you raised any matters which were not before the appointed officer at the time the determination on your application was made?

Yes ☐ No ☑

If yes, you should explain in the box below, why you are raising new material, why it was not raised with the appointed officer before your application was determined and why you consider it should now be considered in your review.

List of documents and evidence

Please provide a list of all supporting documents, materials and evidence which you wish to submit with your notice of review and intend to rely on in support of your review. Note: there will be no opportunity to submit further documents to accompany this notice of review.

Supporting Statement
Image of blocked up windows to rear of property
Email between Environmental Health and GSP Acoustics agreeing methodology to be used for noise assessment.
Noise Impact Assessment

Note: the planning authority will make a copy of the notice of review, the review documents and any notice of the procedure of the review available for inspection at an office of the planning authority until such time as the review is determined. It may also be available on the planning authority website.

Checklist

Please mark the appropriate boxes to confirm you have provided all supporting documents and evidence relevant to your review:

- [x] Full completion of all parts of this form
- [x] Statement of your reasons for requiring a review
- [ ] All documents, materials and evidence which you intend to rely on (e.g. plans and drawings or other documents) which are now the subject of this review.

Note: where the review relates to a further application e.g. renewal of planning permission or modification, variation or removal of a planning condition or where it relates to an application for approval of matters specified in conditions, it is advisable to provide the application reference number, approved plans and decision notice from that earlier consent.

Declaration

I the applicant/~~agent~~ [delete as appropriate] hereby serve notice on the planning authority to review the application as set out on this form and in the supporting documents.

Signed [redacted] Date 20.02.19

The completed form should be returned to the Clerk of the Local Review Body, Democratic Services, Scottish Borders Council, Council Headquarters, Newtown St. Boswells TD6 0SA or sent by email to localreview@scotborders.gov.uk

Deans' Bar Notice of Review Supporting Statement

We took on this property in 2016 feeling really excited. It has been a pub since the 1800's and as far as we know is the oldest operating licensed premises in the town, so is steeped in local history. It was also owned by my wife's Great Grandfather for over 50 years (BT Smith & Son) who built the current building as it stands today. It only became a club when the YM Rugby Club took it over approximately 10 years ago and run it as a club.

When we applied for our license, we were advised that we would require Planning permission to use the building as a pub even though we were making no physical changes. When the YM took on the property they too should have applied for Planning so that they could run it as a club, however they did not, so the use of the building was never officially changed and was therefore always a pub. SBC still insisted that we required Planning permission as it had been run as a club for over 10 years.

We submitted the application in June 2016 and were able to open the front bar in December 2016 but were advised that the function room would require ventilation by the way of air conditioning units. We found this to be very contradictory on two points - we were allowed to open the front bar without the same ventilation and if the YM still owned the property they would still be able to use the function room as is. The units are thousands of pounds and were never required for the any of the previous owners and the use of that room is not changing. Also, there is a noise condition attached to the units and we have been unable to source units that satisfied this condition. We were also asked by Environmental Health to block up the existing air vent on the ceiling, so this was a bit confusing.

The point I would like to get across is that no other bar or function room in the town has had to install these types or similar air conditioning units. Square One for example has a bar in a cellar with no windows or ventilation. Since we have opened, The Bridge Function Room and 13 Brew's Function Room have all been allowed to open without air conditioning units and we find it a bitter pill to swallow that these types of places are allowed to open without any fuss or requirements and are probably getting the business we are having to turn away. Some also have windows that open which is one of the reasons that our planning application was refused.
The Office Bar has recently installed new windows which open the same as ours, again without any problems.
Another example is Coopers Bar on the High Street, who knocked a wall down in their bar to create a pool room without planning permission (they have single pane glass and their ventilation is extractor fans). They then applied for planning permission and this was granted as the room they opened up was an existing part of the building. The windows we opened up in the function room were also an existing part of our building.

We then decided, instead we would replace the existing windows and install extractor fans – to a similar specification that most other bars in the town use. On 22 September 17 I made a planning application to reinstate the 2 windows in the function room in Deans' Bar in lieu of the air conditioning units required in the original planning application.

There were already windows in the function room which had previously been blocked up on the outside with breeze blocks by the YM without planning permission (see attached picture). The windows on the inside were still present; but broken and required to be replaced. I therefore had the breeze blocks removed and had the broken windows replaced with triple glazing. (In hindsight this was done prematurely, and I shouldn't have done this until planning had been approved; but as the windows were an existing feature I presumed there wouldn't be an issue). I sent the

specifications of the windows to Planning and I also sent in (and discussed with Forbes Shepherd) the details of extractor fans that were fitted for ventilation.

I was asked in December 17 to arrange a noise assessment to determine the impact of the windows (no other factor was requested to be tested). Forbes Shepherd also asked if I could get the front bar assessed at the same time, which I agreed to at a cost to me of nearly £2500. I was in constant communication with Forbes during this time. It took a few months for me to get quotes and to raise funds for the assessment of the function room and the front bar and these were carried out in May 2018 with the methodology for the noise assessments discussed and agreed between Forbes Shepherd and CSP Acoustics (please see attached email). Forbes advised that once the noise assessment was complete for the function room, if there were no major issues, he couldn't see an issue in planning being passed.

The noise report for the function room came back and the only recommendation was a new acoustic fire door which we had fitted at the end of September. The reports were submitted to SBC on 10 August 2018.

We emailed Planning and Environmental Health on 25 September 2018 with the specification of the fire door and to advise it would be fitted that week. In that email it was mentioned that the noise reports were issued to SBC on 10 August 2018. Stuart Herkes responded to say that he was unable to locate these reports.

We resent these on 26 September 2018 and were advised they would be forwarded to Environmental Health. It was at this point we were made aware that Forbes Shepherd was on long term sick leave which I believe has led to the issue of poor communication from SBC. Since Forbes left there has been a total breakdown in communication.

SBC had Carmichael Acoustics, an independent Acoustic company assess our noise report and even though the method of assessment was agreed with Forbes Shepherd on 25/04/2018, there appears to be a suggestion in the comments from Carmichael Acoustics and the council's subsequent decision that a different assessment method ought to have been adopted.

Is it standard practice for noise assessments to be scrutinised by an outside body, or has this just been a practice adopted for us?

I asked for a meeting on 2 October 2018 to discuss how we can take steps to resolve all this and was turned down by Lynn Crothers from Environmental Health.

We are having an ongoing noise issue with the upstairs neighbour and realise this has massive implications on the operation of the bar. However, I feel it is very unfair that one person, (who since the first day we opened made it very clear that he wants the bar closed rather than resolve any noise issues and openly said this to Councillor Davie Paterson) can effectively determine the fate of my business. There were no recorded complaints when the YM ran the bar and they had live bands and discos in the function room which were very much open to the public and we genuinely feel we are being harassed by this person, supported by Environmental Health. It feels as though since Forbes Shepherd left, Environmental Health has picked a side and have become very obstructive and we are being treated very unfairly. All we want is a resolution to this problem that will allow us to run the function room the way it has always been and was meant to be, rather than us have an empty room that is going to waste and we want to be treated the same as other similar businesses in the town.

The amount of stress and pressure on health and family life has been unbearable, we are a young family with children and the excitement and enjoyment of opening and running the bar has been completely shattered and made so difficult operationally and financially for something that should have been pretty straightforward and seems to be for other similar businesses.

I genuinely feel my business is being treated unfairly and being scrutinised and asked to do things other businesses in the town are not. We are turning away functions regularly which highlights that there is a demand for this room to be open the same as it has always been. This is also a massive loss of revenue for us and may be the difference between the bar remaining open or having to close.

RE: 1285 Deans Bar, 3 Orrock Place, Hawick - Noise Impact Assessment

Shepherd, Forbes FShepherd@scotborders.gcsx.gov.uk
24/04/2018 15:13

To: Michael Richardson

Michael

The criteria appear to be fine.

Your proposal involves accessing the upstairs flat to carry out testing. Can you let me know when you intend carrying out the assessment so that I can speak to the owner of the property and hopefully negotiate to get you access to the property?

Regards

Forbes Shepherd
Environmental Health Officer
Environmental Health
Planning & Regulatory Services
Environment & Infrastructure
T: 0300 100 1800
E: fshepherd@scotborders.gcsx.gov.uk

From: Michael Richardson [redacted]
Sent: 23 April 2018 14:04
To: Shepherd, Forbes
[redacted]
Subject: 1285 Deans Bar, 3 Orrock Place, Hawick - Noise Impact Assessment

***** This email was received from the GCSX *****
Good Afternoon Mr. Forbes Shepherd,

Deans Bar, 3 Orrock Place, Hawick Noise Impact Assessment (17/01368/FUL)

CSP Acoustics have been appointed to carry out a noise impact assessment with respect to the variation in planning permission for Deans Bar. The assessment will review the potential impact of reintroducing windows into the Function suite, which are currently blocked off. There will also be an assessment of the noise ingress from the front bar into the residential flat above.

We are contacting you to confirm the assessment methodology and criteria prior to carrying out any works on the project.

Function Suite Assessment

Our proposed assessment is as follows; Use CSP Acoustics database survey measurements for music noise levels within the function suite then calculate levels of noise breaking out through the proposed windows (assuming these are closed). To determine the music noise level occurring inside the nearest dwelling we will apply distance attenuation and a correction for a partially open window. Resulting Internal noise levels will then be compared against NR20 for function suite usage between 2300-0700 and similarly NR30 for usage between 0700-2300.

Where music noise levels arising within the nearest dwelling exceed these limits recommendations will be made to reduce noise impact.

Bar Assessment

With approved access to the flat above, carry out sound insulation testing of the floors airborne sound insulation performance between the bar and the flat above. Testing may be carried out in a number of rooms in the flat above to get a broad picture of the floor performance.

From the sound insulation test results and information about activity within the bar below, provide a summary of any potential areas of concern with reference to BS8233:2014 internal noise levels, and provide guidance where necessary.

Testing and calculations of the floors sound insulation performance will be in accordance with;

BS EN ISO 16283-1:2014
BS EN ISO 717-1: 2013

If you can get back to me to confirm the criteria it would be appreciated.

Kind regards,

Michael Richardson, TechIOA
Acoustic Technician

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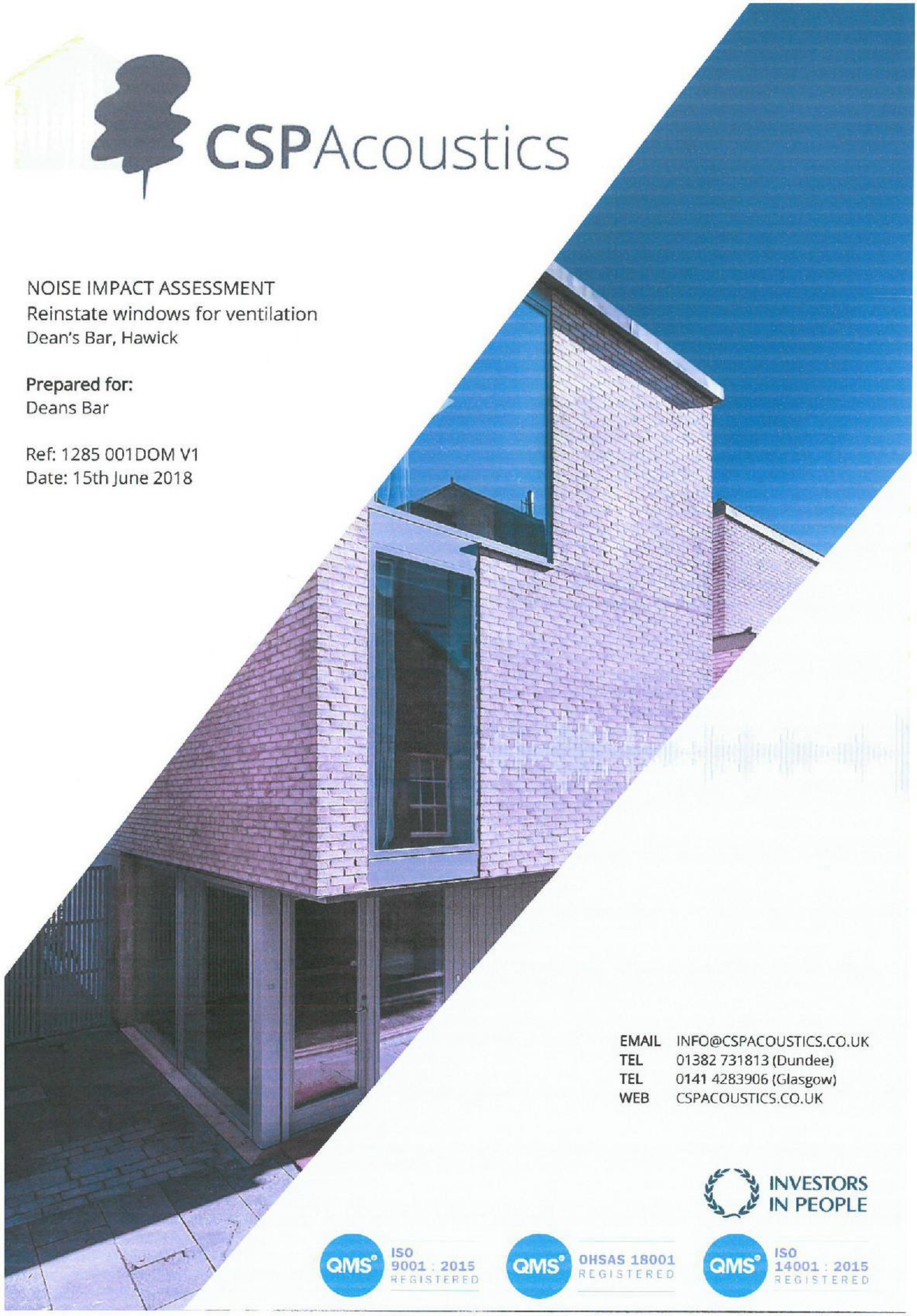
NOISE IMPACT ASSESSMENT
Reinstate windows for ventilation
Dean's Bar, Hawick

Prepared for:
Deans Bar

Ref: 1285 001DOM V1
Date: 15th June 2018



EMAIL INFO@CSPACOUSTICS.CO.UK
TEL 01382 731813 (Dundee)
TEL 0141 4283906 (Glasgow)
WEB CSPACOUSTICS.CO.UK

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Contents

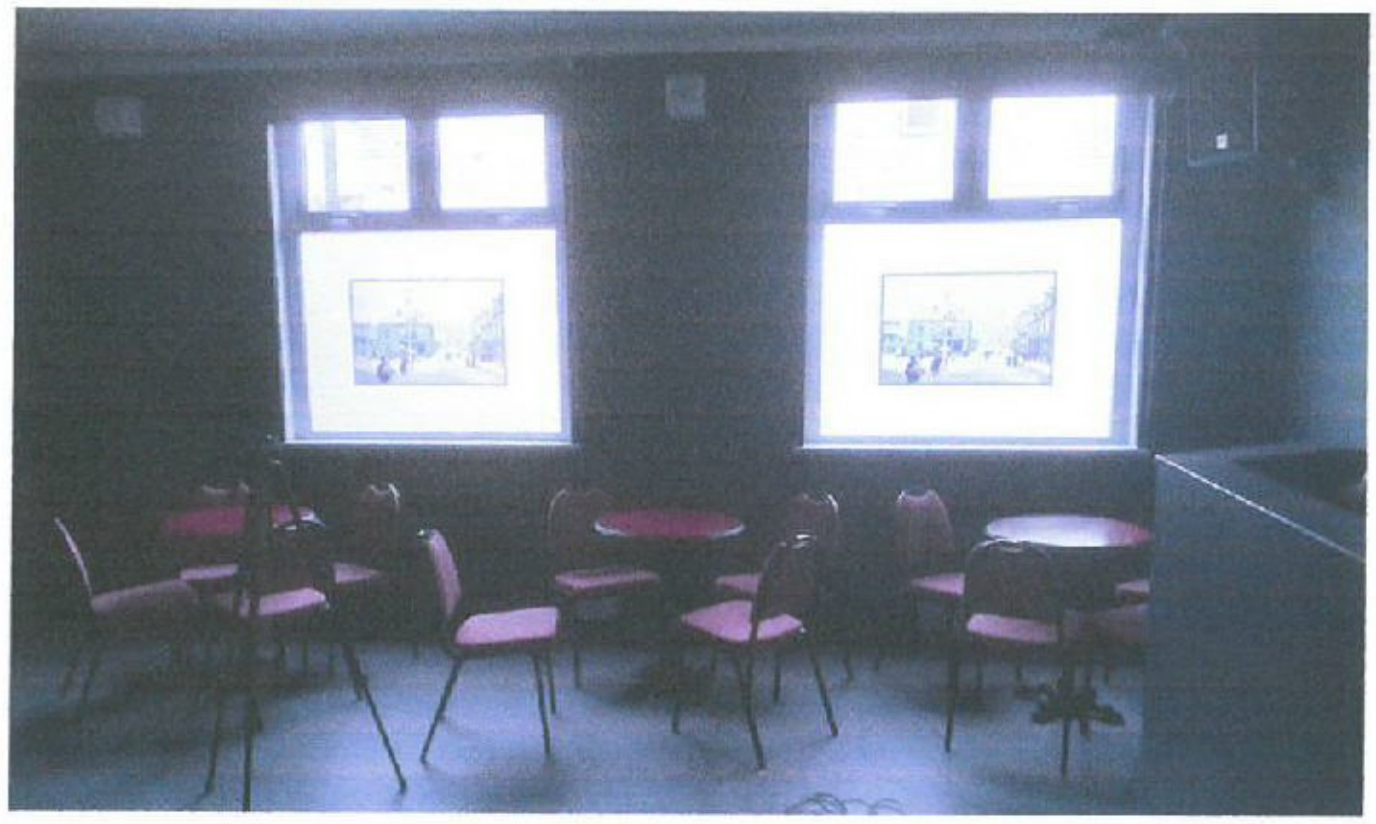
Document Revision History

Version	Reason	Date/Edits Made By:
1280 001 DOM	1st Issue	

1.00 Introduction

1.01 CSP Acoustics has been commissioned to investigate the potential adverse noise breakout through the two reinstated window units at the Dean's Bar premises, located at 3 Orrock Place, Hawick, TD9 0HQ.

1.02 The two windows are located in Dean's Bar function room as shown in the following picture. It is understood that the function room has a license for live and amplified music.



1.03 The evaluation is based on the glazing construction detail provided by Deans Bar and similar triple glazing sound reduction performance[1].

1.04 The likely amplified music reverberant levels have been compared with the Scottish Borders Planning Department requested indoor criteria, i.e. the noise rating curves NR20 night time. It is believed that compliance with the lower night-time levels means also compliance with the higher day time limit.

1.05 It is understood that the required indoor levels are to be met with the receptor's windows open for ventilation.

1.06 It should be noted that although the fire escape door was not commissioned for evaluation it is likely that, at its actual conditions, it provides significant source of noise breakout.

[1] Velfac triple glazing windows

1.07 The assessment is based on the following legislative, planning policy and guidance context:

- BS 8233:2014 Guidance on sound insulation and noise reduction for buildings;
- The Planning Advice Note PAN 1/2011 'Planning and Noise', provides advice on the role of the planning system in helping to prevent and limit the adverse effects of noise;
- Planning and Noise, Planning Advice Note (1999) PAN56 Scottish Executive

1.08 All CSP Acoustics Consultants/Surveyors hold membership of the Institute of Acoustics.

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CSP Acoustics:

- Fort Street House, 63 Fort Street, Broughty Ferry, Dundee DD5 2AB
- 29 Eagle Street, Craighall Business Park, Glasgow G4 9XA

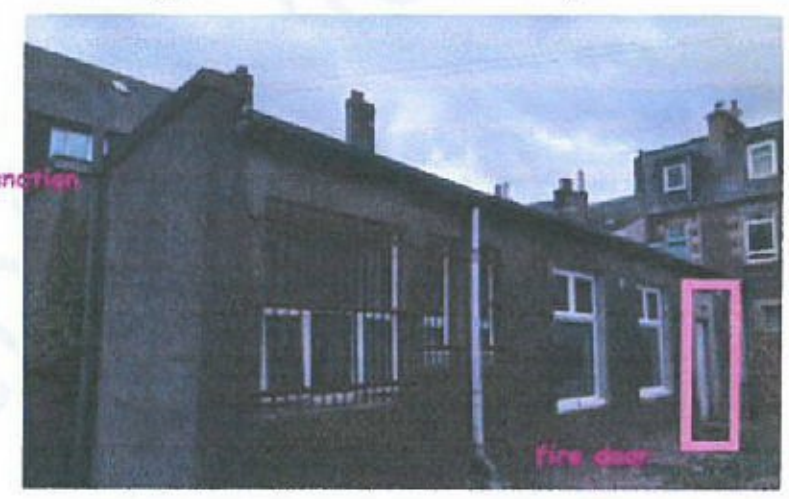
2.00 Summary

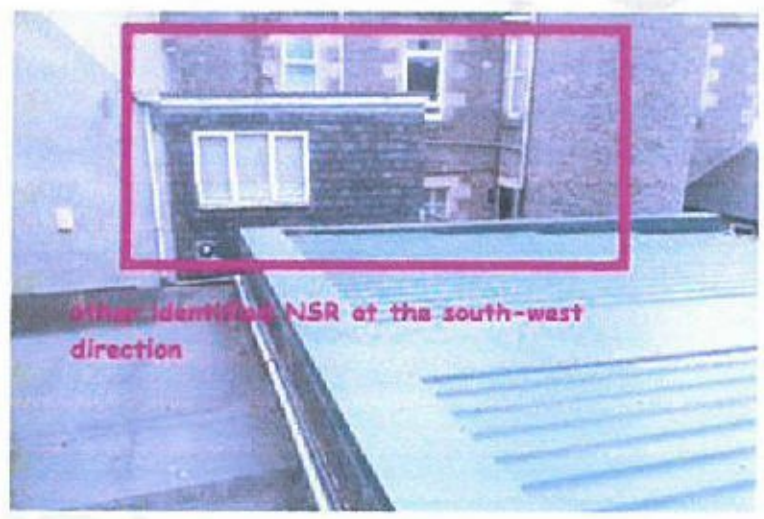
2.01 CSP Acoustics has completed a noise breakout assessment for the Dean's Bar function room western façade windows.

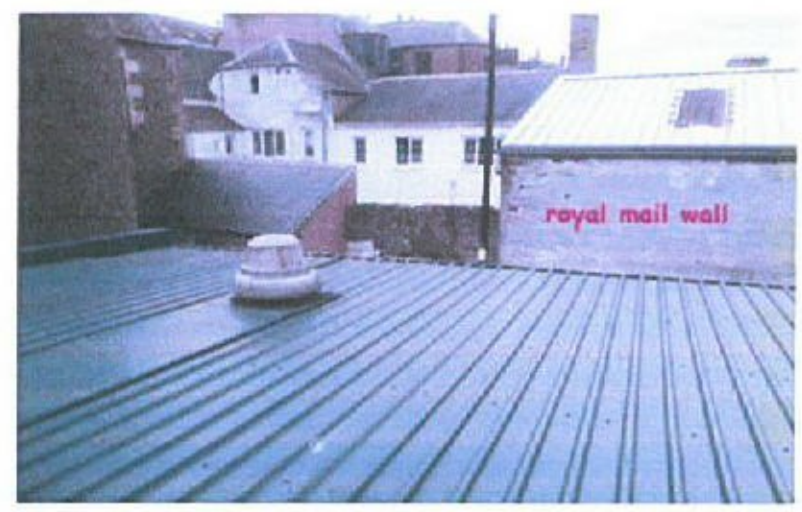
2.02 The nearest identified NSR is located above the function room and at 6m to the southern-west direction.

2.03 During the sound insulation survey it was perceived significant leakage of the sound energy source located in the function room through the fire escape door.

2.04 The following pictures presents the actual configuration surroundings:







2.05 Potential noise breakout through the windows to the identified nearest NSR has been evaluated based on the recorded reverberant levels of amplified music played in other similar venues as follows:

	Octave band centre frequency (Hz)							
LAeq,t 90dB(A)	63	125	250	500	1k	2k	4k	8k
Band Lp levels	83	86	87	87	88	79	71	66

2.06 Note that the values above should be considered as the music higher limit settings.

2.07 The predicted noise indoors at the NSR located above the function room and at 6m to the south-west direction is summarized in the following table:

	Octave band centre frequency (Hz)							
NSR ID	63	125	250	500	1k	2k	4k	8k
Room above function room	30	29	29	22	17	10	0	0
At 6m distance	32	31	31	24	19	12	0	0

2.08 The predicted indoor noise levels at the nearest NSR due to noise breakout through the function room windows indicated compliance with the required NR criteria for day NR35 and night-time NR20.

	Octave band centre frequency (Hz)							
Criteria	63	125	250	500	1k	2k	4k	8k
NR20	51.3	39.4	30.6	24.3	20	16.8	14.4	12.6
NR35	63.1	52.4	44.5	38.9	35	32	29.8	28

2.09 Although the predicted noise breakout through the windows seems to comply with the nearest NSR indoor levels it is advised that the fire escape door is refitted in a made good and resealed door frame. Additionally the door itself should be replaced by an acoustically rated solid door to reduce noise transfer.

3.00 Assessment and Results

3.01 It is understood that the 36mm thick, 1.580m x 1.980m triple glazing units are constructed with 4mm glass/ 12mm gap/ 4mm glass/ 12mm gap filled with argon gas and 4mm glass panes.

3.02 According to other similar construction, typically this glazing would provide a mean sound reduction index in the order of Rw 34dB and the likely expected octave band spectra is given in the following table:

	Octave band centre frequency (Hz)							
4/12/4/12/4	63	125	250	500	1k	2k	4k	8k
	20	24	25	34	39	43	46	50

Table 1 – glazing sound reduction index (dB)

3.03 The music levels used to evaluated the potential breakout is given below:

	Octave band centre frequency (Hz)							
LAmax 90 dB(A)	63	125	250	500	1k	2k	4k	8k
Band Lmax	83	86	87	87	88	79	71	66

Table 2 – reverberant music levels (dB)

3.04 The predicted noise breaking through the function room windows' to open windows[2] above and diagonally is as follows:

- Note that the window above function room is around 7m distance and that the next nearest NSR is located to the south-west direction at approximately 6m;
- The noise break-in calculation not consider the fully minus 6dB attenuation provided by indoor to outdoor levels due to the surrounding buildings wall's reflection.

	Octave band centre frequency (Hz)							
NSR ID	63	125	250	500	1k	2k	4k	8k
Room above function room	0	5	12	8	5	0	0	0
At 6m distance without wall reflection	0	0	7	3	0	0	0	0

[2] Open windows are considered to provide 15dB of noise attenuation

Table 3 – predicted noise break-in at the nearest identified NSR (dB)

3.05 The above results are based on the following noise transfer between indoor to outdoor algorithm:

$$Lp_{at\ facade} = Lp_{fr} + 10\log S_{windows} - SRI_{window} - 6 \qquad \text{(Equation 1)}$$

Where:
Lpfr is the reverberant music levels played in the function room;
S is the area of windows, in this instance S equal to approximately 6.26m^2;
SRI is the sound reduction index of the windows
Note: Minus 6dB is the typical correction from a reverberant room to outside. However in this instance, only -3dB will be applied to account for the surrounding walls' reflection.

3.06 Additionally, the calculated noise levels at the façade are then corrected to minus 15dB to predict the likely indoor noise levels.

3.07 Distance attenuation is calculated based on the following algorithm:

$$Lp = 10\log (Q/4\pi r^2) \qquad \text{(Equation 2)}$$

Where:
Lp is the predicted levels at a distance r;
Q is 2 in this instance due to directivity of spherical propagation and one reflective surface;

3.08 The NSR indoors correction is given by:

$$Lp = 10\log (T/0.16xV) \qquad \text{(Equation 3)}$$

Where:
Lp is the predicted reverberant indoor corrected levels;
T is the reverberation times in seconds and in this instance typical 0.5secs has been used;
V is the bedroom under evaluation approximate volume. In this instance 32m^3 have been used.

3.09 The following table evaluates the predicted indoor noise levels against the night-time criteria. It is reasonable to assume that the higher day time noise limits would also be achieved if the predicted NSR indoor night-time levels are met.

	Octave band centre frequency (Hz)							
NSR ID	63	125	250	500	1k	2k	4k	8k
Room above	0	5	12	8	5	0	0	0

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function room								
NR20	51.3	39.4	30.6	24.3	20	16.8	14.4	12.6
Compliance verification	-51.3	-34.4	-18.6	-16.3	-15	-16.8	-14.4	-12.6
At 6m distance	0	0	7	3	0	0	0	0
NR20	51.3	39.4	30.6	24.3	20	16.8	14.4	12.6
Compliance verification	-51.3	-39.4	-23.6	-21.3	-20	-16.8	-14.4	-12.6

Table 4 – indoor noise levels evaluation (dB)

3.10 The above summaries of results are all negative, i.e. below the set criterion, and therefore indicate compliance with the set night-time noise rating curve NR20.

3.11 A copy of the calculations' worksheet has been included in the Appendix B of this report.

4.00 Conclusion

4.01 The noise break out evaluation is based on typical amplified music levels. However, it should be kept in mind that these levels must be used to limit the amplified music played in the function room to avoid excess of noise breaking out to the nearest identified NSR.

4.02 Based on the predicted results the function room windows do not provide an adverse source of noise and the predicted night-time indoor levels complies with the required NR20 criterion. It is reasonable to assume that day time criterion is also met as the source would be the same although compared to NR35, which is a higher limit.

4.03 During site survey it was perceived that the existing fire door is not well fitted and has significant gaps around the frame, which was identified during survey as a major source of noise breakout to the flat above. Therefore, it is advised that the door itself should be replaced with an acoustic rated door, fitted and sealed properly in its frame.

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Report Authors:

Diana do O'Monteiro,
BEng(Hons) MSc MIOA
Acoustics Consultant

Checked By:

Michael Richardson
TechIOA
Acoustic Technician

Appendix A: Acoustic Glossary

Acoustic Term	Description
Acoustic environment	Sound from all sound sources as modified by the environment
Ambient Noise	Totally encompassing sound at a given location, usually composed of sound from many sources near and far
Background Noise	The lowest noise level present in the absence of any identifiable noise sources. This is usually represented by the L_{A90} measurement index.
Break-in	Noise transmission into a structure from outside
Break-out	Noise transmission from inside a structure to the outside
Cross-talk	Noise transmission between one room and another room or space
Ctr	Correction term applied against the sound insulation single-number values (R_w, D_w, and $D_{nT,w}$) to provide a weighting against low frequency performance
dB (decibel)	Defined as 20 times the logarithm of the ratio between the root-mean-square pressure of the sound field and a reference pressure (2x10-5Pa).
dB(A)	Level of sound across the audible spectrum with a frequency filter to compensate for the varying sensitivity of the human ear to sound at different frequencies at a lower SPL
Façade Level	A sound field determined at a distance of 1m in front of a building façade.
Free-field Level	A sound field measured at a point away from reflective surfaces other than the ground
Frequency (Hz)	Number of cycles of a wave in one second measured in Hertz.
Impact sound pressure level	Average sound pressure level in a specific frequency band in a room below a floor when it is excited by a standard tapping machine or equivalent

Indoor ambient noise	Noise in a given situation at a given time, usually composed of noise from many sources, inside and outside the building, but excluding noise from activities of the occupants
$L_{Aeq,T}$	$L_{aeq,T}$ is defined as the equivalent continuous "A"-weighted Sound Pressure Level in dB over a given period of time.
L_{Amax}	Maximum A - weighted sound pressure level recorded over the measurement period. Usually has a time constraint (L_{afmax}, L_{asmax})
Measurement time interval, Tm	Total time over which measurements are taken
Noise	Unwanted sound.
Noise criteria	Numerical indices used to define design goals in a given space
Noise rating NR	Graphical method for rating a noise by comparing the noise spectrum with a family of noise rating curves. This is usually used to control noise that has tonal characteristics that $L_{Aeq,t}$ wouldn't detect.
Noise-sensitive premises (NSPs)	Any occupied premises outside the assessment location used as a dwelling (including gardens), place of worship, educational establishment, hospital or similar institution, or any other property likely to be adversely affected by an increase in noise level
Normalized impact sound pressure level	Impact sound pressure level normalized for a standard absorption area in the receiving room
Octave band	Band of frequencies in which the upper limit of the band is twice the frequency of the lower limit
Percentile level $L_{AN,T}$	A-weighted sound pressure level obtained using time-weighting "F", which is exceeded for N% of a specified time period
Rating level, $L_{Ar,Tr}$	Specific sound level plus any adjustment for the characteristic features of the sound
Reference time interval, T_r	Specified interval over which the specific sound level can be determined.
Residual sound	Ambient sound remaining at the assessment location when the specific sound source is suppressed to such a degree that it does not contribute to the ambient sound

Residual sound level, Lr = $L_{Aeq,T}$	Equivalent continuous A-weighted sound pressure level of the residual sound at the assessment location over a given time interval, T
Reverberation time T	Time that would be required for the sound pressure level to decrease by 60 dB after the sound source has stopped within a reverberant space
Sound level difference D	Difference between the sound pressure level in the source room and the sound pressure level in the receiving room
Sound power level, LWA	Ten times the logarithm to the base 10 of the ratio of the sound power radiated by a sound source to the reference sound power, determined by use of frequency-weighting network "A"
Sound pressure level	Is the Root Mean Squared value of the instantaneous sound level over a period of time expressed in decibels, usually measured with an appropriate frequency weighting
Specific sound level, Ls = $L_{Aeq,Tr}$	Equivalent continuous A-weighted sound pressure level produced by the specific sound source at the assessment location over a given reference time interval, T_r
Specific sound source	The sound source which is being assessed
Third octave band	Octave bands sub-divided into three parts, equal to 23% of the centre frequency
Weighted level difference Dw	Single-number quantity that characterizes airborne sound insulation between rooms, but which is not adjusted to reference conditions
Weighted standardized level difference $D_{nT,w}$	Single-number quantity that characterizes the airborne sound insulation between rooms

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Appendix B: Calculation Worksheet

	at façade above function room	63	125	250	500	1k	2k	4k	8k
music		83	86	87	87	88	79	71	66
10log Sw	S equal to 6.26m square	8	8	8	8	8	8	8	8
SRI windows		20	24	25	34	39	43	46	50
indoor to outdoor		-3	-3	-3	-3	-3	-3	-3	-3
distance correction 10log 2/4pir2 (r is 7m)		-25	-25	-25	-25	-25	-25	-25	-25
building edge attenuation		-3	-3	-3	-3	-3	-3	-3	-3
Lp at façade		**40**	**39**	**39**	**30**	**26**	**13**	**2**	**-7**
	at façade 6m diagonally to south-west	**63**	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**
music		83	86	87	87	88	79	71	66
10log Sw	S equal to 6.26m square	8	8	8	8	8	8	8	8
SRI windows		20	24	25	34	39	43	46	50
indoor to outdoor		-3	-3	-3	-3	-3	-3	-3	-3
distance correction 10log 2/4pir2 (r is 6m)		-24	-24	-24	-24	-24	-24	-24	-24
building edge attenuation		-3	-3	-3	-3	-3	-3	-3	-3
angle attenuation 10log(45/180)		-6	-6	-6	-6	-6	-6	-6	-6
Lp at façade		**35**	**34**	**34**	**25**	**21**	**8**	**-3**	**-12**

The noise break-in through NSR façade is included as separated worksheets.

Sound Insulation Assessment
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