

Noise Management Scheme

For Protection of neighbouring residents

In respect of
Planning Condition No. 7 of Planning Consent Number A/52/20/PL dated 11/06/2020

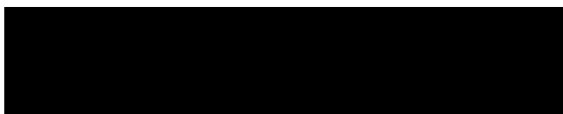
MICRO-BAR AND BARISTA COFFEE HOUSE at

**Formerly Woodies News Agent (and formerly Enchanted Florist)
Red Lion House, High Street, Angmering, BN16 4AE**

Now named 'The Resourceful Squirrel'

Date: 12th June 2020

Proprietor:
Miss Sally Beituni



Measures will be put in place as follows to manage noise nuisance to the adjacent residential dwellings:

During Construction:

Refurbishment and upgrading works:

- Working hours will be restricted to between 08:00 – 18:00 weekdays, and between 08:00 – 13:00 Saturdays. No Sunday or Bank Holiday working
- Deliveries of materials, loading and unloading (and collection of any redundant materials) will be restricted to the above hours.
- No radios or other music will be played during construction.
- Close liaison will be maintained with neighbouring residents to agree convenient times for unavoidable noisy activities. Close liaison will be ongoing during these activities.
- There is to be no installation of large equipment or machinery either internally or externally to the premises.

Operational noise management and mitigation measures:

- The ceiling in the unit has been upgraded to reduce the airborne sound level by 52dB exceeding the requirement of the Environmental Health department and Building Regulations Part E1.
- There is only one opening door (the entry door/fire exit) and no opening windows in the unit.
- No drinking will be allowed outside the premises with no opened drinks being permitted to be taken outside the premises.
- Opening hours are from 11am-10pm.
- Signage will be displayed in the premises asking patrons to respect neighbours and to leave quietly. This will be closely monitored. Signage will be displayed clearly inside the premises and facing out on the front window
- Smokers will be monitored and asked to respect the neighbours in line with the Management Plan for Smokers (attached).
- No Plant or machinery is to be installed either internally or externally. No extract systems or ventilation/heating systems/boilers will be installed.
- No music will be played in the premises
- Deliveries and collections will be restricted to between the hours of 08:00 – 19:00 weekdays
- No tables will be outside the premises
- The proprietor will be vigilant in monitoring customer behaviour both inside and outside the property
- Close liaison will be maintained with neighbouring residents to monitor any effects of operation noise.

Testing:

A Sound Test report is attached by Therm Energy Ltd evidencing the reduction in airborne sound between the unit and the flat above, as required by Environmental Health.

Management Plan for Smokers

In respect of

MICRO-BAR AND BARISTA COFFEE HOUSE at

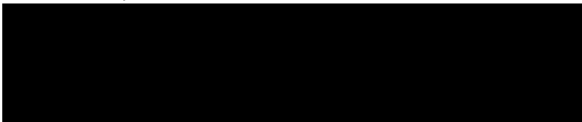
**Formerly Woodies News Agent (and formerly Enchanted Florist)
Red Lion House, High Street, Angmering, BN16 4AE**

Now named 'The Resourceful Squirrel'

Date: 4th June 2020

Proprietor:

Miss Sally Beituni



Measures will be put in place as follows to manage smokers and their residual waste (cigarette ends and packets, etc.) in order not to cause nuisance to neighbours and passer's by:

- An existing Arun District Council waste bin is situated at the front of the property which has a cigarette extinguishing plate on the top. See photos.
- No Trading after 10pm any day
- No open drinks will be allowed outside the premises
- No tables will be outside the premises
- No events or parties will be held in the premises
- The proprietor will be vigilant in monitoring customer behaviour both inside and outside the property
- Signage will be displayed clearly inside the premises and facing out on the front window to the effect:

NOTICE TO SMOKERS

No smoking in the premises – No drinking outside the premises

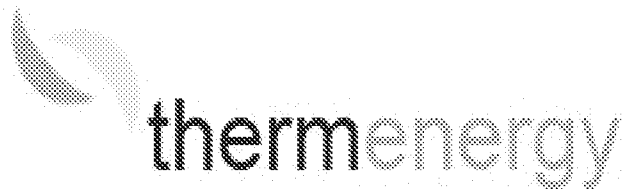
These premises are covered by monitored and recorded CCTV

PLEASE DO NOT LITTER THE FOURECOURT AND KEEP NOISE LEVELS DOWN TO A MINIMUM

Please respect our neighbours at all times when smoking outside the premises.

Please use bin provided outside the front of the premises for all cigarette ends and litter





REPORT OF PRE-COMPLETION SOUND INSULATION TESTING



Therm Energy Ltd
1 Tarrant Street
Arundel
West Sussex
BN18 9DG [REDACTED]

Technical Report No.ST-20-027
Development of The Resourceful
Squirrel , Red Lion Building, High
Street, Angmering, BN16 4AE
1st June 2020

SOUND INSULATION TEST REPORT

Address of property tested:	The Resourceful Squirrel Red Lion Building High Street Angmering West Sussex BN16 4AE
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Property Type:	Material change of use
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Date (s) of testing:	29 th May 2020
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Client:	Liz Galloway
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Report date:	1st June 2020
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Test organisation:	Therm Energy Ltd 1 Tarrant Street Arundel West Sussex BN18 9DG
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Accreditation reference:	UKAS Testing Laboratory No. 4660
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Test reference number:	ST-20-027
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Test performed by:	Louie Woods
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Report prepared by:	Louie Woods
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Checked by:	Joe Solti
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1.0 INTRODUCTION

Therm Energy Ltd have been appointed to measure the airborne sound insulation of separating floor between converted shop premises and existing flat above

These tests are required to satisfy the sound insulation requirements in accordance with policy QE DM1 and D DM1 of the Arun local Plan.

This report records the results of the sound insulation tests and details the test procedures used.

Therm Energy Ltd is a UKAS accredited testing laboratory No.4660.

2.0 TEST PROCEDURES

2.1 Testing Standards

Airborne sound insulation testing is conducted in accordance with the procedure described in BS EN ISO 140-4: 1998.

Impact sound insulation testing is conducted in accordance with the procedure described in BS EN ISO 140-7:1998.

2.2 Building Regulation Compliance

The pre-completion sound tests were conducted in accordance with Annex B of Approved Document E: 2003 (incorporating 2004, 2010, 2013 and 2015 amendments) and the accredited Therm Energy Ltd test procedures.

2.3 Airborne Sound Insulation

A dodecahedron loudspeaker is placed in the 'source room' which is normally deemed to be the larger of the two rooms. The source noise level is then measured, with a minimum of 5 measurements taken each time in a different location.

The room on the opposite side of the separating element is deemed the 'receiving' room and noise is transmitted through the separating construction from the source room and is then measured a minimum of five times, using a different location for each measurement. The loudspeaker position is then moved to a different position and the sequence is repeated and five further measurements are taken in the source room and a further five measurements taken in the receiving room.

A minimum of six reverberation time measurements are taken over three locations in the receiver room using the dodecahedron loudspeaker. Background noise measurements are taken in the receiver room at 5 positions.

The difference in source and receiver noise levels is measured and calculated, when tested, for each wall and floor in accordance with BS EN ISO-4. The results are converted into a single number which characterises the acoustic performance using the method prescribed in BS EN ISO 717-1, and is described as the Weighted Standardised Level Difference ($(D_{nT,w})$).

A correction to the result is made using the C_{tr} spectral adaptation term which is intended to take account of low frequency sound insulation performance. The term is added to the $D_{nT,w}$ value to provide $D_{nT,w} + C_{tr}$. this is the rating used for the performance standard of building elements as specified in Approved Document E 2003 to the Building Regulations 2010.

2.4 Impact Sound Insulation

An approved tapping machine is placed on the floor above a receiving room and positioned with the hammer line at 45° to the joists or beams. The noise level from the tapping machine is measured in the receiver room a minimum of two times, measuring each time in a different location.

The process is then repeated a further three times with the tapping machine rotated 90° and moved to a different location within the room. A total of eight measurements are performed.

A minimum of six reverberation time measurements are undertaken in the receiver room. Background noise measurements are also performed in the receiver room at five positions.

The level is measured and calculated for each floor in accordance with BS EN ISO 140-7. The results are converted into a single number which characterises the acoustic performance using the method prescribed in BS EN ISO 717-2, and is described as the Weighted Standardised Impact Sound Pressure Level ($L'_{nT,w}$).

Please note that testing for impact sound will only arise when there are separating floors present.

2.5 Background Noise

Background noise levels in the receiver rooms were measured during the tests and the receiving room levels corrected in accordance with BS EN ISO Parts 4 and 7 as appropriate.

3.0 MEASURING EQUIPMENT

The main details of instrumentation and equipment used during the sound insulation tests are given in Table 1.

Reference	Description	Model	Manufacturer	Calibration Expiry
TEE1-1	SOUND LEVEL METER	2250	Brüel & Kjaer	13 th May 2022
TEE1-2	SOUND LEVEL CALIBRATOR	4231	Brüel & Kjaer	12 th May 2021
TEE1-3	PRE AMPLIFIER	ZC-0032	Brüel & Kjaer	13 th May 2022
TEE1-4	DODECAHEDRON SPEAKER	4292	Brüel & Kjaer	N/A
TEE1-5	TAPPING/IMPACT MACHINE	3207	Brüel & Kjaer	
TEE1-6	POWER AMP	2734	Brüel & Kjaer	N/A
TEE1-8	LASER DISTANCE MEASURER	D110	Leica Disto	27 th November 2020 ⁽¹⁾
⁽¹⁾ This equipment is subject to an annual check in accordance with a Therm Energy Ltd documented procedure.				

Table 1 - Measuring Equipment

4.0 TEST RESULTS

4.1 Airborne sound

Results of the measurements, in terms of single-figure ratings, are provided in Table 2. They are provided as Weighted Standardised Level Differences $D_{nT,w} + C_{tr}$ (for airborne sound) as required by BS EN ISO 140-4. They are also defined in ISO 717-1 which deals with airborne insulation.

The graphical results are presented in Appendix A, together with the underlying data from which the single-figure ratings are calculated. Adverse deviations that occurred in excess of 8 dB are also recorded in accordance with BS EN ISO 140-4 & 7.

The measured levels have been compared to the requirements of policy QE DM1 and D DM1 of the Arun local Plan to determine the 'Pass' or 'Fail' category as required.

Test No.	Rooms	$D_{nT,w} + C_{tr}$ (dB)		Pass / Fail
		Measured	Required	
1	Airborne floor test - The Resourceful Squirrel shop to flat above lounge	52	≥50	PASS

Table 2 - Comparison of Measured Levels of Airborne Sound Insulation

5.0 OBSERVATIONS AND COMMENTS

None reported

6.0 SUMMARY & CONCLUSIONS

Therm Energy Ltd by appointment has undertaken sound insulation tests for Building Regulations compliance purposes. The development is described as The Resourceful Squirrel, Red Lion Building, High Street, Angmering, West Sussex, BN16 4AE.

The Sound Insulation tests were performed on Friday 29th May at the development site.

The test result of this report is shown in Section 4 and in our opinion demonstrates compliance with policy QE DM1 and D DM1 of the Arun local Plan in all areas tested.

7.0 REFERENCES

1) **BS EN ISO 140-4: 1998**

Acoustics - Measurement of sound insulation in buildings and of building elements.

2) **BS EN ISO 140-7: 1998**

Acoustics - Measurement of sound insulation in buildings and of building elements

3) **BS EN ISO 717-1: 1997**

Acoustics - Rating of sound insulation in buildings and of building elements. Airborne sound insulation

4) **BS EN ISO 717-2: 1997**

Acoustics - Rating of sound insulation in buildings and of building elements Impact sound insulation

5) **Approved Document E: “Resistance to the passage of sound”** - (2003 Edition incorporating 2004, 2010, 2013 and 2015 amendments)

APPENDIX A – SOUND INSULATION GRAPHS

The test results are presented in graphical form on the following Pages. The blue line of the results graph(s) represents the measured values of sound insulation in each 1/3 octave band. The red line represents the best fit or $D_{nT,w}$ curve for the data. The curves are weighted for different frequencies. The method of fitting the curve requires adding all the differences where the blue line is above or below the red line, and the appropriate curve is closest one where the sum is less than 32dB. This is advised by ISO 717: Parts 1 and 2.

Standardized Level Difference according to Part E of Building Regulations 2000 with 2010 amendments

Field measurements of airborne sound insulation between rooms

Client: Liz Galloway

Date of test: 29/05/2020

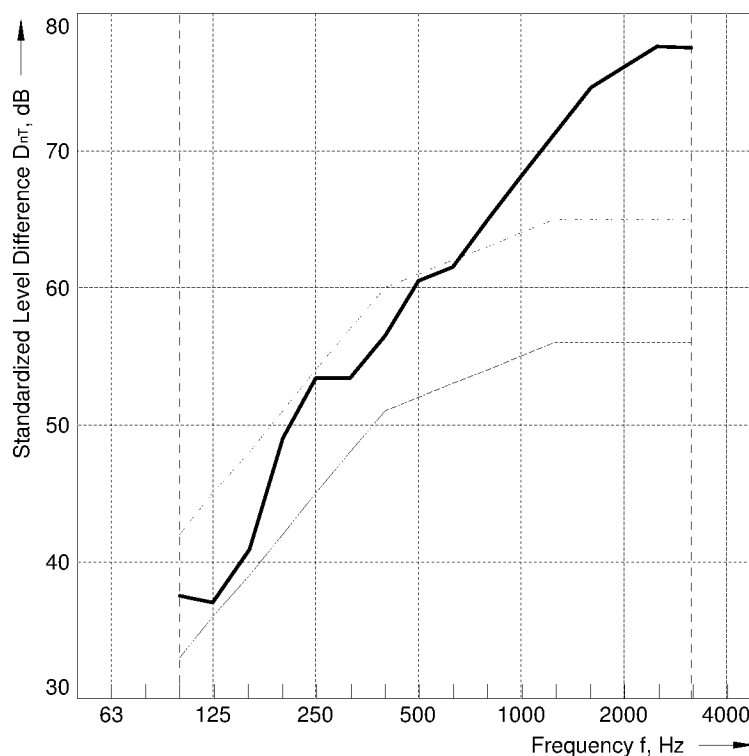
Description and identification of the building construction and test arrangement, direction of measurement:

Airborne floor test - The Resourceful Squirrel shop to flat above lounge

Source room volume: 68 m³Receiving room volume V: 44.00 m³

----- Frequency range according to the
 curve of reference values (BS EN ISO 717-1)

Frequency f Hz	D _{nT} 1/3 Octave dB
50	
63	
80	
100	37.5
125	37.0
160	40.9
200	49.0
250	53.4
315	53.4
400	56.5
500	60.5
630	61.5
800	65.0
1000	68.1
1250	71.2
1600	74.6
2000	>= 76.1
2500	>= 77.6
3150	>= 77.5
4000	
5000	



Rating according to BS EN ISO 717-1

 $D_{nT,w}(C;C_{tr}) = 61 (-3; -9) \text{ dB}$ $C_{50-3150} = \text{N/AdB}; C_{50-5000} = \text{N/AdB}; C_{100-5000} = \text{N/AdB};$

Evaluation based on field measurement
 results obtained in one-third-octave
 bands by an engineering method

 $C_{tr,50-3150} = \text{N/AdB}; C_{tr,50-5000} = \text{N/AdB}; C_{tr,100-5000} = \text{N/AdB};$

No. of test report: ST-20-027

Name of test institute: Therm Energy Ltd

Date: 01/06/2020

Signature: Louie Woods

APPENDIX B - TERMINOLOGY

The following terms and definitions from BS EN ISO717 and BS EN ISO 140 have been used within this report, and have been included to aid the reader.

Airborne Sound	Sound propagating through air
Airborne Sound Insulation	Sound Insulation that reduces transmission of airborne sound between buildings or part of buildings
C_{tr}	The value to be added to the single-number rating to take account of the characteristics of particular sound spectra according to ISO 717: Part 1
Decibel (dB)	The unit used for many acoustic quantities to indicate the level with respect to a reference level.
$D_{nT,w}$	A single number quantity that characterise the airborne sound insulation between rooms.
Hertz (Hz)	The unit of the frequency of sound (cycles/second)
Impact Sound	Sound resulting from direct impact on a building element.
$L'_{nT,w}$	A single number quantity used to characterise the impact sound insulation of floors.
Noise	Unwanted sound.
Reverberation Time	The time, in seconds, taken for a sound to decay by 60 dB after the sound source has been stopped.
Reverberation	The persistence of sound in a space after a sound source has been stopped.