

Housing Health and Safety Rating System (HHSRS)

Case Studies

Group D
Psychological
Requirements

Hazard D20
Noise

Example D20.3
Pre-1920
First-floor Flat in
Terraced House
non-HMO

Vulnerable Group
Persons of all ages

Multiple Locations
No

Related Hazard B13
Indoor
Air Pollutants

Related Hazard B14
Excess Heat

Related Hazard A4
Fire and
Explosions

Dwelling

Description

This property is a first-floor flat, created in the 1960s when a four-storey, Regency terraced house with a two-storey back addition was subdivided into four self-contained flats. It is leasehold and Grade II listed, being located within a conservation area.

There are flats in the basement and on the ground floor, with a one-bedroomed flat on the first floor shared with part of a maisonette on the first and second (top) floors.

The property is in generally good condition and situated on a quiet street, so external noise is not an issue.

The electrical and gas safety certificates are satisfactory and the EPC for the flat is an 'E'.



1
Front exterior

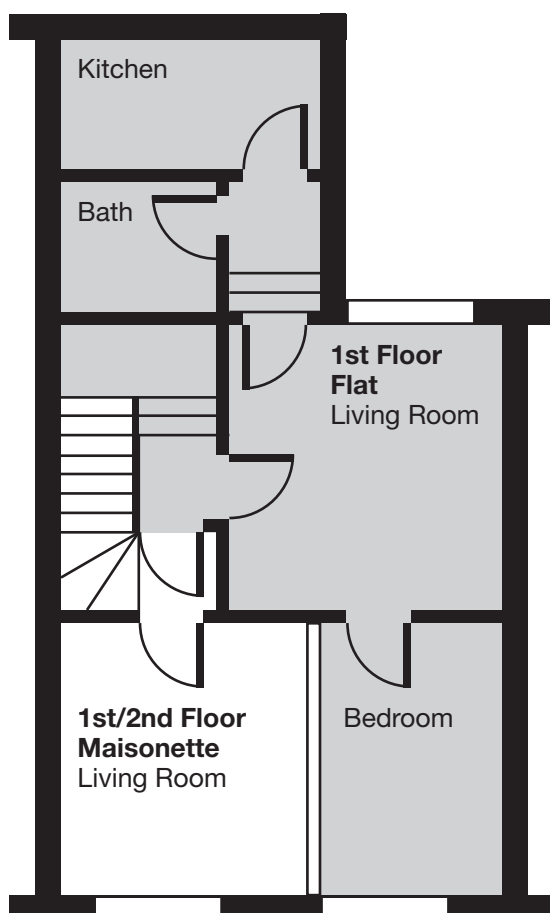
Deficiencies

Description

On the first floor, a partition now divides the large front room (originally the main living room) to provide the bedroom for the first-floor flat and the living room of the maisonnette. The construction of this partition wall is uncertain, but there is poor sound insulation between the two dwellings. Television noise and music can be heard through this wall, as can the sound of appliances being plugged into or switched on/off in the electric sockets.

The living room has a polished wood floor; the bedroom in the flat is carpeted. The other internal and external 'party' walls to the first-floor flat follow the original structural walls and provide adequate sound insulation, as do the floors and ceilings, which are of traditional timber and lath-and-plaster construction, with a 50 mm sand layer to absorb sound.

The living room has a polished wood floor with a large rug, the bedroom in the flat is carpeted. The other internal and external 'party' walls to the first floor flat follow the original structural walls and provide adequate sound insulation, as do the floors and ceilings which are of traditional timber and lath and plaster construction with a 50mm sand layer to absorb sound.



Relevant Baseline Indicators

0

Satisfactory
or N/A

1

Not
Satisfactory

2

Defective

3

Seriously
Defective

Subject		Score				BI	Baseline Indicator											
10	Noise	0	1	2	3	10.1	All new flats/flat conversions should comply fully with current Building Regulations in respect of sound insulation. Older flats/flat conversions should comply as fully as possible with current Building Regulations.											
		0	1	2	3	10.2	The noise level inside the dwelling caused by steady external noise sources must not exceed:<table><tr><th>Time</th><th>Area</th><th>Level</th></tr><tr><td rowspan="3">07:00–23:00</td><td>Dining Room T16</td><td>45dB LAeq</td></tr><tr><td>Living Room T16</td><td>40dB LAeq</td></tr><tr><td>Bedroom T16</td><td>40dB LAeq</td></tr><tr><td>23:00–07:00</td><td>Bedroom T8</td><td>35dBLAeq</td></tr></table>	Time	Area	Level	07:00–23:00	Dining Room T16	45dB LAeq	Living Room T16	40dB LAeq	Bedroom T16	40dB LAeq	23:00–07:00
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07:00–23:00	Dining Room T16	45dB LAeq																
	Living Room T16	40dB LAeq																
	Bedroom T16	40dB LAeq																
23:00–07:00	Bedroom T8	35dBLAeq																

Other Relevant Matters

0

Satisfactory or N/A

1

Not Satisfactory

2

Defective

3

Seriously Defective

Score					Matters affecting Likelihood of Harm
0	1	2	3		Siting of dwelling
0	1	2	3		Internal arrangement
0	1	2	3		Floor finishes
0	1	2	3		Construction / Repair
0	1	2	3		Siting of plumbing
0	1	2	3		Equipment
0	1	2	3		Door closers

Score					Matters affecting Harm Outcomes
0	1	2	3		Siting of dwelling
0	1	2	3		Internal arrangement
0	1	2	3		Floor finishes
0	1	2	3		Construction / Repair
0	1	2	3		Siting of plumbing
0	1	2	3		Equipment
0	1	2	3		Door closers

Likelihood of Harm

Scale Points Likelihood of harm from this hazard over the next twelve months	
Very Likely	1 in 1
	1 in 2
	1 in 3
Example Dwelling	1 in 5
Likely	1 in 10
	1 in 20
	1 in 30
	1 in 50
Unlikely	1 in 100
	1 in 200
	National Average 1 in 300
	1 in 500
Very Unlikely	1 in 1,000
	1 in 2,000
	1 in 3,000
	1 in 5,000
Score 1 in 5	

Justification of Scoring
Likelihood of Harm

The poor sound insulation to the wall between the upper-maisonette living room and first-floor-flat bedroom is likely to cause regular sleep disturbance simply from normal domestic activity, and in addition, the hard floor in the living room will compound the issue, increasing the likelihood of an occurrence because exposure to noise in this way can have an adverse impact on mental health, including elevated levels of stress and poor concentration. Frequent sleep disturbance caused by noise from an adjacent property can also lead to annoyance and the risk of verbal or physical confrontation, possibly assault. With only one bedroom in the flat, the occupant cannot relocate to another bedroom to escape any noise disturbance.

Harm Outcomes

Extreme		Severe		Serious		Moderate	
Death, permanent paralysis, etc.		Heart attack, serious fractures, etc.		Chronic stress, severe concussion, etc.		Broken fingers, moderate cuts, etc.	
Very Likely	50.0	Very Likely	50.0	Very Likely	50.0	Example Dwelling	89.9
	30.0		30.0		30.0		National Average
	20.0		20.0		20.0		89.9
Likely	10.0	Likely	10.0	Example Dwelling + National Average	10.0	These scores are simply calculated as the sum of the other three harm outcomes subtracted from 100%	
	5.0		5.0		5.0		
	2.0		2.0		2.0		
Unlikely	1.0	Example Dwelling + National Average	1.0	Unlikely	1.0		
	0.5		0.5		0.5		
	0.2		0.2		0.2		
Very Unlikely	0.1	Very Unlikely	0.1	Very Unlikely	0.1		
Example Dwelling + National Average	0.0		0.0		0.0		
Score		Score		Score		Score	
0.0%		1.0%		10.0%		89.9%	

Justification of Scoring

Harm Outcomes

There is no reason to think the spread of harm outcomes will be any different from the national average, which is the same for all property ages and types.

Safety Ratings

Scenario 1
As described in this document

Key

Category	Band	Score
1 Legal duty to take action	High	10,000
2 Discretion to take action	Medium	1,000
	Low	100

Likelihood of Harm 1 in 5			
Extreme 0.0%	Severe 1.0%	Serious 10.0%	Moderate 89.9%
Category	Band	Score	
1 Legal duty to take action	High	10,000	
2 Discretion to take action	Example Dwelling Medium	978	
	Low	100	
National Average		16	
Score	978		

Scenario 2

After works meeting baseline indicators

Likelihood of Harm
1 in 200

Extreme 0.0%	Severe 1.0%	Serious 10.0%	Moderate 89.9%
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Category	Band	Score
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1 Legal duty to take action	High	10,000
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2 Discretion to take action	Medium	1,000
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Low	100
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Example	24
National Average	16

Score
24

Scenario 3

After further improvements

Likelihood of Harm
1 in 300

Extreme 0.0%	Severe 1.0%	Serious 10.0%	Moderate 89.9%
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Category	Band	Score
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1 Legal duty to take action	High	10,000
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2 Discretion to take action	Medium	1,000
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Low	100
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Example	16
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Score
16
Dwelling +
National
Average

Justification of Scoring

After works meeting baseline indicators

Compliance with the BIs will require the internal wall between the living room/bedroom to be upgraded to meet building regulation requirements, which would result in the main issue around noise transmission being eliminated.

Justification of Scoring

After further improvements

The occupant of the upper maisonette could be encouraged to fit a carpet with underlay in the living room if impact sound transmission continues to cause a nuisance once the internal wall has been acoustically insulated.

Longer term, and depending on the room usage on the floors above and below, the front bedroom and rear kitchen could be swapped. From a nuisance perspective, there would be less conflict having a kitchen adjacent to the living room at the front. Both options provide a poor internal layout from a fire safety perspective as the bedroom is an inner room in both scenarios, so due regard would need to be given to this.

Other Relevant Legislation and Guidance

Listed Buildings

Where properties are listed or are located in a conservation area, this should not affect the assessment of risk and the calculation of the hazard rating score. However, advice is likely to be needed from the conservation officer within the local authority planning team as to whether planning permission/listed building consent is needed for certain works. All external works are likely to need planning permission in a conservation area. A listed building will probably need consent for any works that alter the character of the building, which may include internal works where there are specific characteristics. The listed building/conservation area status has to be taken into account when determining the most appropriate course of enforcement action and what reasonably practicable improvements can be made to the property, whilst retaining its character and appearance.

Leasehold properties

In leasehold properties there may be restrictions on works that can be carried out without the freeholder and management company's express approval. This could include, for example, alteration of doors and windows as well as maintenance of the structure of the building (e.g. the roof).

Party Walls

A party wall agreement may be needed before works can be undertaken to party structures, party walls that form part of a building, or shared garden boundaries.

Building Regulations

The HHSRS is a risk-based assessment system focusing on how people can be harmed through their interaction with the individual circumstances present in a particular dwelling. By contrast, building regulations are building-focused acceptable solutions provided by approved documents indicating minimum standards to achieve compliance. As such, although properties may be compliant with the more prescriptive building regulations, and while compliance may usually be considered a positive indicator in the assessment of risk, there can be occasions where individual circumstances allow risk to prevail.

Dwelling Perspective

When assessing multiple dwellings in the same building, due consideration may need to be given to the level of risk posed to different flats within a building. The likelihood of an occurrence, and harm outcomes resulting from an occurrence, may vary significantly for many hazards, depending on the location of the flat within a building.

Noise Nuisance

Noise transmission between dwellings may have to be controlled using the statutory nuisance provisions of the Environmental Protection Act 1990. It is not possible to require owners of adjoining premises to carry out work based on a HHSRS assessment.

For the noise to count as a statutory nuisance it must do one of the following:

- unreasonably and substantially interfere with the use or enjoyment of a home or other premises
- injure health or be likely to injure health

If a statutory nuisance is happening or will happen in the future, councils must serve an abatement notice. This requires whoever's responsible to stop or restrict the noise. The notice will usually be served on the person responsible but can also be served on the owner or occupier of the premises.

The requirements of the Party Wall Act 1996 may also be relevant when carrying out works to reduce noise transmission between dwellings.

Updates

Matters for consideration listed in this section were correct at the time of publication. For the most up-to-date legislation and guidance in these areas, please visit the [gov.uk](https://www.gov.uk) website.