



Housing Health and Safety Rating System (HHSRS)

Case Studies

Group
Physiological
Requirements

B

Hazard
Damp and
Mould Growth

B11

Example
1946–79
First-floor Flat
(Non-HMO)

B11.3

Vulnerable Group
Persons aged
14 years and under

Multiple Locations
Yes

Related Hazard
Excess Cold

B9

Dwelling

Description

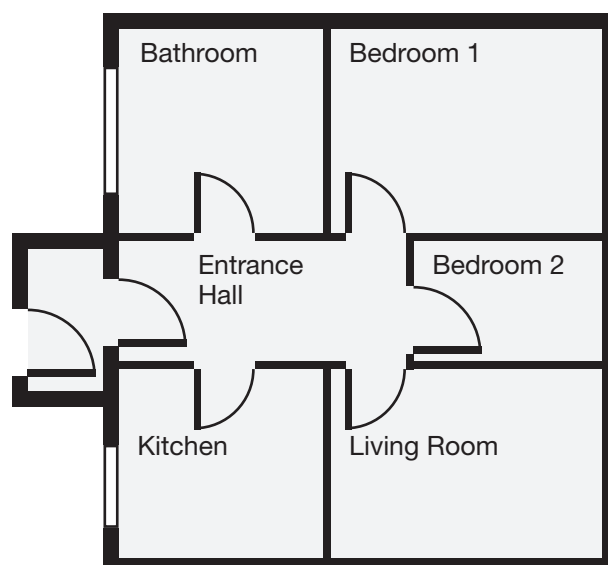
This is a two-bedroomed first-floor flat, built in the early 1970s as part of a mixed retail/commercial/residential town centre development. The flat was designed to be occupied by persons running the retail unit on the ground floor. Access is across the flat deck roof at the rear of the unit into a fully double-glazed uPVC frame porch that is both unheated and unventilated.

All the windows in the flat are double glazed with appropriately sized openable panes but no trickle vents. The flat is heated by adequately sized electric storage heaters with no timers or thermostats. The EPC rating is F (SAP = 29). There is no electrical condition report, but there are no obvious defects, though the system has not been rewired since the late 1990s. The flat is in a satisfactory state of repair and decoration. The tenants have a condensing tumble dryer to dry their clothes.



1

Exterior of dwelling
Photo: Colin Burdett
Shutterstock.com



2

Floorplan

Deficiencies

Description

The roof over the flat is poorly insulated; the cavity walls are not insulated. The entrance porch leads to an unheated landing/hallway, from which all the rooms are accessed. Ventilation of the bathroom and kitchen is by opening the windows as there are no extractor fans. There is a 220 × 150mm airbrick in the kitchen that is now sealed, having been filled with foam.

There is black mould growth above the skirting boards due to condensation on the rear external walls and at the junctions with the ceilings in both bedrooms.

There is some mould growth on the window reveals in the bathroom and, to a lesser extent, in the kitchen and bedrooms. Moisture from condensation was pooling in the porch at the time of the inspection, which was on day when the external temperature was 0°C.



3
Entrance porch and
flat roof exterior



4
Pooling water on porch
floor interior



5
Mould growth in
smallest bedroom

Relevant Baseline Indicators

0

Satisfactory
or N/A

1

Not
Satisfactory

2

Defective

3

Seriously
Defective

Subject	Score	BI	Baseline Indicator
2 Drainage	0 1 2 3	2.1	Every drainage fixture, stack, vent, water, waste and sewer pipe shall be properly installed, maintained in a safe and functional order and kept free from obstructions, leaks and defects. The drainage system must have suitable rodding or access points to allow clearance of blockages.
	0 1 2 3	2.3	There shall be adequate provision for surface- and foul-water drainage for the size and maximum occupancy of the dwelling. All drains and gullies shall be covered by a suitable grille or cover to prevent the build-up of debris restricting the natural operation of the system.
	0 1 2 3	2.4	All rainwater pipes shall discharge properly into the drainage system or soakaway. Rodding or access points shall be available to allow the clearance of any blockage.
4 Sanitary Facilities: Bathroom	0 1 2 3	4.8	Ventilation for the bathroom must be provided by mechanical extraction that is ducted to the outside of the building, in line with Baseline Indicator 16.1.
5 Sanitary Facilities: Kitchen	0 1 2 3	5.6	Suitable facilities for the effective and safe removal of fumes and moisture-laden air to the external air by means of a cooker hood or extractor fan; a cooker hood that only recycles the odour through an active carbon filter would not be acceptable, it must vent to outside. A mechanical extractor would be the normal mechanism for this function, in line with Baseline Indicator 16.1.
6 Clothes Drying Facilities	0 1 2 3	6.1	Where the dwelling does not contain a secure and private garden or yard for the exclusive use of that dwelling, a dryer (vented or recirculation type), or dedicated space to install a dryer, or access to a communal dryer facility must be provided.

Relevant Baseline
Indicators

0

Satisfactory
or N/A

1

Not
Satisfactory

2

Defective

3

Seriously
Defective

Subject		Score				BI	Baseline Indicator
15	Heating and Insulation	0	1	2	3	15.1	Structural thermal insulation shall be provided to minimise heat loss. Where there is a loft space, insulation shall be provided as detailed: a minimum 250mm of loft insulation (assumed to be mineral wool or similar).
		0	1	2	3	15.3	If the walls are of cavity wall construction, they must be insulated unless professional examination confirms to do so is technically unfeasible, due to either their condition or location in terms of wind-driven rain, or the width of the cavity being less than 40mm.
		0	1	2	3	15.4	Every dwelling shall have a properly installed heating system in good and safe working condition that is capable of safely and adequately heating all habitable rooms, bathrooms and WC rooms. The system must be capable of heating the main living area to 21°C and the remaining habitable rooms to a temperature of 18°C when the external temperature is minus 1°C, and the system should not allow the temperature to exceed 25°C in any room during the heating season.
		0	1	2	3	15.5	Heating and hot water must be capable of being controlled effectively and timed to operate by the occupiers.
16	Ventilation	0	1	2	3	16.1	The air exhausted from a bathroom, WC room, kitchen, clothes dryer or basement must be provided by mechanical ventilation or by a correctly designed and installed natural ventilation system, as required by Part F of the Building Regulations. In addition, it shall not be vented into any other parts of the building's habitable space or an attic; such air shall discharge directly to the outdoors but not near any intake on the building exterior.
		0	1	2	3	16.2	All habitable rooms must have at least one window, door or skylight which opens to the outside and can be fixed in an open position. In addition, ventilation may also be provided by the presence of trickle vents, air bricks or passive stack ventilation.
		0	1	2	3	16.3	In each habitable room, the size of the openable windows, doors and skylights together must be at least 5% of the floor area of that room.
		0	1	2	3	16.4	All means of ventilation shall be maintained in good repair and working order.

Relevant Baseline
Indicators

0

Satisfactory
or N/A

1

Not
Satisfactory

2

Defective

3

Seriously
Defective

Subject		Score				Baseline Indicator	
17	Moisture and Contaminant Control	0	1	2	3	17.1	Every foundation, roof, roofing component, exterior wall, floor, door, skylight and window shall be watertight, weathertight, free of persistent dampness or moisture and in good condition.
		0	1	2	3	17.2	The building's drainage system, such as footing or foundation drains, gutters, downspouts, rainwater collection containers or other elements shall direct water away from the structure.
		0	1	2	3	17.3	No single room in any of the property shall have an observable level of damp or mould growth or deterioration of internal finishes that exceeds 5% of the wall and/or ceiling surface.

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	Energy efficiency
0	1	2	3	Water tanks and pipework
0	1	2	3	Plumbing and waste pipes
0	1	2	3	Roof and subfloor spaces
0	1	2	3	Room sizes
0	1	2	3	Flooding

Score				Matters affecting Harm Outcomes
0	1	2	3	Energy efficiency
0	1	2	3	Water tanks and pipework
0	1	2	3	Plumbing and waste pipes
0	1	2	3	Roof and subfloor spaces
0	1	2	3	Room sizes
0	1	2	3	Flooding

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
	1 in 5
Likely	1 in 10
	1 in 20
	1 in 30
	Example Dwelling 1 in 50
Unlikely	1 in 100
	1 in 200
	1 in 300
	1 in 500
Very Unlikely	1 in 1,000
	National Average 1 in 2,000
	1 in 3,000
	1 in 5,000
Score 1 in 50	

Justification of Scoring
Likelihood of Harm

The poorly insulated flat roof and lack of cavity wall insulation are leading to excessive heat loss. Cold external walls and ceilings result in condensation and associated mould growth. Lack of extractor fans in kitchen and bathroom together with the ventilation issues associated with the blocked airbrick in the kitchen exacerbates the condensation problem. Occupants may be reluctant to leave windows open due to security concerns as these windows are easily accessible from the flat roof. Lack of heating in the entrance hallway combined with lack of timer and thermostatic controls to the storage heaters make the heating system less effective and more costly to run. Black mould growth in both bedrooms, kitchen and bathroom will result in exposure to mould spores, which can trigger allergic symptoms and cause asthma. Whilst mould growth is affecting a relatively small area in each room, it will increase the likelihood of harm.

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 +	89.0	
	30.0		30.0		30.0			
	20.0		20.0		20.0			
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%			89.0%	

Justification of Scoring

There is nothing to suggest that the spread of harms would differ from the national average.

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 50			
Extreme 0.0%	Severe 1.0%	Serious 10.0%	Moderate 89.0%
Category	Band	Score	
1 Legal duty to take action	High	10,000	
2 Discretion to take action	Medium	1,000	
Example Dwelling	Low	98	
Score		National Average	2
98			

Scenario 2

After works meeting baseline indicators

Likelihood of Harm
1 in 2,000

Extreme 0.0%	Severe 1.0%	Serious 10.0%	Moderate 89.0%
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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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Score 2	Example Dwelling + National Average	2
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Scenario 3

After further improvements

Likelihood of Harm
1 in 3,000

Extreme 0.0%	Severe 1.0%	Serious 10.0%	Moderate 89.0%
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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		1,000
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	Low	100
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Score 2	Example Dwelling + National Average	2
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Justification of Scoring

After works meeting baseline indicators

The baseline indicators require mechanical extract ventilation to be fitted to the kitchen and bathroom, and the kitchen airbrick to be unblocked. If the extract ventilation from the kitchen and bathroom is effective, condensation and further mould growth should be eliminated. Provision of improved insulation to the flat roof combined with cavity wall insulation and a more efficient controllable heating system should allow the surface temperatures of the walls and ceilings to be kept well above the dew point.

Justification of Scoring

After further improvements

Extending the heating system to the porch and hallway would further help to reduce the likelihood of an occurrence.

Other Relevant Legislation and Guidance

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.

Leasehold properties

In a leasehold property, 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).

Minimum Energy Efficiency standard

The Energy Efficiency (Private Rented Property) (England and Wales) Regulations 2015 (often referred to as the Minimum Energy Efficiency standards/MEES) set a minimum energy efficiency level for domestic private rented properties. Since 1 April 2020, property owners can no longer let or continue to let properties covered by the MEES Regulations if they have an EPC rating below E unless they have a valid exemption in place. The Government has since proposed that all rental properties will need an EPC rating of 'C' or above in the future (which remains a proposal at the time of writing), and it will be in a property owner's interest to consider this when making decisions around conducting works, as it may be more economically efficient to improve a property straight to Band C rather than carrying out graduated works over a period of time.

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