



Housing Health and  
Safety Rating System  
(HHSRS)

Case Studies

Group B  
Physiological  
Requirements

Hazard B9  
Excess Cold

Example B9.3  
1946–79  
Flat in Slab Block  
(Non-HMO)

Vulnerable Group  
65 years +

Multiple Locations  
Yes

Related Hazards B11  
Damp and  
Mould Growth



# Dwelling

## Description of Dwelling

This is an end maisonette, located on the 5th and 6th floors of a 1960s, nine-storey slab block of 32 maisonettes, built of non-traditional concrete construction, with an east–west orientation.

The dwelling comprises a living room, kitchen and store on the lower floor, and two bedrooms and bathroom on the upper floor. Hot water is via an immersion heater in a foam-lagged tank with time clock and thermostat. The tenant has provided their own condensing tumble dryer.

The property is in a good state of repair for its age, with a satisfactory electrical installation condition report. The EPC is rated F.



1

Front exterior

# Deficiencies

## Description of Deficiencies

The concrete-system build of the flats has not been retrofitted with insulation, so there is significant heat loss through the walls. Heating is installed at lower-floor level only, by electric elements set in the floor slab, with a thermostat and time-clock control in the living room. The occupier supplements this with portable electric heaters.

The windows are single glazed, metal framed and draughty during high winds. All the windows are centre-pivot opening lights except the bathroom, which is a top-hung opening light. Both the kitchen and bathroom are ventilated by opening the windows; there are no extractor fans. There is mould growth due to condensation on the external walls in the bedrooms and around the window reveals in the bathroom.



2  
Design of floor heating elements



3  
Portable heater in use



4  
Bathroom window



5  
Mould growth to bedroom

## Relevant Baseline Indicators

0

Satisfactory  
or N/A

1

Not  
Satisfactory

2

Defective

3

Seriously  
Defective

Subject	Score	BI	Baseline Indicator
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
14 Lighting and Services	0 1 2 3	14.4	All electrical installations, including fixtures and fittings, must be maintained in good repair.
	0 1 2 3	14.5	Gas appliances and flues provided for occupants are safe for continued use.
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 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 toilet rooms. The system must be capable of heating the main living room 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.

Relevant Baseline  
Indicators

0

Satisfactory  
or N/A

1

Not  
Satisfactory

2

Defective

3

Seriously  
Defective

Subject		Score				BI	Baseline Indicator
16	Ventilation	0	1	2	3	16.1	The air exhausted from a bathroom, toilet 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	16.4	All means of ventilation shall be maintained in good repair and working order.
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.

# 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	Thermostatic radiator valves
0	1	2	3	Insulation settling
0	1	2	3	Ventilation quantity
0	1	2	3	Ventilation control
0	1	2	3	Draught proofing

Score				Matters affecting Harm Outcomes
0	1	2	3	Thermostatic radiator valves
0	1	2	3	Insulation settling
0	1	2	3	Ventilation quantity
0	1	2	3	Ventilation control
0	1	2	3	Draught proofing

# 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
	Example Dwelling	1 in 30
Unlikely		1 in 50
		1 in 100
		1 in 200
		1 in 300
Very Unlikely		1 in 500
		1 in 1,000
		1 in 2,000
		1 in 3,000
		1 in 5,000

Score

1 in 30

Justification of Scoring

This end maisonette located over the 5th and 6th floor is of non-traditional concrete construction providing very poor thermal insulation to the external walls. The draughty single glazed windows add to the heat loss in this exposed and elevated location. Lack of mechanical extract fans in the kitchen and bathroom result in considerable heat loss when windows are opened to reduce humidity from cooking and washing. The electric underfloor heating on the lower floor will be expensive to operate, and lack of fixed heating on the top floor leaves occupants reliant on portable electric heaters. The impact of the deficiencies will be greater for someone 65 years and over who is more likely to spend a considerable period of time at home.

These combined factors justify an increase in likelihood that someone within the vulnerable group may suffer harm from the effects of excess cold.

# 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	<b>Example Dwelling</b> 45.0 <b>National Average</b> 45.0  These scores are simply calculated as the sum of the other three harm outcomes subtracted from 100%	
<b>Example Dwelling + National Average</b>	30.0		30.0		30.0		
	20.0		20.0	<b>Example Dwelling + National Average</b>	20.0		
	Likely	10.0	Likely		10.0		
	5.0	<b>Example Dwelling + National Average</b>			5.0		
	2.0			2.0			
Unlikely	1.0		Unlikely	1.0	Unlikely		
	0.5		0.5		0.5		
	0.2		0.2		0.2		
Very Unlikely	0.1	Very Unlikely	0.1	Very Unlikely	0.1		
	0.0		0.0		0.0		
<b>Score</b> 30.0%		<b>Score</b> 5.0%		<b>Score</b> 20.0%		<b>Score</b> 45.0%	

## Justification of Scoring

There is no reason to believe the potential spread of harm outcomes will be any different 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 30			
Extreme 30.0%	Severe 5.0%	Serious 20.0%	Moderate 45.0%
Category	Band		Score
	Example Dwelling		10,382
1 Legal duty to take action	High		10,000
2 Discretion to take action	Medium		1,000
	National Average		311
	Low		100

Score  
10,382

**Scenario 2**

After works meeting baseline indicators

Likelihood of Harm  
1 in 300

Extreme 30.0%	Severe 5.0%	Serious 20.0%	Moderate 45.0%
------------------	----------------	------------------	-------------------

Category	Band	Score
----------	------	-------

1 Legal duty to take action	<b>High</b>	10,000
-----------------------------------	-------------	--------

<b>Example Dwelling</b>	<b>Medium</b>	<b>1,038</b>
-----------------------------	---------------	--------------

2 Discretion to take action	<b>Medium</b>	1,000
-----------------------------------	---------------	-------

National Average		311
---------------------	--	-----

<b>Low</b>		100
------------	--	-----

Score

1,038

**Scenario 3**

After further improvements

Likelihood of Harm  
1 in 1,000

Extreme 30.0%	Severe 5.0%	Serious 20.0%	Moderate 45.0%
------------------	----------------	------------------	-------------------

Category	Band	Score
----------	------	-------

1 Legal duty to take action	<b>High</b>	10,000
-----------------------------------	-------------	--------

2 Discretion to take action	<b>Medium</b>	1,000
-----------------------------------	---------------	-------

<b>Example Dwelling + National Average</b>		<b>311</b>
--	--	------------

<b>Low</b>		100
------------	--	-----

Score

311

**Justification of Scoring**

After works meeting baseline indicators

Installing mechanical extract fans in the kitchen and bathroom, connected to the lighting circuit and with a 15-minute overrun, or humidity controlled, will reduce humidity within the flat while limiting heat loss. Installing an efficient and controllable central heating or other heating system that enables the habitable rooms and bathroom to be maintained at a comfortable level of warmth will reduce the likelihood of harm from the Excess Cold hazard, but it will remain higher than the national average.

**Justification of Scoring**

After further improvements

The energy efficiency of the flat can be improved by installing high-efficiency double glazing and thermal over-cladding. These works would need to be done as part of a block improvement scheme as it is likely to require freeholder consent.

## Other Relevant Legislation and Guidance

---

### 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.

### 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 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, for example the roof.

### 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.

---

### 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.