



Housing Health and Safety Rating System (HHSRS)

Case Studies

Group B
Physiological
Requirements

Hazard B11
Damp and
Mould Growth

Example B11.1
1946-79
End-of-terrace House
(Non-HMO)

Vulnerable Group
All persons aged
14 years and under

Multiple Locations
Yes

Related Hazards B9
Excess Cold



Dwelling

Description of Dwelling

This house is a two-bedroomed, end-of-terrace house built in the 1960s, of non-traditional 'Wimpey No-fines' construction with 254 mm solid walls rendered externally. The property is as built, without any additional drylining or retrofitted insulation.

The front of the property faces west, and the exposed gable wall is north facing. The accommodation comprises a hall with doors off to the living room, kitchen and utility area on the ground floor. Stairs lead from the hall to the bedrooms, bathroom and separate toilet on the first floor.

Externally the property is in good repair, except on the external gable where there are a couple of cracks. There are no defects to the roof, gutters or downpipes. The house is in a suburban location on a large social housing estate. It is rented to a family of three.



1
Front exterior of property

Deficiencies

Description of Deficiencies

The property is affected by damp in the living room, kitchen and second (east-facing) bedroom, in particular:

— Living room

Rising and some penetrating damp with associated tide marks affecting the external gable wall in both recesses to either side of the fireplace in the living room.

— Kitchen

Dampness, caused partly by condensation, affecting the whole of the front external wall surrounding the window and adjacent ceiling and party wall in the small kitchen, however, the location of dampness is consistent with the cracks evident in the external rendering. There are small spots of mould growth, mainly in the corners of the room and at the junctions with the ceiling.

— Second bedroom

Penetrating damp and some associated mould is affecting the north-facing gable-end wall.

The only means of ventilating the property is by opening the windows, which are poorly fitted double-glazed units installed in the late 1980s. They do not have trickle vents or night latches and their insulation characteristics are inferior to windows produced post-2002.

The central heating system dates from the 1990s, with radiators in every room but lacking thermostatic valves, though there is a basic 24-hour time-clock. There is 100 mm of loft insulation.

The house does not have an EPC; the family has lived in the property since the 1990s. The roof, gutters and downpipes are in reasonable condition for their age. There is hairline cracking to the external render generally.



2
External wall with
cracks to rendering



3
Mould growth to the
externl kitchen wall



4
Mould growth to the
bedroom wall



5
Mould growth to the
living room wall

Relevant Baseline Indicators

0

Satisfactory
or N/A

1

Not
Satisfactory

2

Defective

3

Seriously
Defective

Subject		Score				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 house, a dryer (vented or recirculation type), or dedicated space to install a dryer, or access to a communal dryer facility must be provided.
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).

Relevant Baseline
Indicators

0

Satisfactory
or N/A

1

Not
Satisfactory

2

Defective

3

Seriously
Defective

Subject	Score	Baseline Indicator
	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.
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	16.2 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.
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.

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	Heating
0	1	2	3	Insulation
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	Flood prevention

Score				Matters affecting Harm Outcomes
0	1	2	3	Heating
0	1	2	3	Insulation
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	Flood prevention

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
	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 5	

Justification of Scoring
Likelihood of Harm

The combination of penetrating damp, condensation and associated mould growth in the kitchen, living room and one of the bedrooms exposes the occupants to a greater likelihood of harm, particularly as two of these are habitable rooms where the vulnerable group are likely to spend the majority of their time. The lack of extract ventilation, inadequate insulation and an inefficient heating system will exacerbate the condensation, dampness and mould growth in the affected rooms.

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	78.0
	30.0		30.0		30.0	National Average 89.0 These scores are simply calculated as the sum of the other three harm outcomes subtracted from 100%	
	20.0		20.0		Example Dwelling		20.0
Likely	10.0	Likely	10.0	National Average	10.0		
	5.0		5.0		5.0		
	2.0		Example Dwelling		2.0		2.0
Unlikely	1.0	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%		2.0%		20.0%		78.0%	

Justification of Scoring

The continuous nature of the damp and the mould in habitable rooms will contribute to prolonged exposure to mould spores. Inhaling mould spores over a 12-month period would considerably exacerbate and potentially cause respiratory illness such as asthma and/or other forms of respiratory illness. This is particularly relevant as the second bedroom is likely to be occupied by a member of the vulnerable age group. Overall, it is judged that there are increased risks of severe and serious health outcomes.

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 2.0%	Serious 20.0%	Moderate 78.0%
Category	Band	Score	
1 Legal duty to take action	High	10,000	
2 Discretion to take action	Example Dwelling	1,756	
	Medium	1,000	
	Low	100	
National Average		2	

Score
1,756

Scenario 2

After works meeting baseline indicators

Likelihood of Harm
1 in 1,000

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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Example		5
National Average		2

Score

5

Scenario 3

After further improvements

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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Example		2
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Score

2

Justification of Scoring

After works meeting baseline indicators

The baseline indicators adequately address the issue of penetrating damp (by repairing the rendering). The installation of mechanical extract ventilation will assist in reducing condensation, and loft insulation together with upgrades to the heating system to incorporate room thermostat, time clock and thermostatic radiator valves would help to ensure that condensation and mould growth is reduced. Assessment of this dwelling under the related hazard of excess cold would also be useful, to then consider solutions that would have potential to resolve both hazards. Improvements to the heating system and insulation would enable the property to reach the national average (dependant on the works ultimately carried out, they also have the potential to attain better than the national average).

Justification of Scoring

After further improvements

Whole-house insulation together with a more efficient A-rated central heating boiler with room thermostat, time clock and thermostatic radiator valves could reduce the likelihood of harm occurring to that of the national average. Dependant on the works ultimately carried out, they also have the potential to attain better than the national average.

Other Relevant Legislation and Guidance

Minimum Energy Efficiency Standards

No EPC is legally required for this property due to the length of time the tenants have been living at the property (over 10 years). At such time as the property is sold or rented out again in a new agreement, the property will require an EPC. At this point, the Energy Efficiency (Private Rented Property) (England and Wales) Regulations 2015 (often referred to as the Minimum Energy Efficiency standards/MEES) would apply to the property. These regulations 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 a 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