

Housing Health and Safety Rating System (HHSRS)

Case Studies

Group A
Protection Against
Accidents

Hazard A2
Falling on
Stairs etc.

Example A2.3
Pre-1920
Detached House
(Non-HMO)

Vulnerable Group
60 years +

Multiple Locations
No

Related Hazards B9
Excess Cold

Related Hazards D21
Lighting

Dwelling

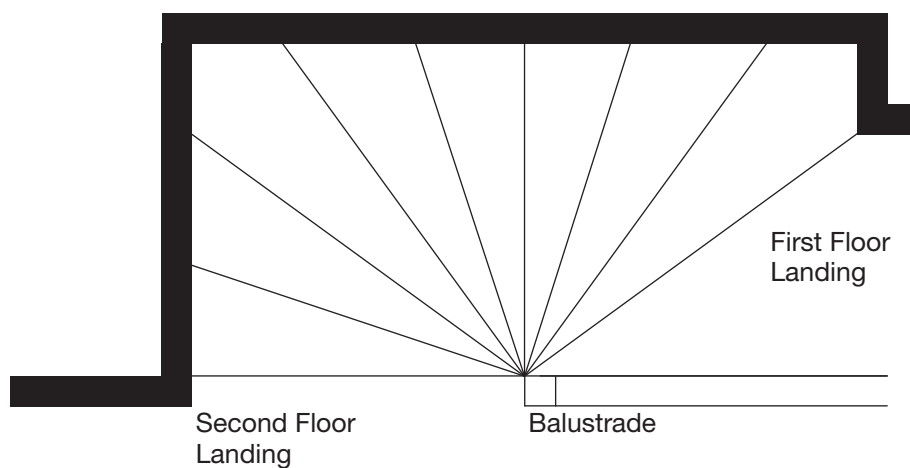
Description

This three-bedroomed property is a rural detached cottage built around 1790 and is a listed building. It is in reasonable repair for its age. There are no leaks from the gutters or downpipes. There is no electrical inspection report or EPC, and no smoke alarms are present.

There is a single step up to the front door and a single step down at the back door into the garden, neither of which presents a significant hazard. There is an outside light that illuminates the back door and the flat garden close to the house, and a streetlight is positioned opposite the front door.



1
Front view of house
Photo: David Calvert
Shutterstock.com



2
Partial floorplan
showing staircase

Deficiencies

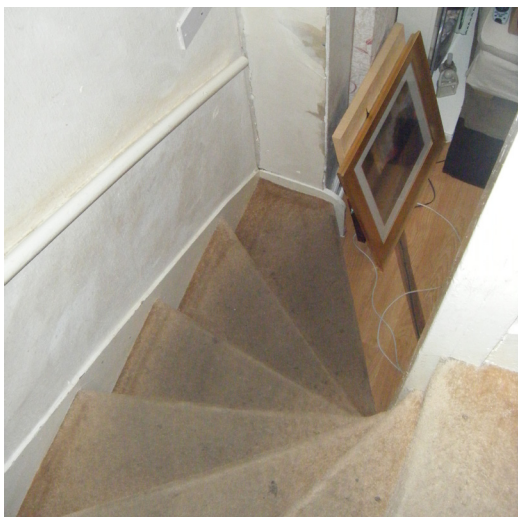
Description

The main stairs comprise extremely steep winders which have uneven risers and treads, measuring between 200mm and 250mm. The surface of the stairs is painted wood to each side, with a bare strip in the middle. The handrail fitted to the adjacent wall cannot be gripped at certain angles.

There is no natural lighting on the stairs, but artificial lighting is positioned in the ceiling above the stairs, with a switch on the landing. There is no switch to the landing light at the foot of the stairs, although this area is lit to a degree by the artificial lighting in the passage.

There is a short first-floor landing, off which there are two bedrooms; the bathroom and WC are on the ground floor. The stairs open into a passage on the ground floor, which is 1500mm wide.

There is no central heating to the dwelling. Heating is provided via an open fire in the living room and an Aga in the kitchen.



4
Staircase looking down
from midpoint



3
Staircase looking down
from top floor landing

Relevant Baseline Indicators

0

Satisfactory
or N/A

1

Not
Satisfactory

2

Defective

3

Seriously
Defective

Subject	Score	BI	Baseline Indicators
9 External Space	0 1 2 3	9.1	External yards, paths, steps, accessways and surrounds within the curtilage of the dwelling shall be in good repair, even and well drained. Accessways must be suitable non-slip surfaces, have adequate lighting and should not have slopes of sufficient gradient to present a falls risk. This includes consideration to unevenness, trip risks and poor slip resistance, to any steps or surfaces within external space that is provided, to the front door, yard and garden. Where there are drops of more than 300mm from paths, patios, steps, terraces or garden areas, guarding will be necessary where there are high risks of falling. All boundaries should be clearly defined and enclosed by well-maintained and suitable walls or fences. This also applies to structure, accessways, security doors and lifts.
12 Walking Surfaces	0 1 2 3	12.1	Every interior and exterior stairway, ramp, deck, porch, balcony walkway, terrace, landing and hall shall be maintained structurally sound, in good repair, properly anchored and capable of supporting the imposed loads.
	0 1 2 3	12.2	Internal and external stairs must be safe, secure, in sound condition, free from defects and projections and well maintained. External stairs must be designed to allow water to drain away from the steps.
	0 1 2 3	12.3	Stair coverings must be securely and safely fastened. Treads on exterior stairways shall have non-slip surfaces, be firmly fixed and cover at least 75% of each tread.
	0 1 2 3	12.4	Every interior and exterior stairway with four or more risers shall have at least one structurally sound continuous handrail installed, between 900mm and 1000mm high, measured from the pitch line to the top of the handrail. The handrail shall be firmly fastened, capable of supporting a load of 140kg and in good condition.
	0 1 2 3	12.5	Minimum headroom on a staircase shall be 1900mm.
	0 1 2 3	12.6	There shall be landings at the top and bottom of all internal and external flights of stairs, with a minimum width of 750mm and length of 500mm.

Relevant Baseline
Indicators

0

Satisfactory
or N/A

1

Not
Satisfactory

2

Defective

3

Seriously
Defective

Subject		Score				BI	Baseline Indicators
13	Guards	0	1	2	3	13.1	Every stairway, porch, patio, landing, balcony walkway, terrace and hall located more than 600mm above an adjacent area shall have a structurally sound guard, between 900mm and 1100mm high, measured vertically from the floor. The guard shall be firmly fastened, capable of supporting normally imposed loads and in good condition. Balusters with a minimum thickness of 10mm shall be placed at intervals that do not allow passage of a sphere greater than 100mm in diameter. There shall be no climbable cross-pieces.
14	Lighting and Services	0	1	2	3	14.2	Every hall, stairs and landing within the house, and every room used, or intended for use, by the occupant of the house shall have a suitable and adequate means of artificial lighting that is controllable and accessible which can allow lighting to be turned on and off and bulbs/fixtures to be changed and maintained safely. Two-way or PIR-activated lighting shall be provided to any internal staircase.
15	Heating and Insulation	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.

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		Tread lengths
0	1	2	3		Riser heights
0	1	2	3		Tread and riser variation
0	1	2	3		Nosing length
0	1	2	3		Nosing differentiation
0	1	2	3		Handrails
0	1	2	3		Handrail grip
0	1	2	3		Guarding
0	1	2	3		Flight length
0	1	2	3		Lighting
0	1	2	3		Doors onto stairs

Score					Matters affecting Harm Outcomes
0	1	2	3		Flight length
0	1	2	3		Stair pitch
0	1	2	3		Projections
0	1	2	3		Surface hardness

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	Example Dwelling	1 in 10
		1 in 20
		1 in 30
		1 in 50
Unlikely		1 in 100
	National Average	1 in 200
		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 10		

Justification of Scoring
Likelihood of Harm

The winding staircase is not only steep but has varying sizes in riser and going throughout the flight which poses many difficulties for any user, particularly as the handrail is of a poor design which makes difficult to grip in the angles. There is no covering to the stairs, only a short first floor landing and lack of two-way switch to the bottom of the staircase. The lack of heating also helps exacerbate the situation, cold homes contribute to mobility issues which in a situation such as this and a staircase of this design could increase the risk for the vulnerable group.

The extreme nature of stair design would cause any user to be more vigilant than usual and would lead to extra care being taken which does mitigate the likelihood to some degree, but not by a large amount. Overall, the combination of deficiencies to these stairs lead to the likelihood being increased by a significant degree.

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	55.0
	30.0		30.0		30.0		National Average
		20.0	Example Dwelling	20.0	Example Dwelling + National Average	20.0	
Likely	10.0	National Average	10.0		10.0		
Example Dwelling	5.0		5.0		5.0		
National Average	2.0		2.0		2.0		
	1.0	Unlikely	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		
	0.0		0.0		0.0		
Score 5.0%		Score 20.0%		Score 20.0%		Score 55.0%	

Justification of Scoring

Harm Outcomes

The steepness of the stairs means that there is a possibility of falling vertically from the top to the bottom step, and the shape of the stairs would suggest that a fall is likely to involve a collision with the handrail and curving outer wall. For these reasons, there is a higher chance of a fall resulting in Extreme or Severe harm 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 10			
Extreme 5.0%	Severe 20.0%	Serious 20.0%	Moderate 55.0%
Category	Band	Score	
1 Legal duty to take action	High	10,000	
Example Dwelling		7,655	
2 Discretion to take action	Medium	1,000	
	National Average	183	
	Low	100	

Score
7,655

Scenario 2

After works meeting baseline indicators

Likelihood of Harm
1 in 20

Extreme 5.0%	Severe 20.0%	Serious 20.0%	Moderate 55.0%
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Category	Band	Score
1 Legal duty to take action	High	10,000
	Example Dwelling	3,828
2 Discretion to take action	Medium	1,000
	National Average	183
	Low	100

Score
3,828

Scenario 3

After further improvements

Likelihood of Harm
1 in 200

Extreme 2.0%	Severe 10.0%	Serious 20.0%	Moderate 68.0%
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Category	Band	Score
1 Legal duty to take action	High	10,000
2 Discretion to take action	Medium	1,000
	Example Dwelling+	183
	National Average	100
	Low	

Score
183

Justification of Scoring

After works meeting baseline indicators

Complying with the BIs wouldn't improve the steepness of the winders or the uneven treads/risers. However, compliance would ensure the provision of non-slip treads and a continuous graspable handrails together with additional lighting with dual switches top and bottom or with PIR activation. BIs would also require improvement to heating in the property. These measures would reduce the likelihood of an occurrence somewhat but not to the national average, and it would remain a Category 1 hazard.

Justification of Scoring

After further improvements

An architect could be employed to review all possible practical alternatives for replacement of the existing arrangement with stairs that conform to current building regulations. Assuming such works are possible, then if carried out, they would significantly improve the staircase back to the national average.

Other Relevant Legislation and Guidance

Building/area status

The assessment of risk and the calculation of the hazard rating score should be unaffected by a property being a listed building or located in a conservation area. 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 is likely to 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.

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.