



Housing Health and Safety Rating System (HHSRS)

Case Studies

Group A
Protection Against
Accidents

Hazard A2
Falling on
Stairs etc.

Example A2.5
Post-1979
Semi-detached House
(non-HMO)

Vulnerable Group
All persons aged
60 years and over

Multiple Locations
Yes

Related Hazards
No



Dwelling

Description

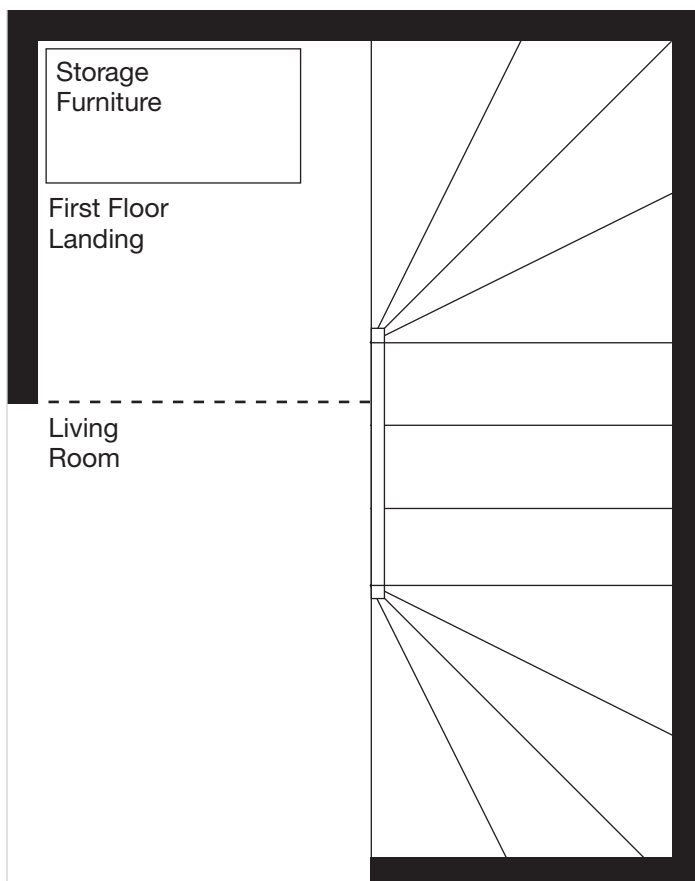
This is a post-1979 'quarter' house, i.e. part of a building containing four dwellings built back to back. The property is in reasonable repair for its age. There are no leaks from the gutters or downpipes. The electrical inspection report is satisfactory, the energy performance certificate (EPC) is C, and mains-wired smoke alarms have been provided in suitable locations.

The open-plan grassed area surrounding the four houses slopes gently and there are no obvious hazards. The approach to the front door is down three concrete flagstone steps from the car parking area. There is no handrail, but there is a PIR-operated light in the porch. The risers for these three steps are even, there are no nosings to trip over, and the treads are 450mm.

The internal stairs comprise four winders at the bottom, three straight steps in the centre and a further four winders at the top, the whole flight turning through 180 degrees. The stairs comply with building regulations (pitch less than 42 degrees, riser height 210mm, tread depth 235mm, width 830mm). On the landing, furniture is sited opposite the top of the stairs. The foot of the stairs is open to the main living room. The top of the stairs ends in a small landing, off which are two bedrooms and a bathroom.



1
Front exterior view of house



2
Partial floorplan showing staircase

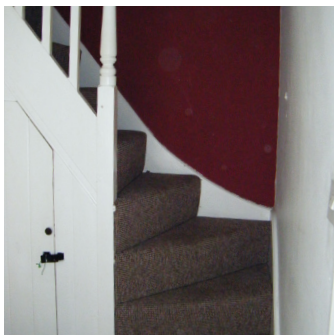
Deficiencies

Description

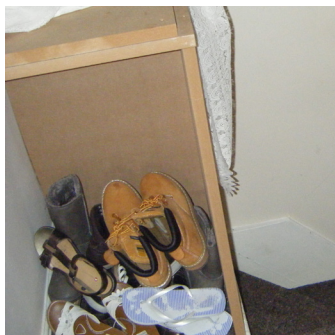
Apart from a short section near the bottom newel post, there is no handrail on the inside of the stairs. The rail running on the outside wall is difficult to grasp. There is no rail or guarding at the bottom of the stairs and the floor is wood-effect laminate.

There is a light on the ceiling at the top of the stairs that is operated from a suitably located switch on the landing and by another at the bottom of the stairs (though access is partially obstructed by a small table with a lamp on it). The small size of the property restricts placement of furniture.

There is no handrail to the external steps.



3
Staircase from ground floor showing lack of handrail and unguarded bottom with steep winders



4
Furniture located at the top of the stairs which restricts movement and access to the light switch

Relevant Baseline Indicators

0

Satisfactory
or N/A

1

Not
Satisfactory

2

Defective

3

Seriously
Defective

Subject		Score				BI	Baseline Indicator
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 300 mm 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, access ways, security doors and lifts.
		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.
12	Walking Surfaces	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 140 kg and be 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 Indicator
13	Guards	0	1	2	3	13.1	Every stairway, porch, patio, landing, balcony walkway, terrace, landing 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 100 mm 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.

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	1 in 10
	1 in 20
	Example Dwelling 1 in 30
Unlikely	1 in 50
	1 in 100
	National Average 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
Likelihood of Harm

While the stairs are fully carpeted and comply with building regulations, the lack of a continuous handrail on a staircase in conjunction with winders to both top and bottom provide no means for someone to steady themselves if they a misstep or trip when using the staircase. Positioning of furniture on the landing restricts safe access to and from the stairs. The lack of guarding to the side of the lower winders increases the risk someone will fall from the staircase or trip over the edge.

Externally, the lack of a handrail to the three steps leading from the front door into the car parking area increases the risk of slips, trips and falls, particularly in icy conditions when the steps could become slippery.

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	59.0	
	30.0		30.0		Example Dwelling		30.0	
	20.0		20.0				National Average	74.0
Likely	10.0	Example Dwelling	10.0	National Average	20.0	These scores are simply calculated as the sum of the other three harm outcomes subtracted from 100%		
	5.0		5.0		10.0			5.0
	2.0		2.0		2.0			2.0
Example Dwelling + National Average	1.0	Unlikely	1.0	Unlikely	1.0			
	0.5		0.5		0.5			0.5
	0.2		0.2		0.2			0.2
Very Unlikely	0.1	Very Unlikely	0.1	Very Unlikely	0.1			
	0.0		0.0		0.0			0.0
Score		Score		Score		Score		
1.0%		10.0%		30.0%		59.0%		

Justification of Scoring

Harm Outcomes

There is no guarding by the winders at the bottom of the stairs. Impact with the wall-mounted wooden cabinet behind the sofa could cause a head injury and someone could fall onto the hard floor surface in the gap between the party wall and sofa, causing severe bruising or fractured bones. Falling from a height of 840mm is considered to increase the chances of 'Severe' and 'Serious' harm due to the potential for serious fractures or loss of consciousness in persons of the vulnerable age group.

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 1.0%	Severe 10.0%	Serious 30.0%
		Moderate 59.0%
Category	Band	Score
1 Legal duty to take action	High	10,000
2 Discretion to take action	Example Dwelling Medium	986
	National Average Low	109 100

Score
986

Scenario 2

After works meeting baseline indicators

Likelihood of Harm
1 in 100

Extreme 1.0%	Severe 5.0%	Serious 20.0%	Moderate 74.0%
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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		217
National Average		109
	Low	100

Score

217

Scenario 3

After further improvements

Likelihood of Harm
1 in 200

Extreme 1.0%	Severe 5.0%	Serious 20.0%	Moderate 74.0%
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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 + National Average		109
	Low	100

Score

109

Justification of Scoring

After works meeting baseline indicators

The baseline indicators would require a suitable handrail to be fitted, of between 900mm and 1000mm high, which is secure and able to support a load of 140kg. Whilst this will significantly reduce the likelihood of a fall requiring medical intervention, the risk remains above average due to the lack of guarding to the side of the lower winders.

Justification of Scoring

After further improvements

Further works could return the risk to the national average. The provision of suitable guarding to the side of the lower winders as per 'other relevant matters' would significantly reduce the risk of harm. The occupant should be advised to move the furniture obstructing the landing at the top of the stairs. Installation of a handrail to the external three steps leading from the front door to the car parking area would further reduce the risk.

Other Relevant Legislation and Guidance

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.