



Housing Health and Safety Rating System (HHSRS)

Case Studies

Group A
Protection Against
Accidents

Hazard A3
Falling Between
Levels

Example A3.3
1920–1945
Semi-detached House

Vulnerable Group
All persons aged
5 years and under

Multiple Locations
No

Related Hazards A6
Collisions,
Entrapment and
Ergonomics



Dwelling

Description of Dwelling

This is a 1930s, three-bedroomed semi-detached house on a sloping site, with gardens laid to green at the front and rear of the property. The house has been modernised with new uPVC double glazed casement windows and doors, which were installed about 5 years ago. The house has been rewired, and gas-fired central heating has been provided.



1
Front exterior

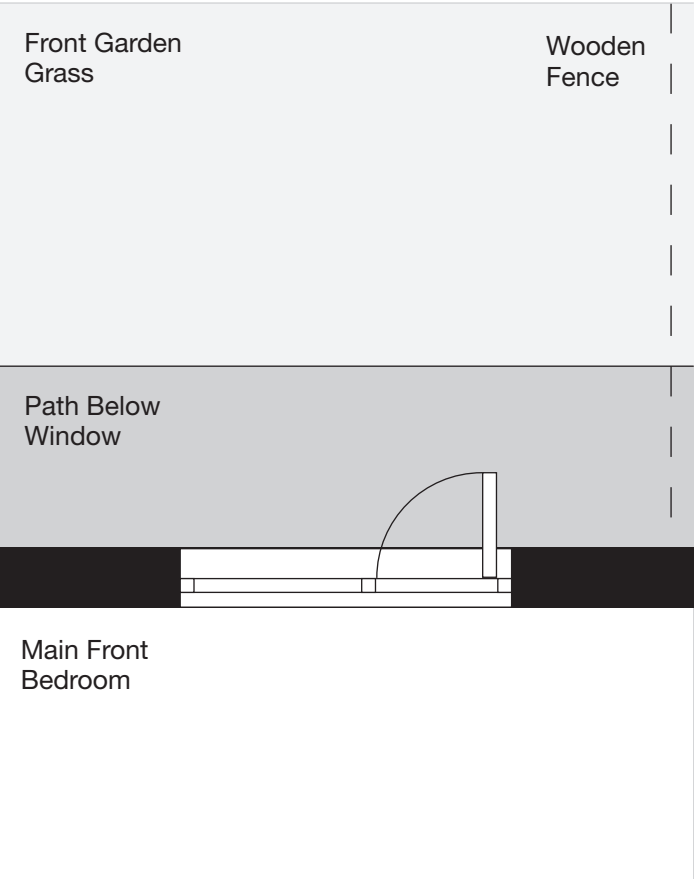
Deficiencies

Description of Deficiencies

The window to the first-floor front bedroom comprises a main fixed light below a narrow top-hung opening and a side-hung opening light. This is fitted with a safety catch, which limits the opening to less than 100mm. However, the faulty safety catch is easily disengaged, allowing the window to be opened to a full 90 degrees.

The sill height is some 900mm above the bedroom floor, but there is a radiator fixed to the wall under the sill. Externally, the bottom of this window is 4.2 metres above the 1 metre wide concrete path. There is a kerb and grassed area in front of this. Below, about one metre to the side of the window, is a sagging wooden ‘post-and-paling’ fence.

The safety catches on all other windows appear to operate satisfactorily.



2
Partial floorplan
showing area below
bedroom window



3
First floor front
bedroom window

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.
11	Security	0	1	2	3	11.5	All door and window frames and furniture shall operate properly and be in a good state of repair, with no open joints or compromised seals between the windows/doors and adjacent walls.
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.
		0	1	2	3	13.2	All windows with an opening section greater than 100mm, through which a person may fall a single storey or more, shall have a fall-prevention device that restricts opening to less than 100mm. It must be possible to overcome this restriction easily when the windows in question are required to be escape windows, under the building regulations.
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.

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	Window operation
0	1	2	3	Window sill heights
0	1	2	3	Window cleaning

Score				Matters affecting Harm Outcomes
0	1	2	3	Height above ground
0	1	2	3	Nature of ground
0	1	2	3	Non-safety glass

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
	1 in 50
Unlikely	1 in 100
	1 in 200
	1 in 300
	1 in 500
Very Unlikely	1 in 1,000
	Example Dwelling + National Average 1 in 2,000
	1 in 3,000
	1 in 5,000

Score

1 in 2,000

Justification of Scoring
Likelihood of Harm

While the bedroom window sills are only 900mm high, this is not particularly unusual for a property of this age. The window safety catches to one of the bedrooms is faulty, but in comparison to the average property of this age, many wouldn't have safety catches. The likelihood of a harmful event will therefore be close to the national average for a property of this age.

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	74.5	
	30.0		30.0		30.0			
	20.0		20.0		Example Dwelling	20.0		
Likely	10.0	Likely	10.0	National Average	10.0	These scores are simply calculated as the sum of the other three harm outcomes subtracted from 100%		
	5.0		Example Dwelling		5.0		5.0	
	2.0		National Average		2.0		2.0	
Unlikely	1.0	Unlikely	1.0	Unlikely	1.0			
	Example Dwelling		0.5		0.5			
	National Average		0.2		0.2			
Very Unlikely	0.1	Very Unlikely	0.1	Very Unlikely	0.1			
	0.0		0.0		0.0			
Score		Score		Score			Score	
0.5%		5.0%		20.0%			74.5%	

Justification of Scoring

Harm Outcomes

If a person were to fall from the first-floor window, they would most likely land on the hard, unforgiving concrete path directly beneath the window, although there is a chance they may land on the wooden fence (offset slightly from the path).

The hard surface and increased risk of projections from the sagging wooden ‘post-and-paling’ fence would increase the likelihood of harm outcomes being categorised as ‘Extreme’, ‘Severe’ or ‘Serious’, as potential harm might include serious fractures, unconsciousness, or death. As such, the harm outcomes in these categories are increased.

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 2,000			
Extreme 0.5%	Severe 5.0%	Serious 20.0%	Moderate 74.5%
Category	Band	Score	
1 Legal duty to take action	High	10,000	
2 Discretion to take action	Medium	1,000	
	Low	100	
Example		8	
National Average		4	
Score		8	

Scenario 2

After works meeting baseline indicators

Likelihood of Harm 1 in 3,000			
Extreme 0.5%	Severe 5.0%	Serious 20.0%	Moderate 74.5%
Category	Band	Score	
1 Legal duty to take action	High	10,000	
2 Discretion to take action	Medium	1,000	
	Low	100	
	Example	6	
	National Average	4	
Score	6		

Justification of Scoring

After works meeting baseline indicators

Replacing or repairing the defective window restrictor would ensure compliance with the baseline indicators. Given that window restrictors are infrequently found in this age of property, their presence on all windows would reduce the likelihood of harm to slightly better than the national average. The increased severity of harm should a fall occur would remain the same however, since there would be no change to the height, impact surface or obstacles below.

Scenario 3

After further improvements

Likelihood of Harm 1 in 3,000			
Extreme 0.2%	Severe 2.0%	Serious 10.0%	Moderate 87.8%
Category	Band	Score	
1 Legal duty to take action	High	10,000	
2 Discretion to take action	Medium	1,000	
	Low	100	
	National	4	
Score	Example Dwelling	3	

Justification of Scoring

After further improvements

The harm outcomes would be returned to the national average by, for example, removing the driveway and fence below the first-floor window. These measures are not considered necessary as they would not be cost-effective in terms of the small benefit from reducing the harm outcome.

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.