



Housing Health and Safety Rating System (HHSRS)

Case Studies

Group A
Protection Against
Accidents

Hazard A3
Falling Between
Levels

Example A3.4
Post-1979
First-floor Flat
(Non-HMO)

Vulnerable Group
All persons aged
5 years and under

Multiple Locations
Yes

Related Hazards
No



Dwelling

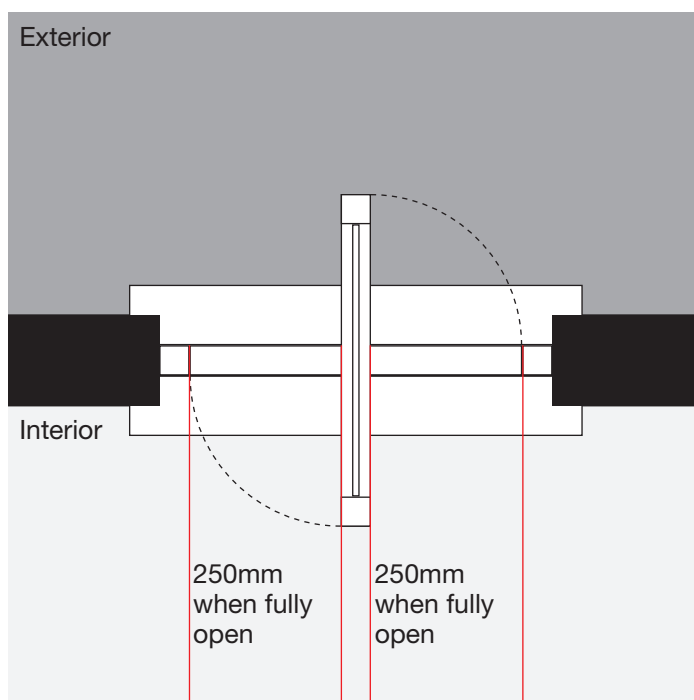
Description

This is a first-floor front-facing flat above a suburban parade of shops. There is a second flat to the rear. Planning permission for the flats to be converted was given in 2007, the original building having been built in 1980 and the space originally used by the shops as stock rooms. The flat comprises a lounge/kitchen, two bedrooms and a bathroom.

Access to the flat is from a shared stairwell entered from a lobby at ground level from the front of the building. The shop in question is extended at the rear so there is a flat roof to which the occupiers of the flat have access, via a door at the top of the stairwell.



1
Front view of flat
Photo: J M Ritchie
Shutterstock.com



2
Plan of rotating window detail
showing opening dimensions

Deficiencies

Description

The door at the top of the stairwell has a multi-locking mechanism with a thumb-turn lock, as the door is intended to serve as an emergency fire escape. To the left hand edge of the flat roof is a fragile Perspex roof-covering to the supermarket delivery bay (with concrete floor). On the other sides of the flat roof there is concrete below. There is no lighting to this roof, nor is there any street lighting nearby.

The windows to the flat have a design as shown in the plan above, with a height of around 800 mm above the floor level. There are key locking handles fitted but the keys are missing so they cannot be locked. There are no restrictors fitted to the windows. Below the windows is the hard-surface road at the front of the shops.



2
Door onto rear flat roof



3
Rear flat roof

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 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.

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

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
	Example Dwelling	1 in 30
		1 in 50
Unlikely		1 in 100
		1 in 200
		1 in 300
		1 in 500
Very Unlikely	National Average	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

The completely unguarded sections of flat roof area and the absence of any artificial lighting source poses a significant risk, especially to those whose sense of risk is less developed (i.e. young children – the vulnerable group for this hazard). This is not the main entrance to the dwelling, so it may not be used on a daily basis; however, the vulnerable group would have to access the flat roof via a door with a thumb-turn lock (no key required). Although the mechanism will be located above the height that an under-5-year-old could easily reach, it remains accessible.

Additionally, the window sills are only 800mm above the floor level. The windows do not have restrictors, are of a wide-opening design, and following the loss of the keys, there is no way of locking them. These issues combined mean the windows are easy to access, making falls from them a real possibility.

Both the flat roof and window issue increase the likelihood of an occurrence to a large 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	58.0
	30.0		30.0				
	20.0		20.0	Example Dwelling	30.0	National Average	92.5
Likely	10.0	Example Dwelling	20.0				
	5.0		10.0	10.0	These scores are simply calculated as the sum of the other three harm outcomes subtracted from 100%		
Example Dwelling	2.0	National Average	5.0	National Average		5.0	
			2.0			2.0	
Unlikely	1.0	Unlikely	1.0	Unlikely		1.0	
	0.5		0.5			0.5	
National Average	0.2	Unlikely	0.2	Unlikely		0.2	
	0.1		0.1		0.1		
Very Unlikely	0.0	Very Unlikely	0.0	Very Unlikely	0.0		
Score		Score		Score		Score	
2.0%		10.0%		30.0%		58.0%	

Justification of Scoring

Harm Outcomes

Figures for the 'Extreme', 'Severe' and 'Serious' harm categories have been significantly increased to take into account the hard concrete surfaces onto which the vulnerable group would fall and the lack of any external lighting. These relevant matters significantly increase the harm outcome that would result should an under-5-year-old fall from the roof. The height that they would fall is also relevant.

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 2.0%	Severe 10.0%	Serious 30.0%	Moderate 58.0%
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Category	Band	Score
1 Legal duty to take action	High	10,000
2 Discretion to take action	Medium	1,000
	Low	100

Example Dwelling

National Average

Score

1,319

9

Scenario 2

After works meeting baseline indicators

Likelihood of Harm 1 in 1,000			
Extreme 2.0%	Severe 10.0%	Serious 30.0%	Moderate 58.0%
Category	Band	Score	
1 Legal duty to take action	High	10,000	
2 Discretion to take action	Medium	1,000	
	Low	100	
	Example Dwelling	40	
	National Average	9	
Score	40		

Justification of Scoring

After works meeting baseline indicators

The baseline indicators would ensure the provision of guarding and external lighting to the flat roof and proper maintenance of the windows, with restrictors and keys for the locks in place. This would mitigate the risk posed by the low sill height. These improvements would significantly reduce the likelihood of a fall occurring, improving the situation to that of the national average. The harm outcomes would however stay the same because they were increased to take into account the external hard surfaces and the distance of the fall: such matters would remain unaddressed by the baseline indicators.

Scenario 3

After further improvements

Extreme	Severe	Serious	Moderate
Category	Band	Score	
1 Legal duty to take action	High	10,000	
2 Discretion to take action	Medium	1,000	
	Low	100	
Score			

Justification of Scoring

After further improvements

Further works not required

Other Relevant Legislation and Guidance

Leasehold Properties

In a leasehold property, 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 (e.g. the roof).

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.