



Housing Health and Safety Rating System (HHSRS)

Case Studies

Group A
Protection Against
Accidents

Hazard A8
Electrical Hazards

Example A8.2
1920–45
Semi-detached
House

Vulnerable Group
All persons aged
5 years and under

Multiple Locations
Yes

Related Hazard A4
Fire and
Explosions



Dwelling

Description

This is a 1930s, semi-detached house on a residential street. It is constructed of solid brick walls under a concrete tiled roof, and comprises a living room, kitchen and dining room on the ground floor, and three bedrooms and a bathroom on the first floor.

The property retains most of the original single-glazed wooden windows and has a gas-fired boiler and central heating system dating from the 1980s.

Although the property is currently rented, there is no electrical installation condition report or EPC available.



1
Front exterior

Deficiencies

Description

The property was re-wired in the 1980s but retains the wired fuses in the consumer unit in the understairs cupboard.

The switches and sockets are in sound condition; however, the occupier advises that the dining-room and living-room ceiling lights 'buzz' and flicker occasionally.

The kitchen sink and the bath are earth bonded. However, the earthing was intended to be connected to a copper spike in the ground just outside the living room. The 9-inch copper spike remains, but the earth bonding is no longer connected to it. A French door has been installed in place of the original window in the living room. When opened wide, this door would have been in contact with any earth-bond cable attached to the earthing rod.



2
Rewireable fuse board



3
Earthing not attached to
copper rod
Photo credit: Healthabitat

Relevant Baseline Indicators

0

Satisfactory
or N/A

1

Not
Satisfactory

2

Defective

3

Seriously
Defective

Subject	Score	BI	Baseline Indicator
14 Lighting and Services	0 1 2 3	14.4	All electrical installations, including fixtures and fittings, must be maintained in good repair.
	0 1 2 3	14.6	Every habitable room shall have at least 2 separate and remote double electric sockets, that are suitably located for use. Kitchens shall have at least 4 suitably located double sockets.
19 Fire Safety	0 1 2 3	19.2	All electrical equipment supplied by landlords in rented residential premises is safe and compliant with current UK requirements for safety of domestic electrical products; all electrical appliances supplied by the landlord are subject to testing in line with the IET Code of Practice for In-service Inspection and Testing of Electrical Equipment (Fifth Edition) (unless they are under one year old and display a UKCA/CE marking).
	0 1 2 3	19.4	The electrical installation should have been inspected and tested within the last 5 years.

Other Relevant Matters

0

Satisfactory
or N/A

1

Not
Satisfactory

2

Defective

3

Seriously
Defective

Score

Matters affecting
Likelihood of Harm

0123

Fuse and meter location

0123

Waterproofing

0123

Lightning protection system

Score

Matters affecting
Harm Outcomes

0123

Fuse and meter location

0123

Waterproofing

0123

Lightning protection system

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

Score

1 in 200

Justification of Scoring

Likelihood of Harm

The system incorporates rewirable fuses and the earthing for services is not present. In addition, if the services were earthed, the position of the earth rod is currently subject to damage. These factors combined increase the likelihood that someone could be electrocuted and also means that the system is less likely to trip, increasing the length of time someone could remain in contact with electricity if an electrical fault were to occur. Furthermore, the likelihood of electrocution from contact with metal surfaces is increased due to the lack of a connected earth rod, even though there is no exposed wiring noted in the description (ordinarily signifying that contact and therefore electrocution is unlikely).

The electrical installation is considerably worse than the majority of UK properties. Although the electrical equipment is reported as being in sound condition, the absence of an EICR or other electrical testing means it is not known what unauthorised alterations or deterioration in condition may have occurred to an installation that is approximately 40 years old. The buzzing associated with the ground-floor lighting circuit is indicative of other electrical faults, albeit the light fittings are likely to be out of reach of a young child in the most vulnerable group.

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	Example Dwelling + National Average	50.0	Example Dwelling	19.5
	30.0	Example Dwelling	30.0		National Average	39.5	
	20.0	20.0	20.0				
Likely	10.0	National Average	10.0		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		
	2.0		2.0		5.0		
Unlikely	1.0	Unlikely	1.0	Unlikely	2.0		
	Example Dwelling + National Average		0.5		0.5		
			0.2		0.2	0.5	
Very Unlikely	0.1	Very Unlikely	0.1	Very Unlikely	0.2		
	0.0		0.0		0.1		
					0.0		
Score		Score		Score		Score	
0.5%		30.0%		50.0%		19.5%	

Justification of Scoring

Harm Outcomes

The presence of rewirable fuses and the absence of earthing to the property means that the power would not be cut off in the event of an electrocution, and exposure is likely to be for a greater period, leading to severe harm outcomes. As RCD protection is present in over 80% of properties, this means there is a higher risk of severe harm outcomes than at the average property.

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 200			
Extreme 0.5%	Severe 30.0%	Serious 50.0%	Moderate 19.5%
Category	Band	Score	
1 Legal duty to take action	High	10,000	
2 Discretion to take action	Medium	1,000	
	Example Dwelling	251	
	Low	100	
	National Average	6	

Score
251

Scenario 2

After works meeting baseline indicators

Likelihood of Harm
1 in 3,000

Extreme	Severe	Serious	Moderate
0.5%	10.0%	50.0%	39.5%

Category	Band	Score
----------	------	-------

1 Legal duty to take action	High	10,000
-----------------------------------	-------------	--------

2 Discretion to take action	Medium	1,000
-----------------------------------	---------------	-------

	Low	100
--	------------	-----

Example		9
National Average		6

Score

9**Scenario 3**

After further improvements

Likelihood of Harm
1 in 5,000

Extreme	Severe	Serious	Moderate
0.5%	10.0%	50.0%	39.5%

Category	Band	Score
----------	------	-------

1 Legal duty to take action	High	10,000
-----------------------------------	-------------	--------

2 Discretion to take action	Medium	1,000
-----------------------------------	---------------	-------

	Low	100
--	------------	-----

Example		6
Dwelling + National Average		

Score

6**Justification of Scoring**

After works meeting baseline indicators

Compliance with Baseline Indicator 19.4 requires the undertaking of an EICR and the execution of all necessary works to resolve any C1, C2 or FI deficiencies. Given the age of the installation, this may necessitate a complete rewire. Written confirmation should be obtained from a competent electrician that all remedial work has been completed.

Compliance with BI 14.4 requires that externally, the earthing rod is repositioned or physically separated (by way of, for example, a robust door-stop or enclosure), to minimise the risk of impact damage. The earthing cable would have to be securely reconnected and tested to ensure it is working correctly.

Justification of Scoring

After further improvements

The installation of a new consumer unit would ensure the likelihood of harm is reduced to the national average.

Other Relevant Legislation and Guidance

Electrical Regulations

The Electrical Safety Standards in the Private Rented Sector (England) Regulations 2020 require landlords to have the electrical installations in their properties inspected and tested by a person who is qualified and competent, at an interval of at least every 5 years. Landlords must provide a copy of the electrical safety report to their tenants and, if requested, to their local authority.

Energy Performance of Buildings

The Energy Performance of Buildings Regulations 2012 requires an EPC to be produced when a property is placed for sale or rent (subject to tenancy type). Where a property is required to have an EPC, it is subject to the requirements of the Energy Efficiency (Private Rented Property)(England and Wales) Regulations 2015.

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.