

Housing Health and Safety Rating System (HHSRS)

Case Studies

Group A
Protection Against
Accidents

Hazard A8
Electrical Hazards

Example A8.1
1946-79
Semi-detached
House

Vulnerable Group
All persons aged
5 years and under

Multiple Locations
Yes

Related Hazard A4
Fire and
Explosions

Related Hazard A5
Flames, Hot
Surfaces, etc

Related Hazard A6
Collisions, Entrapment
and Ergonomics

Dwelling

Description

This property is a two-storey semi-detached house, built in 1964 as part of a council house estate. It is currently occupied by the owner, a single family.

The property is brick built with retrofitted cavity wall insulation and 150 mm of loft insulation, under a concrete-tiled roof. There is uPVC double glazing to windows and external doors. Central heating is provided by a gas-fired boiler in the kitchen, with radiators in all rooms. There are gardens to the front and rear of the house. The house was partially rewired in the 1990s, prior to the local authority selling it. The consumer unit is in the understairs cupboard and has miniature circuit breakers (MCBs) but no residual current devices (RCDs).

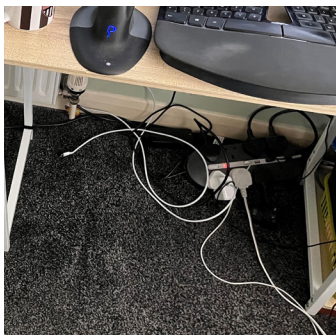


1
Front exterior of property

Deficiencies

Description

The kitchen has one double and one single socket. The only possible placement of the fridge/freezer within the kitchen requires an extension from this single socket. This has been achieved by the use of plastic connectors, with the cable taped to the wall, as shown in the bottom photograph. Cables have been wired into the double socket and electric boxes; these are being used as extension sockets. These are located on top of the work surface to allow other electrical appliances to be used. There are three such extension sockets being used in this way within the kitchen. The remainder of the electrical wiring installation within the dwelling is original. There are two double sockets in the living room, three single sockets in the main bedroom and a single double socket in each of the two smaller bedrooms. There is no electrical installation condition report.



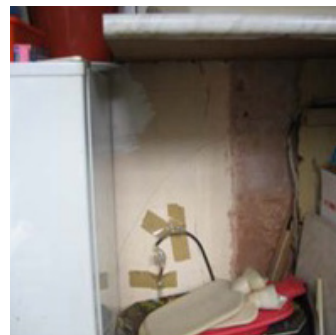
2
Single socket in small
bedroom



3
Extension use in bedroom



4
Extension use in kitchen



5
Wiring taped to wall

Relevant Baseline Indicators

0

Satisfactory
or N/A

1

Not
Satisfactory

2

Defective

3

Seriously
Defective

Subject		Score				B1	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	19.4	The electrical installation should have been inspected and tested within the last 5 years.

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

Score

Matters affecting
Harm Outcomes

0123

Fuse and meter location

0123

Waterproofing

0123

Lightning protection

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
Example Dwelling	1 in 50
Unlikely	1 in 100
	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 50

Justification of Scoring

There is an increased risk of harm, particularly to the vulnerable group (children under 5), as there are electrical sockets and extension cables in the kitchen that are exposed to damage and sources of moisture, adding to the risk of electrocution. The lack of sockets throughout the property is likely to result in the use of extension cables and plugboards. Extension cables at low level or crudely taped in place (such as the one on the kitchen wall) are vulnerable to inquisitive children who may pull or trip on them, potentially exposing live parts. The horizontally positioned socket on the worktop next to the kettle could easily be splashed and then touched by someone.

The provision of MCBs in the consumer unit helps mitigate the risk, though the MCBs alone do not provide the extra protection against electrocution that RCDs do.

The use of extension leads may result in circuits becoming overloaded, which in turn may lead to a fire, although this would be scored separately under the Fire and Explosions hazard.

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	39.5
	30.0		30.0		30.0		National Average
	20.0		20.0		20.0		39.5
Likely	10.0	Example Dwelling + National Average	10.0		10.0	These scores are simply calculated as the sum of the other three harm outcomes subtracted from 100%	
	5.0		5.0		5.0		
	2.0		2.0		2.0		
Unlikely	1.0	Unlikely	1.0	Unlikely	1.0		
	0.5		0.5		0.5		
	0.2		0.2		0.2		
Example Dwelling + National Average	0.5						
	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%		10.0%		50.0%		39.5%	

Justification of Scoring

There is no evidence to suggest that the harm outcomes from electrocution in this instance will differ from the national average.

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 50

Extreme 0.5%	Severe 10.0%	Serious 50.0%	Moderate 39.5%
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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
608

Scenario 2

After works meeting
baseline indicators

Likelihood of Harm
1 in 5,000

Extreme 0.5%	Severe 10.0%	Serious 50.0%	Moderate 39.5%
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Category	Band	Score
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1 Legal duty to take action	High	10,000
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2 Discretion to take action	Medium	1,000
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Low	100
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Score
6

Example Dwelling + National Average
6

Scenario 3

After further
improvements

Likelihood of Harm

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

Application of the baseline indicators should reduce the risk to the national average.

The number and siting of electrical sockets required to remove the need to use extension cables and plugboards is determined to some extent by the occupants' lifestyle and living arrangements.

Justification of Scoring

N/A

Other Relevant Legislation and Guidance

Electrical Safety Standards

The Electrical Safety Standards in the Private Rented Sector Regulations 2020 would not apply in this case as the property was owner/occupied at the time of assessment. If the property is rented again in the future, 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.

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.