



National Center for Healthy Housing

Creating healthy and safe homes for children through practical and proven steps.

An Overview of the Healthy Home Rating System (HHRS)



Principle behind the HHRS

A dwelling, including the structure and associated outbuildings and garden, yard and other amenity space, should provide a safe and healthy environment for the occupants and any visitors.



What is the HHRHS?

- Evidence based risk assessment
- A system (not a standard)
- Developed and tested over ten years in UK (became statutory in UK in 2006)





HHS components

- Structured approach to assessment
- Data for 29 health and safety hazards
- Grades severity of threats
- Applicable to any type of dwelling, however constructed
- Can be updated as knowledge increases (US data vs. UK data)



THE 29 HAZARDS AND THE HAZARD PROFILES

THE EFFECT OF THE DEFECT

Housing Hazards as Identified in the Healthy Home Rating Tool

1 Damp and Mold growth
Caused by dust mites, mold or fungal growth caused by dampness and/or high humidity. It includes threats to mental health and social well-being caused by living with damp, damp staining and/or mold growth.
Most vulnerable: 14 years or less

2 Excess cold
Caused by excessively cold indoor temperatures.
Most vulnerable: 65 years or older

3 Excess heat
Caused by excessively high indoor air temperatures.
Most vulnerable: 65 years or older

4 Asbestos, Silica and other MMM
Caused by excessive levels of silica, asbestos and man-made mineral fibers (MMM).
Most vulnerable: No Specific Group

5 Biocides
Threats to health from these chemicals used to treat timber and mold growth in dwelling. While biocides include insecticides and rodenticides to control pest infestations (e.g. cockroaches or rats and mice), these are not considered for the purposes of the HRR.
Most vulnerable: No Specific Group

6 Carbon monoxide and fuel combustion products
Excess levels of carbon monoxide, nitrogen dioxide, sulfur dioxide and ozone in the dwelling's atmosphere.
Most vulnerable: No Specific Group

7 Lead
Leads from lead-paint dust, chips or leaded water pipes.
Most vulnerable: 6 years or younger

8 Radiation
This category covers the threats to health from radon gas and by-products, primarily radium, but also radon dissolved in water.
Most vulnerable: All persons aged 66 - 84 with living exposure

9 Uncombusted fuel gas
Fuel gas escaping into the atmosphere within a dwelling.
Most vulnerable: No Specific Group

10 Volatile Organic Compounds
Volatile organic compounds (VOCs) are a diverse group of organic chemicals which includes formaldehyde, that are gaseous at room temperature, and are found in a wide variety of materials in the home.
Most vulnerable: No Specific Group

11 Crowding and Space
This category covers hazards associated with lack of space within the dwelling for living, sleeping and normal family/recreational life.
Most vulnerable: No Specific Group

12 Entry by Intruders
Difficulties in keeping a dwelling secure against unauthorized entry and the maintenance of defensible space.
Most vulnerable: No Specific Group

13 Lighting
This category covers the threats to physical and mental health associated with inadequate natural and/or artificial light. It includes the psychological effect associated with the view from the dwelling.
Most vulnerable: No Specific Group

14 Noise
Covers threats to physical and mental health resulting from exposure to noise inside the dwelling or within its vicinity.
Most vulnerable: No Specific Group

15 Domestic Hygiene, Pests and Refuse
Covers hazards which can result from poor design, layout and construction such that the dwelling cannot be readily kept clean and hygienic; access into, and harborage within, the dwelling for pests; and inadequate and unhygienic practices for storing and disposal of household waste.
Most vulnerable: No Specific Group

21 Falling between Levels
This category covers falls from one level to another, inside or
Most vulnerable: 60 years or older

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24 Fire
This category covers threats from exposure to uncontrolled fire and associated smoke at a dwelling.
Most vulnerable: No Specific Group

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27 Explosions
This category covers the threat from the blast of an explosion, from debris generated by the blast, and from the partial or total collapse
Most vulnerable: No Specific Group

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dwelling for drinking and for domestic purposes such as cooking, washing, cleaning and sanitation, as well as the sequence. It includes threats to health from contamination by bacteria, protozoa, parasites, viruses, and chemical pollutants.
Most vulnerable: No Specific Group

occur internally or externally within the curtilage threatening occupants, or externally outside the curtilage putting at risk members of the public.
Most vulnerable: No Specific Group



Connecting ...

- The “effect of the defect”
- Example:
Unheated home



Deficiency	Hazard	Health Impact
?	?	?



Stages in Assessment

1. Dwelling surveyed and any deficiencies recorded
2. Once survey completed, the surveyor attributes deficiencies to hazards
3. Then, the Hazard Rating process begins...
 - Likelihood
 - Harms



Likelihood

The likelihood of an **occurrence** over the next twelve months which could cause harm to a member of the age group vulnerable to that hazard

(**occurrence** is an event or period of exposure)



Spread of Harms

While there may be a most likely outcome, there may also be a possibility of one or more other outcomes

eg, below a 2nd floor window there may be railings on one side and a flower bed on the other; this may mean a 50% chance of death, and a 50% chance of severe bruising



Spread of Harms

The most probable and other possible outcomes given as a percentage of the four main Classes of Harm ~

Class I – Extreme

Class II – Severe

Class III – Serious

Class IV – Moderate



HHRS Hazard Score

Formula used to generate a Hazard Score

Three sets of figures used -

1. Likelihood of an occurrence
2. Spread of possible harms
3. Harm weightings



Banding of Scores

Band	Score
A	5,000 or more
B	2,000 - 4,999
C	1,000 - 1,999
D	500 - 999
E	200 - 499
F	100 - 199
G	50 - 99
H	20 - 49
I	10 - 19
J	9 or less



Hazard Bands

- Example 1 – Falling on stairs
 - Overall Rating: **1,115**
 - **HAZARD BAND: C**
- Example 2 – Falling from 5th floor window
 - Overall Rating: **2,791**
 - **HAZARD BAND: B**



National Center for
Healthy Housing

Thank you!

- Questions
- Concerns

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