

# *Environmental* **Radon** Newsletter

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## Radon and house sales

This issue of the Newsletter is devoted to answering questions that commonly arise when houses are bought and sold.



### Contributions from:

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### What are the risks from radon?

**T**he natural radioactive gas radon enters houses from the ground underneath, where it is formed from the uranium which is found in all rocks and soils. Radon levels indoors depend on the concentration of radon in the ground, details of construction of the house, and the way the house is heated and ventilated. Levels can vary widely between apparently identical houses: the only way to find out whether there is a high level in a particular house is to measure it.

Indoor radon has been found to be the second most important cause of lung cancer after smoking. Although levels in most homes are low, the concentrations exceed the Action Level of 200 Bq m<sup>-3</sup> in a significant number of homes. At this level it is recommended that remedial action should be taken to reduce radon levels.

Living for a lifetime in a house where radon is at the Action Level is estimated to carry a 3-5% risk of fatal lung cancer, the majority of which are in smokers, but with a significant risk to non-smokers. It is possible to reduce this risk substantially by reducing indoor radon levels.

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## POINTS OF CONTACT

Building Research Establishment (BRE)  
Garston, Watford, WD2 7JR  
BRE Radon Hot Line:  
Tel: 01923 664707 Fax: 01923 664010  
www.bre.co.uk

National Radiological Protection Board  
Radon Survey  
Chilton, Didcot, OX11 0RQ  
Radon Freephone: 0800 614529  
Fax: 01235 833891  
www.nrpb.org

Department for Environment,  
Food and Rural Affairs  
Zone 4-E8, Ashdown House  
123 Victoria Street, London SW1 6DE  
Tel: 020 7890 6266/6265 Fax: 020 7890 6289  
www.defra.gov.uk

National Assembly for Wales  
Housing Division  
Cathays Park, Cardiff, CF1 3NQ  
Tel: 01222 825219 Fax: 01222 825391

Environment and Heritage Service  
Department of the Environment for  
Northern Ireland  
Calvert House, 23 Castle Place  
Belfast, BT1 1FY  
Tel: 01232 254754 Fax: 01232 254700

Scottish Executive Development Department  
Housing Division 1  
First Floor East, Victoria Quay  
Edinburgh, EH6 6QQ  
Tel: 0131 244 5575 Fax: 0131 244 5596

Health and Safety Executive  
Health Directorate B6  
Rose Court, 2 Southwark Bridge  
London, SE1 9HF  
Tel: 020 7717 6854 Fax: 020 7717 6717

Northern Radon Liaison Group  
c/o Environmental Health Department  
South Lakeland District Council  
South Lakeland House, Lowther Street  
Kendal, Cumbria, LA9 4UD

Radon South West Committee, Secretary  
28 Seymour Road,  
Newton Abbot, Devon TQ12 2PU

Steering Group on Radon  
(Northamptonshire and elsewhere)  
Environmental Health Department,  
Daventry District Council  
Lodge Road, Daventry  
Northamptonshire, NN11 5AF.

Derbyshire Radon Steering Group  
c/o Environmental Health Department  
Derbyshire Dales District Council  
Town Hall, Matlock  
Derbyshire, DE4 3NN

The Radon Council Limited  
PO Box 39, Shepperton  
Middlesex, TW17 8AD  
Tel: 01932 221212 Fax: 01932 229779

## Is my house in a radon Affected Area?

**R**adon Affected Areas are those with 1% or more of houses above the UK Action Level for radon (200 Bq m<sup>-3</sup>). There is a map of radon Affected Areas on the National Radiological Protection Board website, at [www.nrpb.org](http://www.nrpb.org) (search for "radon map").

If this map doesn't show detailed enough information, NRPB can also provide an individual service for a charge (telephone 0800 614529), and there are companies who can advise whether a house is in a radon Affected Area:

Groundsure Ltd

[www.groundsure.com](http://www.groundsure.com)

Landmark Information Group

[www.landmark-information.co.uk](http://www.landmark-information.co.uk)

Sitescope Ltd

[www.homecheck.co.uk](http://www.homecheck.co.uk)

## Has the house I want to buy been tested for Radon?

**I**n some parts of the country with severe radon problems, more than 30% of houses have already been tested.

House purchasers will often wish to know whether a measurement has been carried out in a house that they wish to buy.

The results of radon measurements for householders are reported in confidence, though tenants normally make them available to their landlords.

The laboratory making the measurements cannot pass the results on to anyone without the permission of the person for whom the measurement was carried out.

House purchasers wanting to know whether the radon level has been measured

in a house should tell their solicitor to ask the vendor's solicitor for this information.

Where a result is available, it should not be taken as more than a general indication of the likely level that will be found when the house has new occupants.

Radon levels inside buildings are very variable, and one of the

important factors affecting the radon level is the lifestyle of the occupants, in particular their preference for heating and ventilation.

The radon level in a building may sometimes be significantly different under the conditions favoured by the new occupants.



## How do I get radon levels measured?

The National Radiological Protection Board advises that householders in radon Affected Areas should have their houses tested for radon.

Radon levels in homes are usually measured using two small plastic detectors which are sent by post. They are left in place for three months and then returned for processing. The detectors are simple and robust plastic devices that contain a radiation sensitive element; they are harmless and do not give off any radiation.

Because radon levels vary from day to day, spot measurements of radon should never be used to determine whether a house has a radon problem. But if time is pressing, short-term measurements over a few days or weeks may be made instead of three-month measurements.

These cannot give as accurate an indication of the annual level of radon as the longer measurements, but can be used for screening purposes. However, these screening measurements will sometimes be

inconclusive, and a further measurement will then be required.

Measurements should not be made if a house is unoccupied or undergoing building works. Each detector should be placed in a main occupied room on a shelf or piece of furniture where air can circulate freely around it.

Locations to avoid include the floor, window sills in direct sunlight or draughts and sources of heat such as fireplaces or electrical equipment.

Radon detectors are available commercially from several laboratories and the cost usually covers the supply and processing of detectors and the report.

A list of laboratories validated for making three-month radon measurements in homes is given at: [www.nrpb.org/services/radon/validation.htm](http://www.nrpb.org/services/radon/validation.htm)

The Radon Council ([www.radonhotline.org](http://www.radonhotline.org)) has information about some firms which make long or short term measurements.

## What can I do if the house I want to buy hasn't been tested?

If the house you want to buy is in a radon Affected Area, but has not yet been tested for radon, you may be worried that testing it after purchase could reveal high radon levels. This would face you with the cost of remedying the problem.

To avoid a sale falling through under these circumstances, a retained fund may be used. Under this arrangement, a small proportion of the purchase price is held by an agreed party for a period after the sale until the radon level has been measured.

If radon remedial work is found to be necessary, it is paid for out of the retained fund.

This retained fund is described as a radon bond in Government literature. It offers a solution by protecting the buyer from possible additional costs, and the seller from an unnecessary price reduction.

In most cases, even in radon Affected Areas, the result of the test will be below the Action Level, and the retained fund will then be passed to the house vendor.

The solicitors acting for both parties should negotiate the terms of the retention. Points to consider include:

### AMOUNT OF RETENTION

Typically £1,000 – see *How much do remedial measures cost?*

### RADON TEST

A three-month test with two monitors from a validated laboratory is recommended. See *How do I get radon levels measured?*

### TRIGGER LEVEL

The usual trigger for radon remediation is an annual house average at or above 200 Bq m<sup>-3</sup>, the UK radon Action Level.

### REMEDIES

See *Where can I get advice on radon remedies?*

If remedial measures are required, the total cost will need to be agreed with the house vendor prior to the release of retained funds.

### RETESTING

The radon test needs to be repeated after remediation to ensure that the work has been successful.

### PERIOD OF RETENTION

Allow 12 months for the initial test and for remediation and retesting if necessary.

## Where can I get advice on radon remedies?

Indoor radon levels can be reduced temporarily by opening ground floor windows, but this is not an effective solution to the problem of indoor radon, and it is not recommended. The highest indoor radon levels are found at night and in winter, and few people are willing to keep ground floor windows open at those times.

Fortunately there are proven radon reduction measures that can substantially reduce indoor radon levels, some by a factor of ten. For more information contact:

- The Environmental Health Department of your local authority
- The Building Research Establishment: (telephone 01923 664707, [www.bre.co.uk/radon/index.html](http://www.bre.co.uk/radon/index.html))
- The Radon Council (telephone 01932 221212, [www.radonhotline.org](http://www.radonhotline.org))

## How much do remedial measures cost?

There is a misconception that radon remedial measures are prohibitively expensive. In fact the costs compare very favourably with those for other work that is often carried out on purchase of a house.

Radon remedies	Typical costs
Mechanical ventilation under suspended floor	£350
Positive ventilation system	£500 - £750
Fan-assisted radon sump	£500 -£1000

  

Other home improvements	Typical costs
Treat rising damp in one wall	£450
Replace carpets	from £1000
Replace bathroom suite	from £ 700

## Where do I go for more information?

- The Government programme on radon is directed by the **Department for the Environment, Food and Rural Affairs**. They produce a range of booklets on radon. See [www.defra.gov.uk/environment/radioactivity/radon/info/index.htm](http://www.defra.gov.uk/environment/radioactivity/radon/info/index.htm)
- The radon programme is implemented at the local level largely through **Local Authorities**. Contact the Environmental Health Department for enquiries about existing houses, or the Building Control Department for new houses. Local Land Charge Officers deal with radon issues arising during conveyancing.
- The **National Radiological Protection Board** provides a wide range of material on the subject, including maps of radon Affected Areas. See [www.nrpb.org](http://www.nrpb.org) and click on **Radon**.
- Advice on building issues, including remedial measures for existing homes and preventive measures for new homes, is available from the **Building Research Establishment**. See [www.bre.co.uk/radon/index.html](http://www.bre.co.uk/radon/index.html).
- **The Radon Council** provides information on radon and maintains a list of companies that offer radon services. See [www.radonhotline.org](http://www.radonhotline.org).



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