

# HPA Advice on the Limitation of Human Exposure to Radon

## Questions & Answers

This document contains those Q+A items that relate specifically to the new HPA radon advice in the Documents of the HPA, published 8<sup>th</sup> July 2010, RCE-15.

### Radon Target level

**Q: What is the radon Target Level (100 Bq m<sup>-3</sup>)?**

A: The health risk from radon is considered to be proportional to the level of long term exposure, with no safe/unsafe threshold. To reflect this, HPA advises that homes with radon levels above the Action Level (200 Bq m<sup>-3</sup>) should be remediated, preferably to below the Target Level.

Householders with levels between the Target Level (100 Bq m<sup>-3</sup>) and Action Level (200 Bq m<sup>-3</sup>) should seriously consider reducing their radon level, especially if they are at greater risk, such as if they are current or ex smokers.

**Q: What should I do if my home is between the Target Level (100 Bq m<sup>-3</sup>) and Action Level (200 Bq m<sup>-3</sup>)?**

A: You should seriously consider reducing the radon level in your home but bear in mind that the risks at this level are lower than in homes that are above the Action Level. You should also remember that, for any radon level, the risks are much greater for smokers than non-smokers: the risk for ex-smokers is in-between.

**Q: Why have both an Action Level and a Target Level for radon?**

A: The Action Level identifies radon levels above which action is most urgent but it is important that substantial reductions are made – not just aiming to get under the Action Level. The Target Level of 100 Becquerels per cubic metre aims to encourage householders to make major reductions in their radon level - to below the Target Level if possible.

Health risks below the Action Level are smaller but not zero. HPA advises householders with radon between the Target Level and the Action Level to seriously consider reducing their radon levels - especially if the household includes smokers or ex-smokers who are at greater risk from radon.

### Radon probability areas and Radon affected areas

**Q: What are radon probability areas?**

A: The HPA recommends that all parts of the UK should be classified according to the probability that homes in the locality will have an indoor radon concentration above the Action Level (200 Bq m<sup>-3</sup>).

- Areas where less than 1% of homes are estimated to be above the Action Level are “lower probability radon areas”.
- Areas where between 1% and 10% of homes are estimated to be above the Action Level are “intermediate probability radon areas”.
- Areas where at least 10% of homes are estimated to be above the Action Level are “higher probability radon areas”.

**Q: I live in a “higher probability radon area” so my home has at least a 10% probability of being above the Action Level. Should I test for radon?**

A: Yes, you should get your home tested for radon and, if the radon level is high, reduce it. Further information is on our radon website [www.ukradon.org](http://www.ukradon.org).

**Q: I live in an “intermediate probability radon area” so my home has a 1-10% probability of being above the Action Level. Should I test for radon?**

A: Yes, you should get your home tested. High radon levels can and do occur in intermediate radon probability areas. Some householders in these areas may decide not to test because, for example, everyone in the household is at a lower risk through being lifelong non-smokers. Remember, the only certain way of knowing your risk from radon is to test the indoor radon level. If the radon level is high, you can lower your risk by reducing the radon level in your home. Further information is on our radon website [www.ukradon.org](http://www.ukradon.org).

**Q: I live in a “lower probability radon area” so my home has less than a 1% probability of being above the Action Level. Should I test for radon?**

A: Every home has some radon but the majority of homes in the UK are in “lower probability radon areas”. This means that if you live in such an area, there is only a small - less than 1% - probability (odds of less than 1 in a 100) that the level of radon in your home will exceed the Action Level. If you live in a lower radon probability area, HPA does not advise measuring the radon in your home but you can test if you wish. You might consider testing if, for example, you have a basement that you use often, say as a living area or bedroom. Further information is on our radon website [www.ukradon.org](http://www.ukradon.org).

**Q: Are radon Affected Areas still in effect?**

A: Yes. To provide consistency with existing arrangements, areas where the probability of exceeding the Action Level is 1% or more are still defined as radon Affected Areas. To avoid the misconception that radon is only present in radon Affected Areas, those areas with a less than 1% probability of exceeding the Action Level are defined as “lower probability radon areas”.

## Testing for radon

**Q: A radon measurement was made in my house several years ago, do I need to retest?**

A: Radon levels can change if the structure of the home changes or if you change the way the home is occupied. Changes likely to alter the radon levels include home improvements (for example installing central heating, double glazing or extra insulation), major building works (extensions, loft or basement conversions) or changes such as whether particular rooms are used or heated differently, as might happen when there is an addition to the family or when occupants retire. A change in occupants can also alter the level.

If the original result was well below the target level ( $100 \text{ Bq m}^{-3}$ ) and there are no significant changes to your home or to your living style, there is no need to retest.

If the original result was between the Target Level ( $100 \text{ Bq m}^{-3}$ ) and the Action Level ( $200 \text{ Bq m}^{-3}$ ) and there are no significant changes to your home or your living style you should consider remediation (see the answer to the second question). If the test was carried out for a previous occupier or you have improved your home or added an extension or converted a basement you should consider re-measuring the radon level.

Further information is on our radon website [www.ukradon.org](http://www.ukradon.org).

**Q: How often should householders retest their radon levels after remediation?**

A: HPA advises householders to retest their radon levels every 5 to 10 years after remediation, and after any major building works, such as new double glazing, central heating, adding an extension, or converting a basement, to check that the remediation remains effective. In addition, regular, say quarterly, simple visual or audio checks should be made to ensure any fans are still operating.

## Remediation

**Q: What should I do if the radon level in my home has been reduced but is still above the Action Level (200 Bq m<sup>-3</sup>)?**

A: If you have reduced your radon level but it is still above the Action Level, you should carry out further works to reduce your level, if possible to below the Target Level (100 Bq m<sup>-3</sup>). In some homes this may not be practical but, by taking action to reduce your radon level, you will have reduced your future radon exposure and your risk of lung cancer.

**Q: What should I do if the radon level in my home has been reduced to below the Action Level (200 Bq m<sup>-3</sup>) but is still above the Target Level (100 Bq m<sup>-3</sup>)?**

A: If you have reduced your radon level but it is still above the Target Level, you should consider carrying out further work to reduce your level, if possible to below the Target Level. In some homes this may not be practical but by taking action to reduce your radon level you will have reduced your future radon exposure and your risk of lung cancer.