

Radon Risk Report: England and Wales

Introduction

This is an advisory report on the requirement for radon protective measures in new buildings, conversions and extensions to existing buildings. The report also indicates whether a site is located within a radon affected area. It is based on the joint British Geological Survey (BGS) - Public Health England (PHE) [radon potential data](#).

Requirement for radon protective measures

The BGS is not able to provide advice on the technical specifications of 'basic' and 'full' radon protective measures. This information is detailed in *BRE Report BR211 Radon: guidance on protective measures for new buildings* which may be purchased from www.brebookshop.com. This report offers guidance on the technical solutions that are required to satisfy Building Regulations requirements.

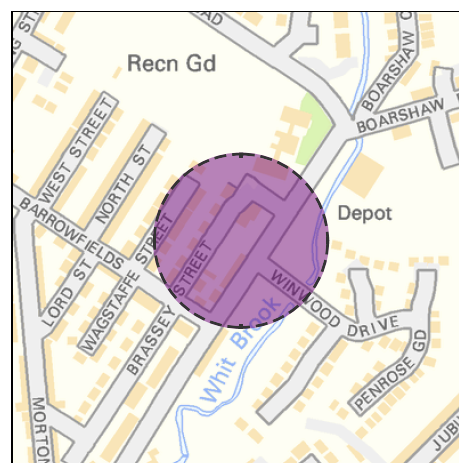
The determination below follows advice in *BR211 Radon: Guidance on protective measures for new buildings (2007 edition)*, which also provides guidance on what to do if the result indicates that protective measures are required.

Location

387497, 406554 (British National Grid)

24/11/2020 13:36:08 GMT

Location Map



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Is the property in a radon Affected Area as defined by Public Health England (PHE)?

No

What percentage of homes are estimated to be above the Action Level?

The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). The property is not in a radon Affected Area.

Guidance

PHE recommends a radon 'Action Level' of 200 becquerels per cubic metre for the annual average of the radon gas concentration in a home. Where 1% or more of homes are estimated to exceed the Action Level (i.e. are in an Intermediate or Higher probability radon area) the area should be regarded as a radon Affected Area.

This report informs you whether the property is in a radon Affected Area and the percentage of homes that are estimated to be at or above the radon Action Level. This does not necessarily mean there is a radon problem in the property; the only way to find out whether it is above or below the Action Level is to carry out a radon measurement in an existing property.

PHE advises that radon gas should be measured in all properties within radon Affected Areas and that homes with radon levels above the Action Level (200 Bq m⁻³) should be remediated, and when achievable to below the Target Level of 100 Bq m⁻³. Householders with levels between the Target Level and Action Level should seriously consider reducing their radon level, especially if they are at greater risk, such as if they are current or ex smokers. Whether or not a home is in fact above or below the Action Level or Target Level can only be established by having the building tested. PHE provides a radon testing service which can be accessed at www.ukradon.org.

The information in this report provides an answer to one of the standard legal enquiries on house purchase in England and Wales, known as CON29 Standard Enquiry of Local Authority (part 1); 3.13 Radon Gas: Location of the Property in a Radon Affected Area.

If you are buying a currently occupied property in a Radon Affected Area, you should ask the present owner whether radon levels have been measured in the property. If they have, ask whether the results were above the Radon Action Level and if so, whether remedial measures were installed, radon levels were re-tested, and the results of re-testing confirmed the effectiveness of the measures.

Further information on radon is available from PHE or www.ukradon.org

What level of radon protective measures are required for new buildings in England and Wales?

None

Guidance

When extensions are made to existing buildings in high radon areas, or new buildings are constructed in these areas, the Building Regulations for England, Wales and Scotland require that protective measures are taken against radon entering the building.

This report provides information on whether radon protective measures are required. Depending on the probability of buildings having high radon levels, the Regulations require either:

1. No protective measures
2. Basic protective measures
3. Full protective measures

More details of the protective measures are available in BR211 Radon: Guidance on protective measures for new buildings (2015 Edition). Additional information and guidance is available from the Building Research Establishment website (<http://www.bre.co.uk/radon/>)

The indicative maps showing where protective measures may be required in new buildings and extensions, conversions and refurbishments in existing buildings are available on the Building Research Establishment website at the following link: <http://www.bre.co.uk/radon/maps.html>

Whether or not a building is in fact above or below the radon Action Level can only be established by having the building tested. PHE provides a radon testing service which can be accessed at www.ukradon.org or by telephone.

Further Information

Risks of Radon

Radon is a radioactive gas which occurs naturally. It has no taste, smell or colour. Special devices are needed to measure it. Radon comes out of the ground. Outdoors, it is diluted to very low levels. However, in some cases the radon level indoors can build up to high concentrations. In such cases, it does pose a serious risk to health.

Action Level for Radon

Public Health England recommends that radon levels should be reduced in homes where the average is more than 200 becquerels per cubic metre of air (Bq m^{-3}). This recommendation has been endorsed by the Government. This Action Level refers to the annual average concentration in a home, so radon measurements are carried out with two detectors (in a bedroom and living room) over three months, to average out short-term fluctuations.

Radon Affected Areas

Public Health England defines radon Affected Areas as those with a 1% probability or more of a home having radon above the Action Level. Public Health England recommends that people in Affected Areas should test their homes for radon.

How to Reduce Radon Levels

Public Health England advises that radon gas should be measured in all properties within radon Affected Areas and that homes with radon levels above the Action Level (200 Bq m^{-3}) should be remediated, preferably to below the Target Level of 100 Bq m^{-3} . Householders with levels between the Target Level and Action Level should seriously consider reducing their radon level, especially if they are at greater risk, such as if they are current or ex smokers.

Indoor radon levels can usually be substantially reduced at a cost comparable to many home improvements, such as replacing carpets. Details of methods of reducing radon levels are given on the Building Research Establishment Website.

Radon in the Workplace

Information on radon measurement in the workplace and in the home is available at:

[Radon in the Workplace](#)

[Radon in the Home](#)

Additional advice on radon in the workplace can be found at:

[Health and Safety Executive](#)

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The results in this report are generated automatically from the joint BGS - Public Health England Radon dataset, based on 1:50 000 digital geological maps and the interpretation of other records in the possession of Public Health England and BGS at the time. Their scope and accuracy is limited by the methods used to create the dataset. The answer given should therefore only be treated as indicative for the search area.

The search in this report is carried out for a circle 150m in diameter centred on the grid reference or point supplied, which takes into account the approximate size of a property's extent and the spatial accuracy of the geological hazards data described above.

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Note that for some sites, the latest available records may be quite historical in nature, and while every effort is made to place the analysis in a modern geological context, it is possible in some cases that the detailed geology at a site may differ from that described.

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