



Radon in Social Housing

Information compiled by propertECO, national specialists in radon gas testing and mitigation.

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propertECO
The Radon Specialists

1. Introduction

1.1 What is radon?

Radon is a naturally occurring radioactive gas and a source of indoor air pollution. It can affect properties of all types, ages, locations and uses. The gas is formed when uranium in the soil and rocks beneath us decays. When it permeates the ground into open air, it is quickly diluted to low concentrations, however if it rises into a building, it can become trapped and build to dangerous concentrations.

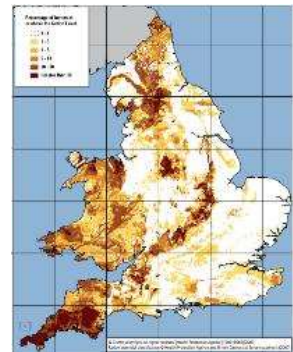
1.2 What risks are associated with radon exposure?

When indoor radon concentrations are high, the radioactive decay products are inhaled and some are deposited in the lungs, where they continue to emit radiation. Each year in the UK over 1100 people die from lung cancer developed as a result of exposure to radon. Radon exposure is the second leading cause of lung cancer, after smoking.

Exposure to radon during childhood increases the lifetime risk of developing lung cancer and, as such, particular attention should be paid to ensuring family homes are not affected.

1.3 Where is radon found?

Properties that lie in certain areas of the UK are more likely to contain high levels of radon, due to the underlying geology and varying amounts of uranium present. Radon is found nationwide, and the indicative maps produced by the UK Health Security Agency (UKHSA) highlight areas where it is estimated that more than 1% of properties will contain high levels. These areas are classed as radon Affected Areas.



Buildings with basements are also more susceptible to high levels of radon accumulating. UKHSA advises that any property with a basement, regardless of whether it is in an Affected Area or not, will have an increased probability of containing high radon concentrations.

1.4 How do I know if there is radon in a building?



Radon is odourless, colourless and tasteless. To assess the level of radon in an existing building, specialist detectors must be placed in the property before being sent to a laboratory for analysis. Radon detectors are small and discreet, and the whole process including laboratory analysis is inexpensive. As radon levels fluctuate according to seasonal and occupational variances (e.g. amount of ventilation through opening windows), a three-month test period is recommended. The result is given in a unit called Becquerels and expressed as Becquerels per cubic metre of air (Bq/m³).

The number of detectors required depends upon the size, layout and usage of the building, and propeTtECO can advise on this. In homes, two detectors are typically used so that a living room and bedroom can be tested.

1.5 Is there legislation requiring social housing providers to test for radon?

All landlords have a Duty of Care to provide a safe home to their tenants under the Housing Act 2004. The Act identifies radon as a potential hazard in dwellings, and the Housing Health and Safety Rating System (HHSRS) requires landlords to measure any potential hazards in their property. All hazards are then given a numerical score based on the overall risk to the occupant. Under HHSRS, a radon test must be completed in any tenanted property that lies in a designated radon Affected Area. As radon levels can vary widely between apparently identical dwellings, each individual property must be tested. Testing should be repeated at intervals of no longer than 10 years.

1.6 What do the radon test results mean?

The Government has set guideline limits, called Action Levels, which are the point at which action should be taken to lower radon concentrations. There are different Action Levels for homes and workplaces.

The residential Action Level is 200 Bq/ m³. If annual average radon concentrations exceed this, the risk score calculated under HHSRS will fall into a band that requires action to be taken to reduce the risk. This is likely to involve the installation of a radon mitigation system, such as a radon sump or positive pressure system. If action is not taken, the Local Authority has powers to take 'appropriate enforcement action' dependent on the severity of the risk.

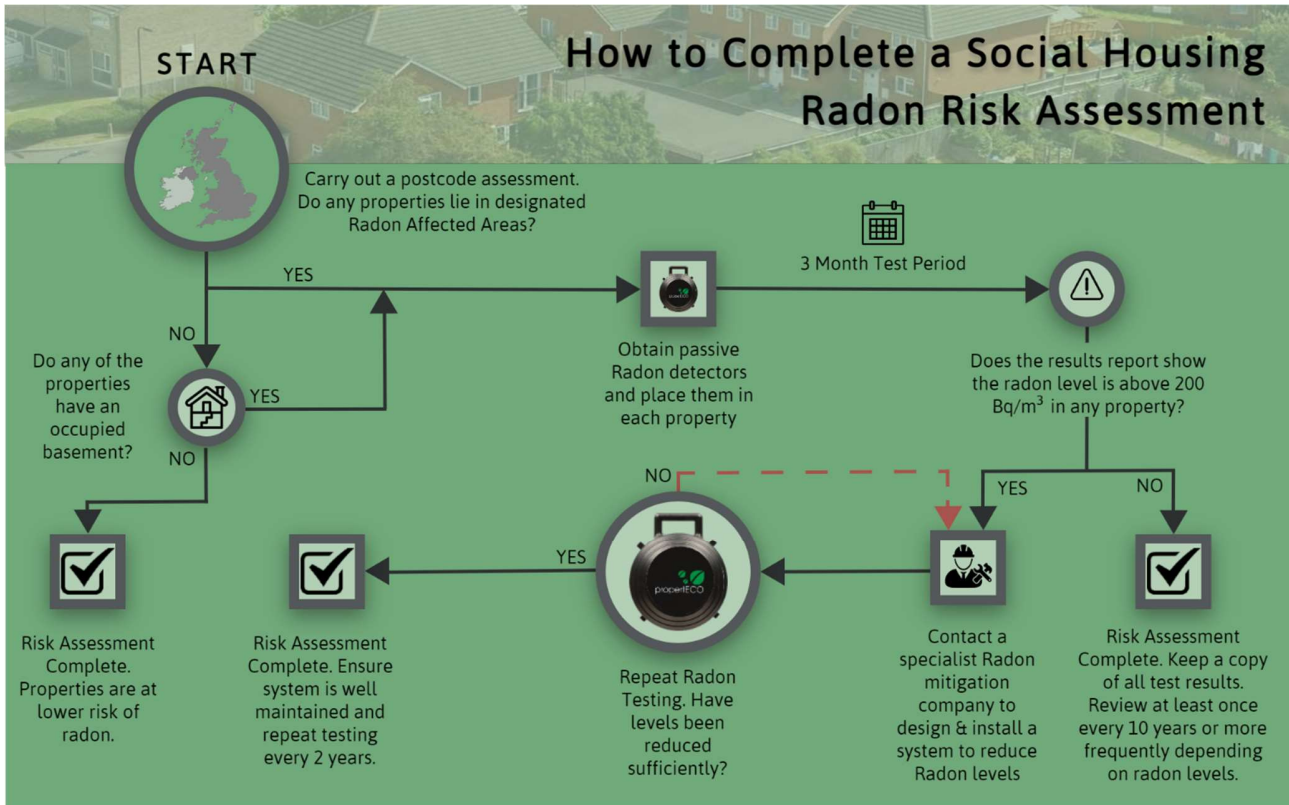
A Target Level of 100 Bq/m³ was introduced as guidance only in 2010. If radon concentrations between 100 and 200 Bq/m³ are identified, action to reduce the level should be considered, especially if there is a smoker or ex-smoker in the home.

1.7 What is a radon mitigation system?

The two main methods of reducing high radon levels are radon sumps and positive pressure systems. These work by altering the difference in air pressure between the ground and the property to influence the movement of any ground gas. A survey is required to determine which system will be the most appropriate and effective. When installing a radon mitigation system in social housing, the tenant should be made aware that it is vital that the system runs constantly. Running costs should therefore be discussed with tenants. Repeat testing should always be carried out following any remedial works to verify their effectiveness.



2. Steps to Complete a Radon Risk Assessment for Social Housing Stock



propertECO work with local authorities and social housing providers across the country to assist with radon compliance. We offer an initial desktop assessment of postcodes to identify properties where testing is required and both a postal and 'place and collect' test service. When elevated radon levels are detected, our expert surveyors are experienced in designing effective radon mitigation systems that can be installed by our local teams of technicians. We can deliver planned preventative maintenance and re-testing programmes and reactive repairs.



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