

HAZARDOUS SUBSTANCE GUIDE

Radon

What is Radon?

Radon is a naturally occurring radioactive element. It is a colourless, odourless and tasteless gas.

Radon is found in the atmosphere but tends to accumulate in underground space such as caves, mines and basements.

Radon can increase the risk of lung cancer, especially when combined with smoking. Before appropriate ventilation became mandatory, many miners developed lung cancer from radon exposure.

Where is it found?

Whilst the highest levels of radon gas are usually found in underground spaces, high concentrations are found in ground floor buildings due to a higher likelihood of a slightly lower pressure than the surrounding atmosphere. This allows radon from subsoil underneath buildings to enter through cracks and gaps in the floor.

Workplaces such as basements, mines, caves and utility industry service ducts can have significant levels of radon as can any above-ground workplaces in radon affected areas. All workplaces including factories, offices, shops, classrooms, nursing homes, residential care homes and health centres can be affected.

Legal Requirements

As outlined in the Health and Safety at Work etc Act 1974, employers must, so far as is reasonably practicable, ensure the health and safety of employees and others who have access to their work environment.

Employers are required to take action to restrict exposure. It is the responsibility of the HSE and Local Authorities to enforce these regulations.

Radon Risk Report

Radon risk reports are required to determine the risk levels of a selected building (NOT the level of radon at the selected address). They are used to estimate the probability of a building being above or below the Action Level for radon. If the result is a higher probability of radon levels within the selected building then further radon measurements and testing should be conducted in order to reach the radon Target Level.

For redevelopment sites, GeoReports provided by the British Geological Survey should be undertaken.



Lucion Services
Protecting people and planet



"Let's discuss your Radon needs"

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Radon Action Level

The Action Level refers to the annual average concentration in a home where there is more than 200 becquerels per metre cubed (200 Bq m⁻³) as recommended by Public Health England. The Ionising Radiations Regulations 2017 (IRR17) come into effect where radon is present above the defined level of 300 Bq/m³ (as an annual average) and employers are required to take action to restrict resulting exposures.

Radon Target Level

The Target Level of 100 Bq m⁻³ is the ideal outcome for remediation works in existing buildings and protective measures in new buildings, as recommended by Public Health England. If the result of a radon assessment is between the Target and Action Levels, action to reduce the level should be seriously considered.

Radon Surveys & Tests

Radon surveys and tests should be conducted in any building where its location and characteristics suggest that elevated levels of radon may be found posing a threat of significant exposure to employees or other persons.

LINKS FOR MORE INFORMATION...

[Radon at a glance](#)[Radon Affected Areas](#)[H&S At Work Act 1974](#)[Ionising Radiation Regulations 2017](#)[Radiation Protection Advisors recognised by HSE \(under IRR17\)](#)[HSE Radon in the Workplace](#)