



## **Radon in council premises - quick guide**

### **What is radon?**

Radon (more properly known as radon-222) is a naturally occurring radioactive gas that can seep out of the ground and build up in indoor workplaces. Radon comes from Uranium which occurs naturally in many rocks and soils. You cannot see, smell, hear or feel it. Most radon will disperse harmlessly into the outdoor air, but some will pass from the ground & collect in spaces under or within buildings. Radon concentration levels are measured in units called becquerels per cubic metre (Bq/m<sup>3</sup>). For workplaces action must be taken to manage occupational exposure if the radon level exceeds 300 Bq/m<sup>3</sup> if the workplace is occupied for more than 1 hour, 52 weeks per year. Please note; there is a 200 Bq/m<sup>3</sup> action level for dwellings (Public Health England (PHE)). The target level for a dwelling is 100 Bq/m<sup>3</sup>.

### **What are the health hazards associated with radon?**

Radon is now recognised to be the second largest cause of lung cancer in the UK after smoking. Lung cancer is also the most common cause of cancer related death in the UK with a 10-year survival rate of 5%.

### **Which workplaces may be affected?**

The highest levels are usually found in underground spaces such as cellars, basements, caves and mines. Well ventilated ground floor and higher storeys are unlikely to have significant radon levels. Boiler and plant rooms located at basement level are not generally considered to be 'at risk' workplaces as they are not usually occupied by employees on a permanent basis.

### **What are the radon levels in Shropshire?**

The Health Protection Agency publish data and graphs indicating radon levels in the UK. The average level in Shropshire is 50 Bq/m<sup>3</sup>, with higher levels being found around the Church Stretton/Long Mynd and Pontesbury areas. Please refer to the UK Radon Map for further details: <https://www.ukradon.org/radonmaps/>

## **What are the legal requirements for workplaces?**

Under 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.

The Management of Health and Safety at Work Regulations 1999 require the assessment of health and safety risks and this should include radon if a workplace is located underground or in a radon Affected Area.

The Ionising Radiations Regulations 2017 (IRR17) come into effect where radon is present above the level of 300 Bq/m<sup>3</sup> when employers are required to register with the HSE and take action to restrict resulting exposures.

The Building Regulations 2000 (England and Wales) supported by BRE report BR211

Require that buildings and extensions (workplaces and dwellings) constructed after 2000 in radon Affected Areas have protective measures installed during construction.

## **What is a radon survey?**

Radon surveys should be conducted in any workplace where its location suggests that elevated radon levels may be found and the area is to be occupied on a full-time basis by employees. Inexpensive surveys can be carried out by leaving small plastic passive detectors in workplaces of interest. Measurements are made over a period of 3 months after which the detectors are posted back to the supplier who then provides the report with results. The Strategic Assets Management Team shall arrange for radon surveys when required.

## **What do the radon survey results mean?**

Where workplace measurements show radon levels below 300 Bq/m<sup>3</sup> then the only further action required is to decide when the risk assessment will be reviewed. The period of re measurement might be in the order of once every 10 years.

For occupied workplaces with radon levels above 300 Bq/m<sup>3</sup> managers will need to take steps to manage occupational exposure or ensure the radon levels are reduced by engineered means. Control measures shall be implemented when radon levels of greater than 200 Bq/m<sup>3</sup> are recorded. Where Radon levels exceed 300 Bq/m<sup>3</sup> the workplace must be registered with the HSE.

## **What are radon in the workplace risk assessments?**

Managers must take responsibility at all times for their employees and ensure adequate safe systems of work are provided. Risk assessments will help identify radon issues to be addressed and confirm that the workplace can be occupied. The risk assessment would include:

- Location of the workplace
- Means of ventilating the workplace
- Length of time employees occupy the workplace
- Control measures to protect the employees from radon exposure
- Employee training needs.

See 'Appendix 1' of the full 'Radon in The Workplace' arrangement, this is part of the Council's Health & Safety Policy available on the intranet.

## **Who should carry out radon in the workplace risk assessments?**

Managers and employees must work together to identify potential hazards and the subsequent risk from the working environment. A suitable and sufficient radon risk assessment must be carried out prior to a cellar or basement area being used as a permanent workplace.

The risk assessment should be carried out by line managers with the full co-operation of the workers. The risk assessment should be reviewed annually or more frequently where there has been any significant change or incident. The outcome of the risk assessment will show if the workplace is suitable for permanent occupation by employees. The Strategic Assets Management Team shall arrange for radon surveys when required.

## **Where can I get further training?**

Training is available from the Organisational Development Team.

## **Where can I get further advice?**

In the first instance please contact your directorate health and safety coordinator for guidance. Further advice can be provided by the Health and Safety Team and the Strategic Asset Management Team.

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