

# Protecting teachers and pupils from radon



## WHAT IS THE PROBLEM? WHAT IS BEING DONE? WHAT SHOULD MY SCHOOL BE DOING?

All indoor spaces in Ireland have radon, but in some buildings this can accumulate to unacceptable levels posing a health risk to the occupants. Schools are no different.

## WHAT IS RADON AND WHY MIGHT IT BE A HEALTH RISK IN SCHOOLS?

Radon is a naturally occurring radioactive gas with no taste, colour or smell. Radon has been categorised by the World Health Organisation as a carcinogen and, in Ireland, up to 250 cases of lung cancer each year are linked to exposure to radon. It is formed in the ground by the radioactive decay of uranium which is present in all rocks and soils. It seeps up through the foundations of buildings and can accumulate to unacceptable levels. There is a synergistic effect between radon and tobacco smoke. This means that smokers are at much greater risk of developing radon related lung cancer than non-smokers.

## IS MY SCHOOL AT RISK?

Some parts of the country are more likely to have a radon problem than others. These parts of the country are called High Radon Areas. You can check the interactive map at [www.epa.ie/radiation/radonmap](http://www.epa.ie/radiation/radonmap) to see whether your school is in a High Radon Area.

## HAS MY SCHOOL BEEN TESTED FOR RADON?

Between 1998 and 2004 all schools were invited to be tested for radon. 38,531 ground floor classrooms and offices were tested in this survey. All schools with radon levels above the reference level were remediated. Reports of the results were issued to each school at the time. For more information on the results of this survey read the full report at [www.epa.ie/pubs/reports/radiation/radoninschools2004.html](http://www.epa.ie/pubs/reports/radiation/radoninschools2004.html). The Department of Education and Science's commissioning of this work was ground-breaking at the time. In fact, many European countries are only beginning to address radon in schools.

At present, all newly built schools have radon preventive measures installed and

are tested for radon within five months of completion. Where radon exceeds the reference level, work is carried to reduce these levels.

## WHAT LEVEL OF RADON IS ACCEPTABLE IN A SCHOOL?

As schools are workplaces, the legally binding reference level for radon in workplaces of 400 becquerels per cubic metre (Bq/m<sup>3</sup>) applies. However, in 1998, the DES set an advisory reference level of 200 Bq/m<sup>3</sup> for schools in order to ensure that the level of protection from radon in schools is the same as that in homes. The reference level is the level above which action to reduce radon is advised.

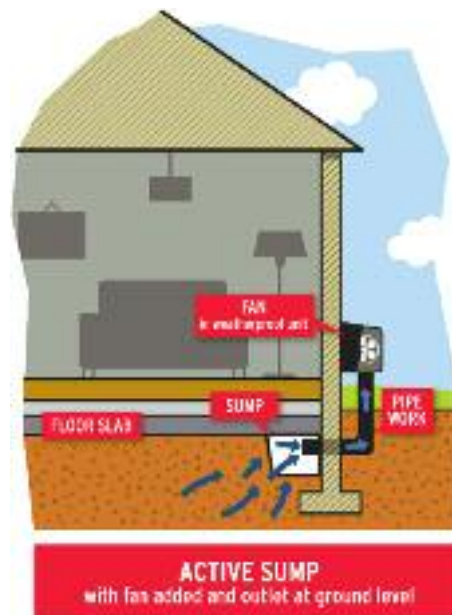
## HOW IS RADON TESTED?

A radon test is carried out by placing a small detector, about the size of a matchbox, in every occupied ground floor classroom and office for three months. After three months, when the detectors are posted back to the laboratory, they are analysed to see how much radon they have been exposed to. A copy of the results is then sent to both your school and the DES. Where radon levels are above 200 Bq/m<sup>3</sup>, remedial work should be carried out.

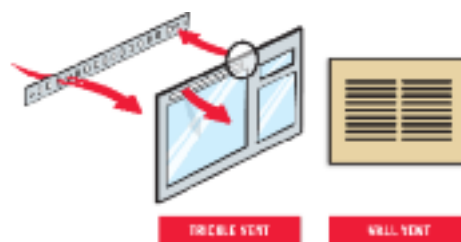
For a radon test or re-test to be carried out in your school, please contact the Devolved and Rental Payments Section of the DES who will fund any testing and remediation work required.

## HOW ARE RADON LEVELS REDUCED?

When your school was tested, if the results for one or more of the rooms in the school were above 400 Bq/m<sup>3</sup>, it is likely that the school was remediated through the installation of an active sump system. In this case, it is recommended that the school is retested every five years and that the fan used with this system is serviced in accordance with the manufacturer's instructions (usually every five years).



When your school was tested, if the results for one or more of the rooms in the school were between 200 and 400 Bq/m<sup>3</sup>, it is likely that these rooms were remediated by fitting air vents to improve ventilation. In this case, retesting is not required; however, vents should be checked on a regular basis to ensure that they have not been blocked up or damaged and fans on sumps should be maintained.



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Find out more about radon at [www.radon.ie](http://www.radon.ie), call 1800 300 600 or email [radon@epa.ie](mailto:radon@epa.ie)

