

Industrial & Commercial

**BUILDING  
REGULATIONS  
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# Part C



By Rebecca Kench  
PROTEN SERVICES

## Don't forget your basement!

Rebecca Kench of ProTen Services discusses the importance of ensuring basement conversions conform with Building Regulations so that consideration is given to radon gas

**RADON IS** a naturally occurring radioactive gas which claims more than 2,000 lives to lung cancer in the UK each year. Part C of the Building Regulations states that protection should be provided against radon, and further guidance on where protection is needed and the level of protection required is given in Approved Document C.

### PART C EXPLAINED...

#### SITE PREPARATION AND RESISTANCE TO CONTAMINANTS AND MOISTURE

Many subjects are embraced by this part. These include the weather and water tightness of buildings, subsoil drainage, site preparation, and measures to deal with contaminated land, radon, methane, and all other site related hazardous and dangerous substances.

For further information on Part C see: [www.planningportal.gov.uk/buildingregulations](http://www.planningportal.gov.uk/buildingregulations)

The necessity to comply with Building Regulations is often overlooked by individuals converting cellars or basements into habitable accommodation. The most obvious danger of this is the potential lack of a suitable fire escape, however an equally worrying consequence is that consideration is unlikely to have been given to radon gas.

In its Environmental Radon Newsletter (Issue 53) the Health Protection Agency (HPA) stated "It is clear...that high radon concentrations can be found in basements anywhere in the country, regardless of Affected Area status".

Section 2.39 of Approved Document C states that buildings ... "built in areas where there may be elevated radon emissions, may need to incorporate precautions against radon." As the HPA has publicly declared that all basements are at risk from high concentrations of the gas, it should therefore be assumed that a basement conversion may need to incorporate protection against its ingress.

Extreme care must always be taken when appointing a contractor to do so, as without the correct training and knowledge of radon movement it would be easy to inadvertently increase levels of the gas in the property.

For example, the installation of an

extract fan in the basement will elevate radon levels by drawing more gas from the surrounding ground into the property.

Another potentially dangerous course of action is the installation of a membrane system. Several membranes used for basement waterproofing have been certificated as suitable for providing radon protection, however using these in isolation to protect a property from radon intrusion would be unwise.

Not only are they vulnerable to defect (a puncture is unlikely to affect its waterproofing qualities, but would let gas pass through), but by providing a barrier to entry in the basement could force radon in the soil to enter the property at ground-floor level, thus increasing the concentration in the rest of the property.

A combination of physical barriers and air management is the most appropriate and effective method of ensuring that the risk of high radon concentration is eliminated not only in the basement but also in the rest of the property.

For further information on ProTen Services, the developers of the ADD Waterproofing combined waterproofing and radon control system, please visit [www.protenservices.co.uk](http://www.protenservices.co.uk) or [www.addwaterproofing.co.uk](http://www.addwaterproofing.co.uk), or telephone 01225 447960.