

Environmental **Radon** Newsletter

SPRING 2012

ISSUE 67

ICRP radon consultation

The International Commission on Radiological Protection (ICRP) has published a draft report entitled *Radiological Protection against Radon Exposure*. It is now available for public consultation until 8 June 2012.

The ICRP is an independent advisory body that provides recommendations and guidance on radiation protection. Organisations such as the International Atomic Energy Agency (IAEA) use the recommendations of the ICRP when producing basic safety standards for radiation protection, which in turn feed into pan-regional and national strategies and policies on radiation protection.

Over recent years, the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) and the World Health Organization (WHO) have published updated scientific advice on radon. From this and other work, organisations such as the Health Protection Agency (HPA) have reviewed and updated their own advice on radon exposure (see *ERN* Issue 64).

The ICRP acknowledged the work by UNSCEAR and WHO and updated its estimates of risks from radon in its brief 'Statement on Radon' at the end of 2009. At the same time the ICRP established a task group to review its earlier 1994 advice on radon, known as Publication 65. The latest draft document is the product of that group's work and updates the advice on radon from the ICRP in the light of its general update on radiation protection, known as Publication 103, and its more

recent Publication 115 on the lung cancer risk from exposure to radon.

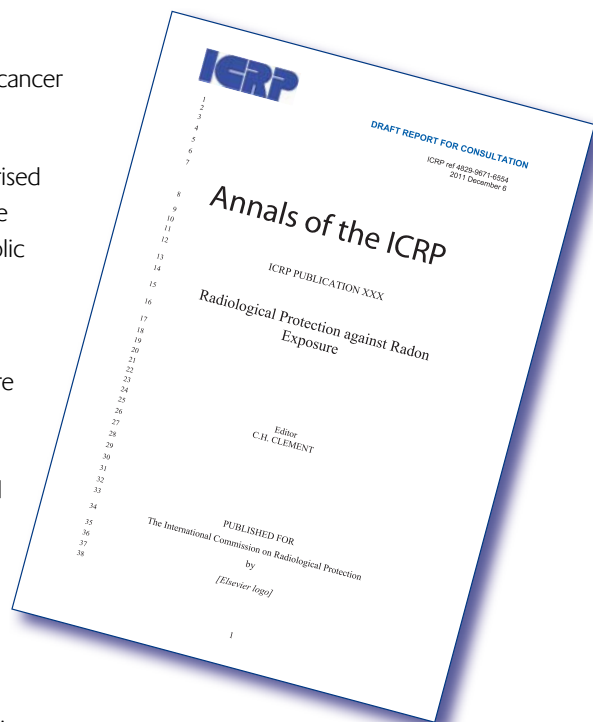
In Publication 103, the ICRP categorised ionising radiation exposure into three groups: occupational exposure, public exposure and medical exposure of patients.

Additionally, the ICRP considers there to be three situations of ionising radiation exposure: planned exposure, emergency exposure and existing exposure.

The new document proposes that the maximum reference level for dwellings is given as an annual mean radon concentration of 300 Bq m⁻³ (the UK Action Level is 200 Bq m⁻³). The ICRP proposes the use of the same national reference level for homes, mixed-use buildings (workplaces to which members of the public have access) and workplaces where exposure to radon cannot be reasonably regarded as the responsibility of the operating management.

Where the radon exposure is related more to the location than to the work activity, optimisation is achieved by a graded approach of managing the exposures, primarily through building mitigation, followed by collective and individual dose assessments. Other high radon workplaces, such as mines and caves, are also managed in this way, with mitigation achieved mainly by ventilation controls. A dose reference level of 10 mSv y⁻¹ is recommended.

Readers should be aware that the ICRP



detriment-adjusted nominal risk coefficients will rise from their Publication 65 values – doubling for members of the public, with a greater increase for workers. This may have consequences for some countries when estimating annual doses.

The ICRP recommendations will influence the European basic safety standards on ionising radiation that are in draft, with which UK legislation must be compliant. The ICRP welcomes comments so it is essential that interested parties reply to the consultation as the change in approach covers many practical areas of radon management and control. The draft document can be downloaded, and comments submitted, through the ICRP website at

www.icrp.org/page.asp?id=148

This note has been compiled by staff of the HPA Radon Group as a very brief introduction to the consultation. Those who wish to respond should refer to the full document and provide comments directly to the ICRP.

Subscribe free at www.ukradon.org/ern

POINTS OF CONTACT

www.UKradon.org provides general information on radon and details of HPA radon services, including radon risk reports for individual properties in the UK

Radon Survey
Centre for Radiation, Chemical and Environmental Hazards
Health Protection Agency
Chilton, Didcot, Oxon OX11 0RQ
Tel: 01235 822622
email: radon@hpa.org.uk
www.hpa.org.uk/radon

BRE
Garston, Watford WD2 7JR
www.bre.co.uk/radon

Health and Safety Executive
Health Directorate B6
Rose Court, 2 Southwark Bridge
London SE1 9HF
Tel: 020 7717 6854
www.hse.gov.uk/radiation/ionising/radon.htm

Welsh Government
Department for the Environment, Sustainability and Housing
Cathays Park, Cardiff CF10 3NQ
Tel: 0300 060 3300

Industrial Pollution and Radiochemical Inspectorate
Northern Ireland Environment Agency
Gasworks Business Park, Belfast BT7 2JA
Tel: 028 9056 9299
email: IPRI@doeni.gov.uk
www.ni-environment.gov.uk/pollution-home/radiation/radon.htm

Scottish Government
Housing and Regeneration
Victoria Quay, Edinburgh EH6 6QQ
Tel: 0131 244 5575

Radon South West Committee
Secretary: Gerald Hudd
Malabar, Hillfarrance, Taunton
Somerset TA4 1AW
Tel: 01823 461095
email: gerald.hudd@sky.com

Derbyshire Radon Steering Group
c/o Environmental Health Department
Derbyshire Dales District Council
Town Hall, Matlock, Derbyshire DE4 3NN

The Radon Council Limited
PO Box 39, Shepperton
Middlesex TW17 8AD
Tel: 01932 221212
email: info@radoncouncil.org
www.radoncouncil.org

Laboratories validated by the HPA for making measurements of radon concentrations in homes are listed at www.hpa.org.uk/radonvalidation

For a risk report where there is no valid postcode, the building footprint is larger than 25 m or for plots of land, visit shop.bgs.ac.uk/Georeports

Update on the HPA Radon in Schools Programme for England

Tracy Gooding

Health Protection Agency, tracy.gooding@hpa.org.uk

The Health Protection Agency has been running a programme of radon risk assessments for schools in England since 2009. Phase 3 of the programme is beginning in 2012.

The Radon in Schools Programme for England is continuing. *ERN* Issue 61 (winter 2009) described the first phase of the programme, which covered the West Midlands and North West regions. The relevant local education authorities (LEAs) were contacted by the Health Protection Agency (HPA) with details of the schools in the state sector that were assessed to be in radon Affected Areas, with information on how the issue could be addressed. Most of the councils from this phase have now responded by arranging radon measurements in the schools involved and taking remedial action where required (see the table).

The second phase started in autumn 2010, and covered the East Midlands (including the 'traditional' radon areas of Derbyshire and Northamptonshire), the North East, and Yorkshire and Humberside. Radon measurements have been arranged in some areas, with other councils

considering their plans. Of course, in this time of financial austerity, reminding employers of their duty of care might not be welcome news, although it is perfectly reasonable for councils to spread the measurements over an extended period to allow for resources to be allocated in a manageable way.

Planning for the third phase is now under way. LEAs in East Anglia, London and the South East will be contacted during 2012 with details of the schools in their areas where monitoring is advised, a guide for placement of detectors, and a model letter that can be sent to parents at the discretion of any school involved.

Future phases will involve the South West, where numerous mature measurement and mitigation programmes are well established, and schools in the independent sector (including some schools with academy status) that do not obtain health and safety services from their local council.

This is a large undertaking, and is providing valuable experience in helping duty holders to manage the radon exposures in their schools in the most efficient and effective way.

Phase	Region	Number of councils		Number of schools monitored
		Committed/monitored	Not committed/no information	
1	North West	15	4	261
	West Midlands	7	6	190
2	East Midlands	5	3	437
	North East	3	5	111
	Yorkshire and Humberside	6	6	63
Total		36	24	1061

News Stories for the Environmental Radon Newsletter

Readers are invited to contact the Editor with suggestions for radon events and topics to include in the newsletter. In particular, non-standard remediation methods which could make interesting case studies would be welcomed.

Please email fero.ibrahimi@hpa.org.uk

Final piece of the radon puzzle?

Jane Bradley, Health Protection Agency, jane.bradley@hpa.org.uk

Since 2003, the Health Protection Agency (HPA) has been raising the importance of remediation with householders who have radon measurements above the UK Action Level (200 Bq m⁻³). This effort has developed into 'Radon Solution Days', where the HPA Radon Group visits local areas and coordinates advice encouraging householders to lower their radon risks.

The HPA has been conducting targeted radon surveys in the UK for many years. The development of these programmes to 'find and fix' homes with high radon levels has included collaborative working with other stakeholders including local authority and health professionals. The main objective is to improve remediation rates, and hence reduce the highest public exposures to radon, by giving householders the information they need to take remedial action in their homes.

Historically, in the final phase of radon programmes, local authority staff have given support by providing individual advice to householders on how to reduce levels in their home. In more recent programmes where there have been several thousand measurements in dwellings, it has been more difficult for local authorities to provide this support. The concept of 'Radon Solution Days' was trialled in Cornwall in 2003 and has been used successfully as part of our programme throughout the UK since that time. The format of the events has developed to include more information about measurements, risks and remedies. These events are designed to answer any questions householders have so they can make an informed choice on methods available to reduce radon levels in their homes.

'Radon Solution Days' are arranged by the local authority in venues that are easily accessible to householders, usually local halls, with long opening times to enable householders to come along at a convenient time during the day or evening. The events are held over several consecutive days throughout the area being targeted. Householders with levels at or above the UK Action Level are invited by personal letter to the events around two weeks in advance. Since 2010 householders with radon levels between the Target

Level (100 Bq m⁻³) and Action Level (200 Bq m⁻³) have been invited because of the greater lung cancer risk to current and ex-smokers. The events are scheduled to commence when the majority of results have been reported to householders within a particular programme. Invitations are also sent to householders in the area who have previously had a measurement above the Target Level but who are not known to have taken remedial measures.

The events are staffed by officers from the local authority, staff from the HPA Radon Group and experts from the BRE. The local authority also invites both local and national radon remediation companies to attend so that householders can discuss measures with them directly. The objective is to provide a 'one stop shop' for radon remediation advice. More recently, staff from local NHS smoking cessation services have been invited to advise current

smokers on the resources available locally to help them in giving up. This is important because the risks from smoking and radon are much greater when combined.

To encourage attendance, a 'free retest voucher' for each specific property is given to each householder on arrival. This can be used by the householder to get a free HPA radon measurement after they have taken remedial action to see if their radon levels have fallen. It also provides a summary of information on the types of remedy that should reduce radon levels in their home based on their radon level and information they provided at the time of the measurement on

their home's characteristics. This information can also be used by the advisers at the events to help them give the most appropriate advice for each property.

The most recent 'Radon Solution Days' have been held after very successful measurement programmes in Orkney and West Oxfordshire. Take up of a free radon measurement in the targeted radon probability areas was around 50% in both areas and around 30% of invited householders attended an event. Feedback from the events and local media has been very positive. The success of these programmes will be measured by the number of householders that take remedial action successfully and, with our help, place the final piece of the jigsaw in their radon puzzle.

Need to measure?



Yes, order pack



Yes, take action



Need to fix?

IRPA13 – 13th International Congress of the International Radiation Protection Association

Chris Perks, LANDAUER EUROPE, info@irpa13glasgow.com

IRPA13 will be held in May 2012 at the Scottish Exhibition and Conference Centre (SECC) in Glasgow. The SECC is Scotland's premier national venue for public events, concerts and conferences.

Over 800 participants have already registered and over 1200 abstracts have been accepted for presentation. There will be an extensive exhibition and extensive use of electronic and social media. It is anticipated that this will be the largest ever gathering of radiation protection professionals. They will share good practice and identify the current key issues for their profession – and have a great time!

The theme of the Congress is

*Living with Radiation
– Engaging with Society*

It will be an opportunity to share methods and experiences of effective engagement and, as always, focus on state-of-the-art radiation protection science. It will explore the experiences of both radiation protection professionals and wider stakeholders such as decision makers, communities, the media and non-governmental organisations, who all have a role to play in making the protection system robust and effective. The topics include radon, for which there is a specific session on Thursday 17 May.

IRPA13 will include:

- A comprehensive scientific and technical programme covering all aspects of radiation protection
- An excellent opportunity for continuing professional development
- An extensive technical exhibition and technical visits programme
- A superb environment for networking
- An opportunity to visit Scotland and its many delights.

Further information on all aspects of IRPA13 is available at

www.irpa13glasgow.com



Living with Radiation - Engaging with Society



13-18 May 2012 ■ SECC ■ Glasgow ■ Scotland

Radon Leaders – a useful American information resource

The USA has a continental sized radon problem with lots of work going on at national, state and local levels. To provide mutual support and coordinated work, the Radon Leaders website has a wealth of information for radon professionals. There is also a useful regular email newsletter.

When it comes to radon concentration, much is still in partial metric units such as pCi L⁻¹ (picocuries per litre) instead of our familiar Bq m⁻³ (becquerels per cubic metre). In spite of that, there is often something useful and interesting either on the website or in the e-newsletter.

Visit www.radonleaders.org for more information and to subscribe to the e-newsletter.

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This newsletter is produced for the Chartered Institute of Environmental Health and the Royal Environmental Health Institute of Scotland by the Centre for Radiation, Chemical and Environmental Hazards of the Health Protection Agency.

It is published quarterly as an insert in the CIEH journal *Environmental Health News* and the REHS journal *Environmental Health Scotland*. In addition, it is distributed to subscribers by the HPA and is freely available at www.ukradon.org. The views expressed in the contributions are not necessarily those of the CIEH, REHS or the HPA.