

13th NATIONAL RADON FORUM

REPORT OF PROCEEDINGS

Introduction

This document reviews the discussion session of the thirteenth National Radon Forum held in Dublin on 24th October 2016. It does not purport to be a comprehensive report of the day's proceedings and remarks attributed to individuals should not be interpreted as representative of the views or policy of the agencies represented.

The meeting was opened by Laura Burke, Director General, Environmental Protection Agency and chaired by Micheal Lehane, Director, Office of Radiological Protection, Environmental Protection Agency. The presentations were divided into two sessions, the first was National Radon Control Strategy – Year 2 and the second was Filling knowledge gaps identified in the Strategy with discussions following each session. All speakers and presentations are listed below:

Welcome address – Laura Burke, Director General, Environmental Protection Agency

National Radon Control Strategy – Year 2

Paul McDonald (Department of Communications, Climate Action and Environment)
Overview of the implementation of the strategy

Stephanie Long (Environmental Protection Agency)
Radon.ie. A new web portal for radon information in Ireland and The new registration scheme for radon measurement services in Ireland

David Fenton (Environmental Protection Agency)
A new course for building staff on the installation of radon preventive measures in new build in Ireland

Eamonn Smyth (Department of Housing, Planning, Community and Local Government)
A new course for the training of radon remediation.

Filling knowledge gaps identified in the Strategy and Future Legislation

David Hevey (Trinity College Dublin)
Review of public information programmes to enhance home radon screening uptake and home remediation

Barbara Rafferty (Environmental Protection Agency)
Update on the current radon research carried out under the NRCS.

- Population weighted national average (jointly with UCD)

- Optimum specifications for radon prevention measures in new build in Ireland (jointly with NUIG)
- Radon and energy efficiency (Jointly with NUIG)
- Future research needs

David Fenton (Environmental Protection Agency)

EU Basic Safety Standards Directive – the framework for future regulations on radon in Ireland.

The reader is invited to view the presentations above which, with this report, should give a flavour of the topics discussed.

Discussion

Darren Arkins (Health and Safety Authority) asked Eamonn Smyth if the registration scheme for radon remediators includes a procedure for dealing with complaints. Mr Smyth replied that such a procedure is included. Under the scheme the EPA reserves the right to review works by radon contractor where complaints arise and reserves the right to de-register a radon remediator if the conditions of the Registration Scheme are not met.

James McLaughlin (European Radon Association) enquired about the numbers who attended the Radon Remediation training course, in particular the number of radon remediation contractors. Mr Smyth replied that in total, 87 people attended the course, the majority were local authority staff with responsibility for social housing. He said that there are currently 20 contractors listed on the EPA's website and all were invited to attend the training course. The invitation to attend the training course was also extended to all 37 contractors that have previously been listed on the EPA's website since the list was established. To date, 13 contractors have completed the training course.

Tim O'Neill (Necoflex) asked Eamonn Smyth if the Radon Remediation training course could be applicable to other targeted audiences such as building designers or surveyors. Mr. Smyth pointed out that one of the actions of the National Radon Control Strategy was to include education on radon in continuous professional development (cpd) for building professionals. While the learning objectives of such cpd would focus on radon prevention in new buildings, information on remediation could be included using some of the remediation course material.

Micheal Lehane (Environmental Protection Agency) noted the smaller number of measurements (649) carried out to update the geographic national average indoor radon concentration in 2015 compared with the number of measurements (11,319) carried out for the National Radon Survey (NRS) when this metric was first established. David Fenton replied that in fact it was the availability of the data from the comprehensive NRS that facilitated the design of a smaller representative survey. He added when designing the survey, statistical advice was sought and this showed that a smaller stratified sample

based on radon risk category and geographical location was appropriate to update the national average indoor radon concentration.

Conor Taaffe (Homebond) asked if radon in water is an issue and if so, have any studies been carried out in Ireland. Stephanie Long replied that radon can be dissolved in water and ingested giving a radiation dose to the stomach. However the main risk from radon in water is an increase in the level of radon in indoor air and pointed out that 1,000 Bq/l of radon in water adds approximately 100 Bq/m³ to levels in indoor air. She said that the EPA provide advice on radon in drinking water and a testing service. She referred to a pilot study of radon in private groundwater supplies in Co. Wicklow in 2001 and to a national survey of radon in approximately 220 public groundwater supplies had been carried out between 2011 and 2013. None of these public groundwater supplies had exceeded the EPA's recommended level of 500 Bq/m³.

Mr Taaffe then asked if any studies had been carried out looking at the relationship between indoor radon levels and airtightness in homes. Eamonn Smyth replied research carried out in the USA found no link between radon levels and air tightness or energy retrofit. He added that a pilot study on the impact of energy retrofitting on radon levels on a small number of local authority homes in Ireland showed that on average, these measures were having no impact on radon levels. Stephanie Long pointed out that research is currently being carried out jointly with NUIG investigating the optimum specifications for radon preventive measures in new build in Ireland.

With regard to the registration scheme for radon measurement companies, Mr Stephen Fennell (Environmental Protection Agency) noted that this applied to testing homes and asked what was required to extent the scheme to include workplace testing. Stephanie Long replied that the register requires measurement companies to comply with the EPA's protocol for the measurement of radon in homes. Furthermore employers obligations under S.I. 125 of 2000 and the Safety, Health and Welfare at Work Act, 2005 and other relevant regulations and current international guidance on radon need to be covered by the scheme.

With regard to future builds, James McLaughlin (European Radon Association) referred to the concept of constructing "healthy buildings" a feature of which would be improved indoor air quality. He asked if for example schools of architecture and civil engineering should include radon in their education programmes to help develop this concept. Stephanie Long replied that one of the tasks in the NRCS is that education on radon should be integrated into the existing system of continuous professional development (CPD) for building professionals in cooperation with their relevant professional bodies. As there is no overarching body that covers all the relevant professional bodies, each will be approached individually.

Stephen Fennell thanked David Hevey for his very informative presentation and asked if his review had highlighted any one country that had achieved the maximum impact with their radon programme and if so, what had their programme consisted of. David Hevey replied

that there was no one country or programme that could be pointed to. A combination of individual actions and a regulatory approach is used by most countries and that the literature didn't present a review between these approaches. Some countries do use more of a regulatory approach such as the USA where radon testing is required at the point of sale. Pippa Boothman (Airthings Ltd) commented that some small scale studies showed that a message of protecting the family can be emotive and encourage action. David Hevey added that that being creative with both imagery and vocabulary can be effective tools to strengthen the message. Barbara Rafferty said following on from this review, in the most recent EPA radon awareness campaigns more direct language is being used. Also as part of the EPA's next awareness campaign in Wicklow, different audiences will be targeted.

James McLaughlin pointed out that campaigns could use a quantitative approach and gave the example of the number of people who die from lung cancer and the percentages of these cancers which are linked to radon. David Hevey replied that people struggle with percentages, a stark message is easier to connect with. James McLaughlin also commented that while radon is natural, indoor radon levels are enhanced by buildings and therefore by the building industry. David Hevey pointed out that people tend to discount anything that is natural and don't regard it as a threat.

Martin Freeman (PropertECO) referred to studies in the United States which found that people who use digital monitors to measure radon are more likely to remediate. He said living in high radon areas and being more predisposed to radon may be a factor in their decision as is being a more cautious individual. David Hevey replied that visibility does work and people respond to live measurements. Martin Freeman commented on the rate of remediation reported by many countries. He said that in his experience the rates of remediation reported are low and that the rate is far higher where a private company is involved in the householders testing and remediation journey. David Hevey said that the data used to report the rate of remediation may not have been gathered objectively or validated and these caveats were referred to in the literature review. Barbara Rafferty pointed out that in the case of the EPA testing service, contact is lost with the householder after a test result is issued whereas remediation companies can engage with the householder and support them in making the decision to take action.

Martin Freeman then asked if the uptake for radon screening uptake and home remediation programmes had been compared with other public health programmes such as bowel cancer screening. David Hevey replied that for this review only similar radon programmes were compared but in broad terms the uptake of health screening programmes is low.

Micheal Lehane commented that many different environmental issues are addressed through the Green schools scheme and this gives opportunities to engage with schools and school children. David Hevey said that schools can be a way to raise awareness and can be a basis to keep awareness alive within a community. He pointed out however that

awareness will only go so far and ensuring people take action to test and remediate if necessary is key.

With regard to increasing government regulation, Paul McDonald (Department of Communications, Climate Action and Environment) asked if there was a danger of becoming a nanny state. David Hevey replied that he had not seen this being expressed explicitly in the literature. He said that governments can facilitate people to take action through incentives schemes.