

7TH NATIONAL RADON FORUM

REPORT OF PROCEEDINGS

Introduction

This document reviews the discussion session of the seventh National Radon Forum held in Dublin on 19th November 2009. It does not purport to be a comprehensive report of the day's proceedings.

The theme of the Forum was "Towards the development of a radon control strategy for Ireland". The meeting was opened by Minister Michael Finneran (T.D.), Minister of State at the Department of Environment, Heritage and Local Government (DEHLG), with special responsibility for Housing and Local Services. Úna Ní Dhubhghaill (DEHLG) chaired the meeting and the speakers are listed below.

Speakers:

- David Pollard (DP) RPII
- Dr. Ina Kelly (IK) HSE
- Anne Marie Part (AMP) HSE
- Stephanie Long (SL) RPII
- David Fenton (DF) RPII
- Prof. Alastair Gray (AG) University of Oxford

The reader is invited to view the agenda and presentations which are available on the Radiological Protection Institute of Ireland's (RPII) [website](#). The presentations, together with this report, should give the reader a flavour of the topics discussed.

Discussion

1. Question from **Eugene Monaghan (All Clear Radon)** to **David Fenton (RPII)** re: energy efficiency and radon levels. Does the guidance document to local authorities recommend that homes which have had insulation and energy efficiency work done get tested for radon gas?

DF replied that the guidance document does not currently address this issue. No scientific research has been carried out in Ireland to investigate if a link exists between increased energy efficiency and increased radon levels. The RPII have submitted a recommendation to the relevant Government Department, recommending that such scientific research be carried out next year. The Dept responded positively to the proposal and, depending on budgetary outcomes in December, will aim to help the RPII in 2010. If such scientific research provides evidence of a link between energy efficiency works and increased radon levels, it will be added to the guidance document at that time.

2. **Mary O'Mahony (HSE)** asked **Alastair Gray (University of Oxford)** two questions:

- a) If the National Reference Level for radon was reduced from 200 Bq/m³ to 100 Bq/m³ or lower, this would increase the number of necessary interventions needed in the country. Wouldn't this also result in an increase in the opportunity cost?

AG stated that if all other elements were left as they currently are but the reference level was reduced, there would be an increase in the problem because more people would potentially live in High Radon Areas. However, if actions were taken to reduce the levels of radon in homes which have radon concentrations below the current reference level, there is the potential to reduce the mean radon concentration of Irish homes. This improved outcome would not necessarily increase costs.

DP wanted to clarify that levels of radon in Ireland are very different to those in the UK. Because of the higher number of homes in Ireland that potentially have radon concentrations above the Reference Level it costs less to find high levels. Therefore the

outcomes of a cost-effectiveness analysis for Ireland would be very different to the one carried out by AG in the UK.

- b) People living in social housing tend to have higher smoking rates than those in private housing. Is there a possibility that because of this link, those living in social housing and on lower incomes are also at greater risk from radon due to the potential combination of high radon levels and smoking?

AG clarified that the study completed by him and his colleagues in the UK focussed on private housing. However he would not be surprised if there was a socio-economic interaction with radon exposure.

3. **Gerald Menezes (TCD)** asked where the National Reference Level for radon came from and was there any scientific reasoning behind it.

AG stated that the Reference Level for radon varies from country to country and it is not based on cost-effectiveness analysis. **DP** suggested that the Reference Level was set by looking at practice in other countries and that it was not customised to the Irish situation. International organisations recommend a range of values (e.g. WHO recommend a Reference Level between 100 and 300 Bq/m³). Dr James **McLoughlin (UCD)** stated that, historically the theory behind the Reference Level goes back more than 200 years and was set as a result of doses to miners and epidemiological analysis. The new recommendation for 100 Bq/m³ is from recent research which suggests that the risk from radon is twice as high as we initially thought. It is important to note that the Reference Level is not a boundary between safety and danger.

4. **Liam Tinney (F.F. Radon Systems Ltd.)** asked if we agreed that the Irish people rely too much on the Building Regulations for ensuring that their homes have radon levels below the Reference Levels.

DF agreed that yes people do rely on them too much. The RPII find high levels in homes built since 1998 and always encourage people to measure radon levels in their homes, regardless of when they were built. **Heather Rochford (RPII)** also pointed out that the Building Regulations require both a radon barrier and a stand-by radon sump in High Radon Areas. However, for the rest of the country, only stand-by radon sumps are compulsory. The reason for installing a stand-by radon sump is to make it easier for homeowners who find high radon levels to remediate because the sump underground is already installed. All that would be required is to extend the sump piping which was capped off at ground level after construction and install a fan. It is important to make clear that, without pipe extensions and a fan, a stand-by sump does nothing to reduce radon levels. All homeowners need to test their homes to check their radon levels.

5. In AG's presentation, he mentioned that research in the UK found their radon barriers to be only 50% effective in reducing radon levels in homes. **Úna Ní Dhubhghaill (DEHLG)** asked him how the missing 50% effectiveness could be accounted for.

AG surmised that the missing 50% effectiveness was due to a combination of the material make-up of the barrier, the fitting of the barrier and also damage done to the barrier since it was fitted. **Greg Burke (DIT)** stated that risk-management analysis has shown that approximately 50% of radon membranes are effective and that the problem is with current building constructions in Ireland that require holes to be made in the membrane to accommodate piping etc. for indoor plumbing.

6. **Greg Burke (DIT)** asked if the outcome of the forum's discussions should be that all homes in Ireland should be fitted with radon membranes.

AG stated that while he was not telling anyone what to do, the conclusion in the UK was to recommend the installation of radon barriers in all new homes. It could reduce radon levels in 50% of homes and would cost very little. **DP** agreed that if it has been found to be effective in the UK, it may be even more effective in Ireland as our radon levels are much higher than in the UK. .

7. **Eamonn Smyth (DEHLG)** stated that under the BER model, all homes for sale and rent have to have a certificate for how energy efficient the home is. Could a similar model be introduced for radon?

SL agreed that it is a good idea and that it had been considered. Such a system is in practice in Sweden but it does not look like an obvious “add-on” to the BER in Ireland. Eamonn clarified that he did not mean that it should be “added-on” to the BER but that a similar, independent scheme should be set up for radon. It would be up to the person buying to ask the question and there would still be the 1 and 3 month measurement problem. SL pointed out that a lot of work had been done on possibly reducing the 3 month measurement period to 1 month and that it looks like it may be feasible.

8. **Eamonn Smyth (DEHLG)** asked if, in Cork, there were any % figures for numbers of homes above the Reference Level in areas that were low risk on the radon map.

DF said that such figures were available but that he did not have them with him at the forum.

9. **Eamonn Smyth (DEHLG)** asked if, in Cork, there were any figures for remediation failures following retesting.

SL stated that 1 or 2 of the homes were marginally above the Reference Level following retesting after remediation. However, the programme has been very successful overall.

10. **Elaine Doorly (TCD)** pointed out that, while most Irish people know a bit about radon, they don't generally know a lot of detail. Are there any plans for a national advertising programme similar to the one rolled out for carbon monoxide?

DP agreed that it is a good ideal in principle and that it has been considered by the RPII. A pilot scheme was planned for 2009 but the timescales have been pushed for budgetary reasons. It is still an item on the agenda though.

11. **Gerard Naughton (Limerick County Council)** asked if Cork assessed the risk of litigation from tenants living in High Radon Areas.

DF said that he was aware that the matter had been given consideration but a decision had been made to go ahead and measure anyway. The issue did not arise and this could be because of a good level of communication between all parts. Úna Ní Dhubhghaill (DEHLG) noted this as a consideration. However she commented that it was important that a fear of litigation should not be a disincentive to measure radon levels in homes.

12. **Bart Doyle (Alpha Radon Teo)** wanted to make a point that only 5 out of 2,500 homes in Cork had refused radon remediation.

13. **Patrick Murphy (UCD)** wanted to clarify a point about the 1 month measurement project which he was involved in. The process for a 1 month measurement will not be as straightforward as for a 3 month measurement. There will most likely be a different measurement protocol and different threshold levels. People shouldn't think that they can offer such a service yet. They should wait for guidance from the RPII first.

DP agreed and said that if it is introduced, the 1 month measurement service may be offered in a similar package to the screening service in the UK.

14. **Denise Ryan (HSE)** held a health forum in Mallow in Co. Cork in Spring 2009. A lot of people who attended had a good level of information and used the radon map already. While a lot took measurement forms, they were worried about remediation costs. It might be worth looking into whether remediation costs could be written off against tax in a manner similar to medical costs.

15. **A member of the audience who introduced himself as a radon remediator** asked if anyone has looked at new technology for radon measurement.

DP stated that there is nothing wrong with current technology. The reason for requiring a longer measurement period is to do with natural variations and oscillations in radon concentrations. These variations are controlled by many factors related to environment, house construction and life habits. Measurement over a long period of time can take these variations into account.

16. **James McLoughlin** suggested that a future option for the National Radon Strategy would be to consider contacting the financial institutes who supply the money to the people who buy and sell properties.