

Radon in Workplaces: what is required of employers in Kerry and other areas and what they need to know

National Radon Forum
Tralee
14 November 2005

Mr David Fenton
Manager
Radon Advice Section



Radiological Protection Institute of Ireland
An Institiúid Éireannach um Chosaint Raideolaíoch

Structure of Presentation

- Brief description of the RPII
- Review of the extent of the radon problem in Ireland
- Review of legislation on radon in workplaces
- Describe how to carry out a radon survey and what is needed if high levels are found?
- Regulatory efforts 2004 and forthcoming prosecutions
- Education and information efforts

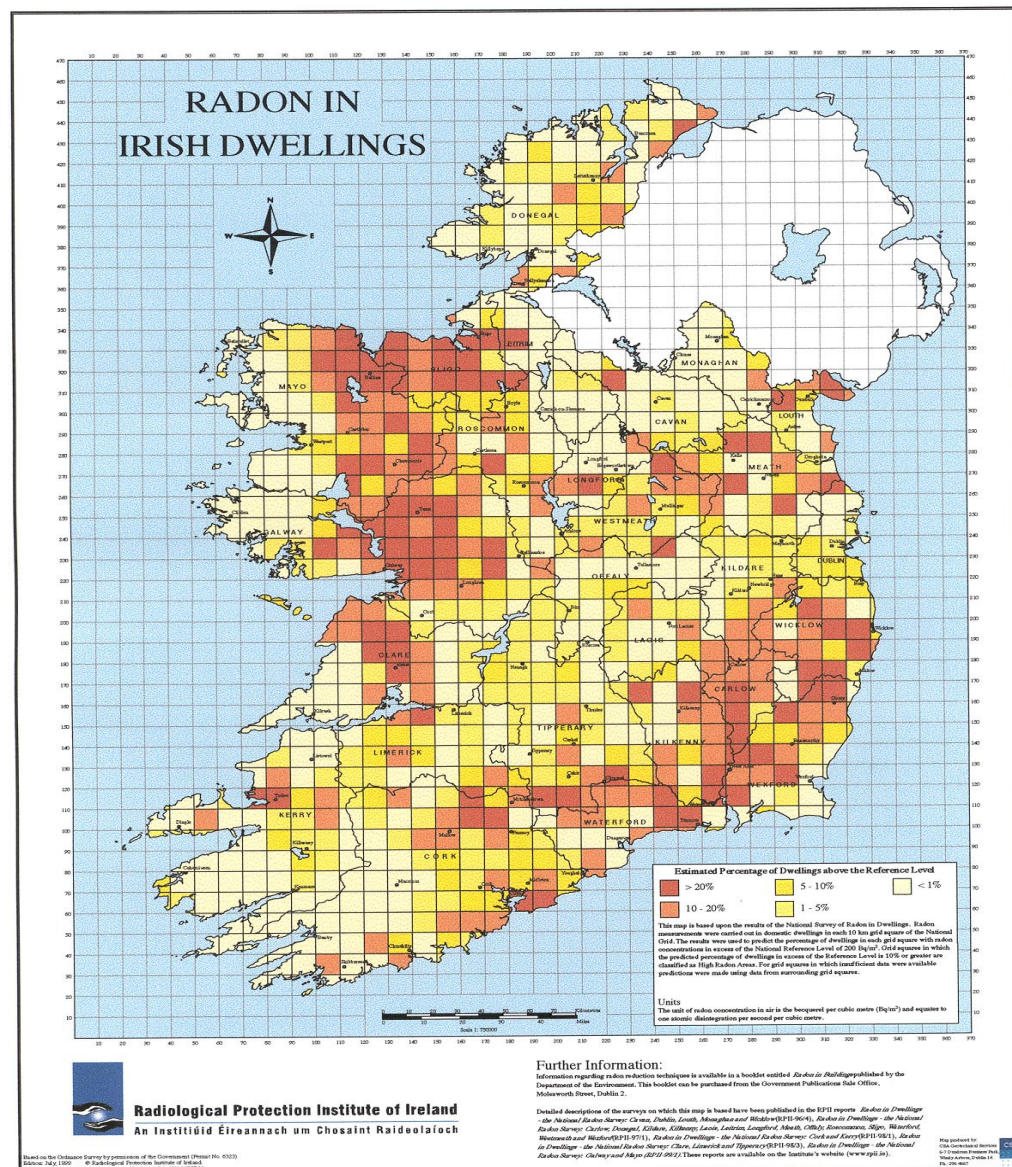


THE RADIOLOGICAL PROTECTION INSTITUTE OF IRELAND

- Advisory Body
- Regulatory Authority
- Dosimetry Service
- Radon Monitoring Service
- Environmental Monitoring
- Information Service



Extent of the radon problem in Ireland



National Radon Survey

Predictive Map of radon in Irish dwellings; 7% of homes predicted >200Bq/m³

High Radon Areas:

10 km grid squares in which 10% or greater of houses are predicted to exceed the national Reference Level

National legislation on radon in workplaces

Two Sets of Regulations are applicable:

- 2005 Safety, Health and Welfare at Work Act (HSA). (Replaced the 1989 act).
- Radiological Protection Act, 1991, S.I. No. 125 of 2000. (RPII)



National legislation on radon in workplaces

- 2005 Safety, Health and Welfare at Work Act (HSA).
- General duty for employers in High Radon Areas to measure radon
- Radon must be included in Safety Statement



National legislation on radon in workplaces

Radiological Protection Act, 1991, S.I. No. 125 of 2000. (RP11)

- Specifies a Reference Level 400 Bq/m^3 , averaged over a minimum period of any 3 months.
- Authorises the RP11 to issue directions and take prosecutions
- When directed, employers have 6 months to comply - that is carry out a radon measurement and forward results to RP11
- No general duty under this legislation



Radiological Protection Institute of Ireland

An Institiúid Éireannach um Chosaint Raideolaíoch

Developing a strategy for radon in workplaces

- HSA and RPII currently developing a Memorandum of Understanding.
- This should help ensure radon is considered during HSA inspections. Thereby help increase awareness of radon among employers.



What employers need to know

- RPII guidance material
 - Concise brochure called “Radon – Radiation in Workplaces” published on RPII website also in your meeting pack.
 - Detailed guidance entitled “Planning Radon Surveys in Above Ground Workplaces” available on RPII website www.rpii.ie/radon.



What employers need to know

1. How to carry out a valid radon survey

RP11 guidance recommends each occupied ground floor or basement workplace is measured: - >100 hours per year.

- Each individual office/workplace must be measured
- For open plan offices one detector per 200 m²
- For large warehouses one per 400 m².



What employers need to know

How to carry out a valid radon survey - ctd.

Measurement is straightforward. Radon detectors can be sent over the post and left in place for at least 3 months

The cost of a radon measurement is low. The cost of a radon detectors is ~€25 so to survey a typical office workplace say of 10 rooms is €250.

Measurement is a once off task there is no requirement for repeat measurements unless changes are made to the building



What employers need to know

2. Who can carry out a radon measurement in a workplace?

Criteria is specified in S.I. No. 125 of 2000.

- the radon measurement laboratory shall be accredited to EN45001, if based in Ireland.
- if in other EU state the laboratory must be accredited or approved by the relevant competent authority in that state
- four radon measurement laboratories in Ireland who are approved under the Order to carry out radon measurements in workplaces



What employers need to know

- Approved radon measurement services
 1. Radon Laboratory Services, Carrick-on-Shannon, Co Leitrim. www.rls.ie
 2. Radon Ireland Group , Macroom, Co Cork. www.radonireland.com
 3. AlphaRadon teo, Dingle, Co. Kerry. info@alpharadon.ie
 4. RPII, Clonskeagh, Dublin 14. www.rpii.ie



What employers need to know

3. What if radon levels are > 400 Bq/m³.

- Notify the RPII using standard notification form - requirement of the S.I. – form on RPII's website
- Action to reduce the radon levels is likely to be needed



What employers need to know

3. What if radon levels are $> 400 \text{ Bq/m}^3$.

Need for remedial action

RP11 recommends, in all cases, that early remediation is carried out.

Employers however may chose to carry out an evaluation to determine if remedial work is justified.



What employers need to know

The evaluation should consider:

- If radon levels are between 400 Bq/m^3 and 800 Bq/m^3 and radon exposure is $< 800 \text{ kBq/m}^3 \cdot \text{h}$ then no remedial work is needed. If $> 800 \text{ kBq/m}^3 \cdot \text{h}$ remedial work to be completed within 6 months.
- If radon levels $> 800 \text{ Bq/m}^3$ remedial work needed as soon as practicable but before exposure of $800 \text{ kBq/m}^3 \cdot \text{h}$ is reached.
- Otherwise system of radiological protection needed
- Full guidance on how to carry out an evaluation is on RPII's website www.rpii.ie/radon



Regulatory Efforts in 2004 and forthcoming prosecutions

- May/June 2004, 60 employers in Tralee and Ennis were directed to carry out radon measurements.
- Once directed each employer had 6 months to respond
- A number of employers ignored the direction and prosecutions are pending before the Tralee and Ennis district courts and are likely to be heard before the end of this year.



Efforts to inform employers about radon



Radiological Protection Institute of Ireland

An Institiúid Éireannach um Chosaint Raideolaíoch

Information efforts

- National Radon Forum
- Attracts media attention and well attended radon in workplaces is a significant theme
- Regional visits to High Radon Areas (HRA), where RPII meet with local chamber of commerce



Other Initiatives

- Efforts by the State Claims Agency to encourage state employers to measure radon
- Many public employers have carried out radon measurements. This is also true of many larger employers



Thank you for your attention



Radiological Protection Institute of Ireland

An Institiúid Éireannach um Chosaint Raideolaíoch