



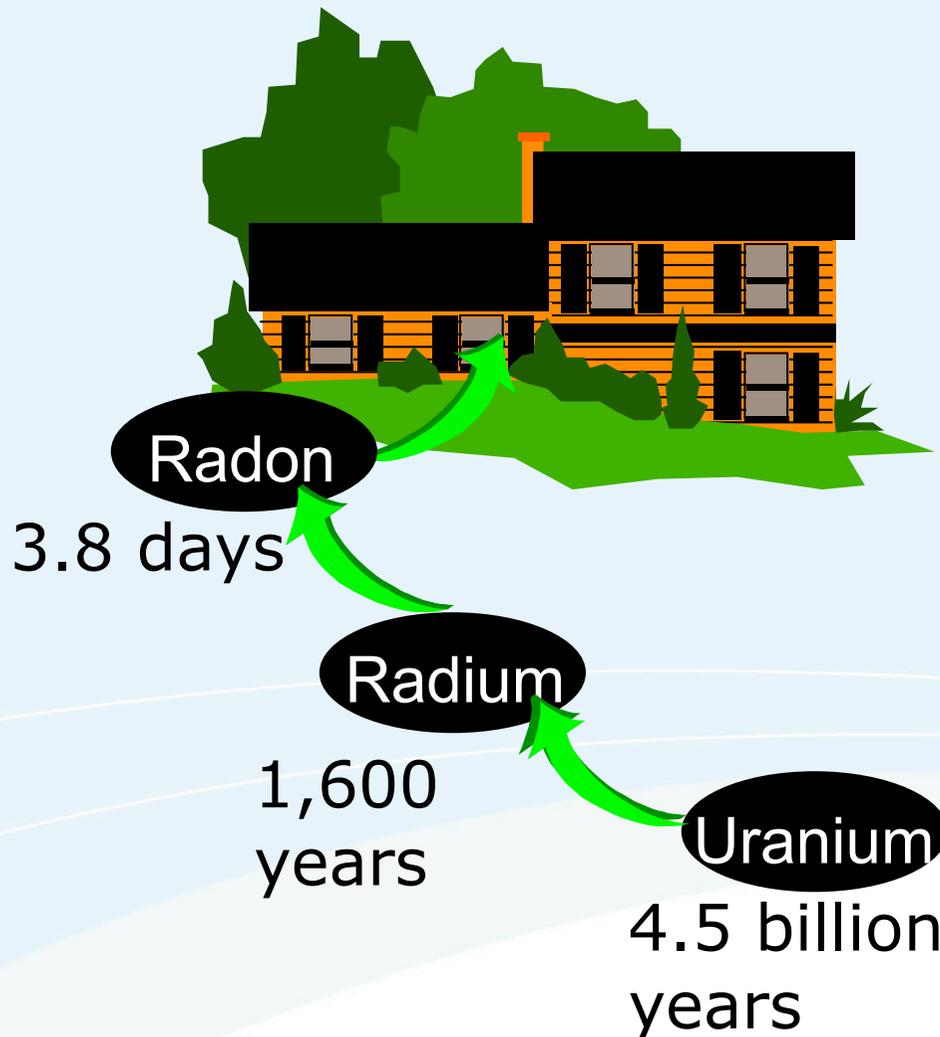
Radiological Protection Institute of Ireland
An Institiúid Éireannach um Chosaint Raideolaíoch

Developing a National Radon Control Strategy for Ireland

Stephanie Long, RPII

Radon

- Radon is a radioactive gas
- It is naturally occurring
- The primary source of radon is from the ground
- It comes from the radioactive decay of uranium which is present in all rocks and soils



Radiological Protection Institute of Ireland

- **Statutory Agency of the Department of the Environment**
- **Key Functions**
 - **Advice to Government and public**
 - **Regulatory Authority**
 - **Monitoring and Measurement**



Advice to Government and public

Public Awareness Campaigns

- **Working closely with our Public Relations Agency, Murray Consultants**
- **Communicating with national/local politicians and Local Authorities**
- **Communicating with members of the public**

Engaging with other State Agencies (MoU)

- **Health Services Executive**
- **Health and Safety Authority**



Radiological Protection Institute of Ireland

RPII does not :

- Approve radon measurement services
- Carry out radon remediation (list on website)
- Train radon remediators (no training courses)
- Implement Building Regulations (Dept. of Environment and Local Authorities)
- Provide medical advice



Radon and ALARA

- Linked to about 12% of lung cancer deaths (internationally 3 % – 14%)
- Radon makes the largest contribution to both the collective and individual dose
- Tackling radon needs input from many State Agencies working together
- Even more important in times of economic need
- A cohesive strategy to reduce radon doses is needed



National Radon Strategy



Seeking support for the development of a Strategy

Persuade others they have a role in tackling radon:

- Public Health Agency (HSE)
- Health professionals (HSE)
- Health and Safety Authority (HSA)
- Local Government (DECLG)
- Building control (Local Government)
- Local and national politicians



Seeking support for the development of a Strategy

- Joint Position statement with HSE (2010) declaring radon a manageable public health risk and recommending the development of a National Radon Control Strategy
- Briefing the Minister for the Environment and other national and local politicians



Seeking support for the development of a Strategy

Supporting Local Authorities in their radon programmes in social housing:

- Guidance documents
- Practical advice re measurement and remediation
- Support with communications with tenants, local politicians and the media



Seeking support for the development of a Strategy

National Radon Forum

- Attendance by staff from Government Departments and Agencies
- Local national and local politicians invited
- Venue has allowed the message to be targeted
 - 2010 Forum held in Cork to highlight Local Authority work (4300 units measured)
 - 2011 Forum was held close to Parliament and opened by the Minister for the Environment



National Public Awareness

- Highlight exceptional readings ($>2,000 \text{ Bq/m}^3$)
- National and local media coverage
- State broadcaster (RTE) has covered the issue



National Publicity – what does it look like?

Home has radon dose equal to nine X-rays

Tracy Hogan
Environment Correspondent

A FAMILY home has been discovered to have 13 times the safe level of lung cancer-causing radon gas.

The occupants of the house in Ballymore, Co Sligo, had been receiving a radiation dose equivalent to nine chest X-rays every day, or more than 3,000 a year. In a statement yesterday the Radiological Protection Institute of Ireland (RPII) said the household, who had checked

for radon, took immediate action and had a radon sump installed under the house.

The RPII has been running extensive campaigns in Sligo and Carrick, both high radon counties, urging people to test for the gas which is responsible for as many as 200 lung cancer deaths annually. David Fenton, senior RPII scientist, said: "The identification of this house is a further reminder that many people throughout the country are living with dangerous levels of radon in their homes."

"It is unnecessary for people to put themselves and their families at risk from radon."

Homeowners need to take this matter seriously and measure radon levels in their homes to ensure that they and their families are not at risk from the hazardous gas.

Mr Fenton said that on the Institute's website www.rpii.ie anyone could search for their own address on an interactive radon map to see if their home or workplace was in a high radon area, and find out how to have a measurement taken.

DEADLY GAS FOUND IN HOMES NATIONWIDE

600 radon cases this year

HIGH levels of cancer-causing radon gas have been discovered in almost 600 homes throughout Ireland so far this year, it emerged yesterday.

The Radiological Protection Institute of Ireland reported that six houses had more than 10 times the acceptable level.

And the occupants of one house had been living with the equivalent of 12 chest X-rays every day.

The Institute says radon is the second biggest cause of lung cancer after smoking, and is linked to up to 200 lung cancer deaths each year in Ireland.

And RPII chief executive Ann McGarry said she feared thousands of families nationwide were unknowingly living with very high concentrations of the gas – increasing the risk of lung cancer.

"We know that radon levels in Ireland are among the highest in Europe and there are an estimated 3,000 homes yet to test with high radon levels," Ms McGarry said.

"The vast majority of households have not had their homes tested for radon gas."

Radon is naturally produced in the ground from the uranium present in small quantities in all rocks and soils. You cannot see or taste it. RPII said 99% of the 4,294 homes measured for radon between January 1 and August 31, were above the "suitable" level.

By JOHN MITCHELL

Sligo

Two homes in Trillick, Co Kerry, two in Ballymore, Co Sligo, and one each in Loughswilly, Co Clare, and Clonmel, Co Wexford, had more than 10 times the acceptable level.

Another six homes had very high levels – including 15 in Galway, 14 in Sligo, 11 in Kerry, five in Cork and one in Mayo.

Houses in Waterford, Carlow, Clare, Tipperary, Kilkenny, Wexford and Wicklow were also affected.

Readings above the acceptable level had been found throughout Ireland. The RPII said it was working closely with householders to reduce the radon levels and the risk to their health.

Homeowners wanting more details of tests can log on to www.rpii.ie or freephone 1800 300 019.

PROTECT YOURSELF WITH A DETECTOR

There are two detector measuring radon, an alpha track detector and a charcoal canister, with the former being the more accurate. The device to get up to an area home and is later analysed in a lab – both are available for about €16.

County	Number of homes with high radon levels	Location of highest level
Carlow	151	Clonmel
Clare	274	Ballymore
Donegal	133	Donnell
Down	245	Youghal
Dublin	68	Clonsilla
Galway	158	Northwood
Leitrim	388	Trillick
Limerick	283	Trillick
Louth	447	Trillick
Mayo	269	Boree
Meath	114	Emmetsry
Monaghan	192	Down
Offaly	51	Castles
Perth	436	Dunloy
Sligo	17	Trillick
Tipperary	128	Ballymore
Wexford	371	Clonmel
Waterford	68	Clonmel
Wicklow	69	Clonmel
Wiltshire	116	Wiltshire
Yorkshire	87	Wiltshire
London	23	London
London	14	London
London	114	London
London	47	London
Total	4286	

FAMILY'S 3,000 X-RAYS A YEAR

Massive radiation dose from killer gas in house

By AINE BONNER

A FAMILY had been unknowingly subjected to radiation doses the equivalent of 3,000 chest X-rays per year, it was revealed yesterday.

Cancer-causing radon gas – a massive 13 times the acceptable level – was detected in the home in the Ballymore area in Co Sligo.

Radon is the second biggest cause of lung cancer after smoking and is linked to about 200 deaths each year in Ireland. Yesterday, the Radiological Protection Institute of Ireland (RPII) said it believes there are more homes across the country with high levels.

Radon is a naturally occurring radioactive gas that originates from the decay of uranium in rocks and soils. Like radon isotopes, it has no smell, colour or taste and can only be detected using special equipment.

Unlike the gas quickly diffuses to harmless concentrations but if it enters a small space like a house, it can accumulate to unsafe levels.

Senior RPII scientist David Fenton said: "In recent weeks we have highlighted the radon problem in Sligo and Carrick, which are among the most affected counties in the country. "We regularly find homes with high radon concentrations and we know there are more. We

This gives rise to a radiation dose which may cause lung cancer. The national Reference Level for radon in homes is 200 becquerels per cubic metre (Bq/m³).

It's estimated that in Ireland an average homeowner to radon in the home at 200 Bq/m³ carries a risk of about one in 50 of contracting fatal lung cancer – twice the risk of death by road accident.

He would urge people not to ignore this warning and to test for radon in their homes. "In the latest case discovered by the RPII the radon levels in the house averaged more than 3,000 Bq/m³ – 15 times the acceptable level of 200 Bq/m³.

When this was discovered, the household took immediate action to fix the problem by having a radon sump installed beneath the house. This prevents high radon levels ever accumulating in the house again.

Dangerous

Mr Fenton said: "The identification of this house is a further reminder that many people are living with dangerous levels of radon in their homes. "It is unnecessary for people to put themselves and their families at risk from radon. "Homeowners need to take this matter seriously and measure radon levels in their homes to ensure that they and their families are not at risk from the hazardous gas."

On the RPII's website, www.rpii.ie, anyone can search for their address on an interactive radon map to see whether their home or workplace is in a High Radon Area.

To test for radon, radon detectors are placed in a bedroom and living room for a three-month period.

The detectors are small and can be sent and returned by post. Costs vary from €60 to €100, and the RPII charge is €16. See www.rpii.ie

Radon in home at dangerous level

Radioactive gas in Sligo house was 13 times above safe limit, institute's tests reveal

Homeowners tested and exposing residents to significant radiation levels. There are measured in levels up to 13 times above the safe limit and the safety limit set by the European Commission is 200. The house had a radon level of 2,600 Bq/m³, 13 times the maximum level of 200 Bq/m³.

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Local Public Awareness

- “Radon Week” in high radon counties
- One message “take the radon test”
 - Briefing to local and national politicians
 - Public meetings
 - Media advertising
 - Interviews on local radio
 - Mail shot to each home
 - Billboards
 - Leaflet distribution



Local Publicity – what does it look like?

Sligo home 13 times over cancer causing gas limit

Radiation dose same as getting 3,000 x-rays a year

A HOUSE has been identified in county Sligo with extremely high concentrations of cancer-causing radon gas. The home, located in the Ballymote area, had radon levels which were over 13 times the acceptable level.

Nationally, radon is the second biggest cause of lung cancer after smoking and is linked to about 200 lung cancer deaths each year.

The Radiological Protection Institute of Ireland (RPII) informed the homeowner, who had undertaken a radon measurement, that the average level in the house was greater than 2,000 becquerels per unit of measurement of radon-222 (Bq/m³) or 13 times the acceptable level of 200.

The radiation dose received by occupants of the house living with this radon concentration is equivalent to receiving nine chest x-rays per day or over 3,000 per year. Following advice, the homeowner took immediate action to fix the problem by having a radon sump installed beneath the house which prevents high radon levels over accumulating in the house again.

Commenting on the finding, David Fenton, Senior Scientist at the RPII, said: "The identification of this house is a further reminder that many people throughout the country are living with dangerous levels of radiation in their homes."

The RPII recently ran an intensive campaign in Sligo urging homeowners to protect themselves. Sligo is a high radon area with an estimated one in every four homes having high levels of the natural occurring gas.

On the RPII's website

anyone can search for their address on an interactive radon map to see whether their home or workplace is in a High Radon Area. They can find out what they need to know about radon - what it is, why it is a problem and how they can have a measurement made. Information can also be obtained on freephone 1800 300 600.

Measuring for radon and, in the event of a high reading, reducing the levels present are both relatively inexpensive. To test for radon, one detector is placed in a bedroom and a second in a living room for a three-month period. The detectors are small and can be sent and returned by post for analysis. The RPII charges €10 for a radon measurement. A list of other companies who carry out measurements can be accessed at www.rpii.ie or by calling 1800 300 600.

Ballymote home records high levels of radon gas

In lower than levels. A Sligo house has been identified as having extremely high concentrations of radon gas, prompting calls for homeowners here to measure the levels in their homes and avoid putting the health of local families at risk.

The home, located in the Ballymote area, had radon levels which were over 13 times the normal acceptable level. Radon is the second biggest cause of lung cancer each year. Over the past few weeks the Radiological Protection Institute of Ireland (RPII) has been urging the best your home message in areas at risk from the radioactive gas and had an intensive campaign in Sligo.

The RPII believes it is very likely that there are more homes here with similarly high radon levels and urges people to test for the gas and reduce their risk of lung cancer.

Senior Scientist at the RPII, David Fenton says Sligo is among the worst affected counties in the country when it comes to radon levels.

"We regularly find houses with very high radon concentrations and we know there are more. We would urge people not to ignore this warning and to test for radon in their homes."

The radiation dose received by occupants of the Ballymote house living with this radon concentration is equivalent to receiving nine chest x-rays per day, or over 3,000 per year. Following advice, the homeowner took immediate action. A radon sump was installed beneath the house which prevents high radon levels over accumulating in the house again. The homeowner is currently waiting on a post-



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Progress to date

- In November 2011, the Minister for the Environment announced a Government decision develop a National Radon Control Strategy for Ireland
- Inter-Agency Group appointed by the Minister
 - 4 Government Departments
 - 6 Government Agencies
- Strategy to be published by November 2013



Progress to date

Inter-Agency Group work programme comprised of 6 work packages:

1. Radon prevention in new buildings
2. Use of administrative/legal measures to increase the rate of testing
3. Communications and public information
4. Competence in radon remediation
5. Competence in radon measurement
6. Radon in workplaces

In parallel with:

- Stakeholder engagement
- Economic analysis



Progress to date – on schedule

- Interim report to be submitted to the Minister by November 2012
- Public Consultation begins January 2013



Thank you for your attention

Any Questions?



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