17 Louth homes found with high levels of cancer-causing radon gas

Dundalk home had more than four times the acceptable level equivalent to more than 1000 chest X-rays per year

[Thursday 7th November 2013]. Seventeen homes in Louth have been found with radon gas levels above the acceptable level in the past year and a half, according to figures released today by the Radiological Protection Institute of Ireland (RPII). One home in Dundalk had more than four times the acceptable level. This is the highest level of radon found in a home in Louth to date and the occupants were receiving a radiation dose equivalent to more than 1000 chest X-rays per year.

In its latest publication of results from completed radon tests in the past year and a half, over 430 homes from across the country have been identified by the RPII as having high levels of radon. Radon is the second biggest cause of lung cancer after smoking and is directly linked to more than 200 lung cancer deaths each year in Ireland.

In Louth, 294 tests for radon gas were completed in the past year and a half – the majority following an awareness campaign in April this year – and of these, 17 were found to be above the acceptable level.

Commenting on the findings, David Fenton, Senior Scientist at the RPII said: "We know that Louth has a particular problem with radon and yet only a fraction of homeowners have tested. Our research shows that, of the homes already tested, there is a large percentage with high radon levels."

In addition to the home with the highest level, ten homes in Dundalk, two in Carlingford, two in Drogheda and one each in Ardee and Clogherhead were found with radon levels above and up to 4 times the acceptable level.

"Tens of thousands of homeowners in Louth have yet to test for radon and among them are many thousands that are unknowingly being exposed to this cancer causing gas. It is really important for people to test their home for radon as this is the only way of protecting your family", said Mr Fenton.

Measuring radon and, in the event of a high reading, fixing the problem are both easy to do. To test for radon, one radon detector is placed in a bedroom and a second in a living room for a three-month period. The detectors are sent and returned by post for analysis. The RPII and a number of private companies provide a radon measurement service. The cost of a measurement is around €50.

If a moderate radon level is found, improving indoor ventilation may reduce the level by up to half, the cost of which is low. For higher levels, installation of a fan assisted sump is the most common method of remediation which can reduce radon levels by over 90%. The sump can be installed in a day by a contractor with little disruption to the home. The typical cost of this work is around €850 with annual running costs of approximately €100 depending on the size of fan installed.

An interactive map is available on the RPII's website (www.rpii.ie) so that anyone can search for their address or nearest town 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 by phoning Freefone 1800 300 600.

ENDS

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Note to Editors:

In the interest of confidentiality, the identification and exact location of the homes with high radon results will not be made available.

Over the last three years the RPII has conducted comprehensive public information campaigns on the risks from radon in Sligo, Carlow, Waterford, South Tipperary, Galway, North Kerry, Wexford and Louth.

Data for all radon measurements, undertaken by the RPII since the early 1990s to-date, is available on its website: http://www.rpii.ie/Your-Home/Radon-in-your-home/Radon-results-by-country.aspx

Radon is a naturally occurring radioactive gas that originates from the radioactive decay of uranium in rocks and soils. It has no smell, colour or taste and can only be detected using special detectors. Outdoors, radon quickly dilutes to harmless concentrations but when it enters an enclosed space, such as a house or other building, it can accumulate to unacceptably high concentrations. This gives rise to a radiation dose, which may cause lung cancer.

The national Reference Level (or 'acceptable' level) for radon in homes is 200 becquerels per cubic metre (Bq/m^3). The becquerel is the unit of radioactivity. A 'High Radon Area' is one in which more than 10 per cent of homes are predicted to have radon levels in excess of the national Reference Level.

There is direct evidence for a link between radon in the home and lung cancer. Radon has been classified by the International Agency for Research on Cancer (IARC), a part of the World Health Organisation, as a Group 1 carcinogen together with asbestos and tobacco smoke.

Based on current knowledge, it is estimated that in Ireland, for the population as a whole, a lifetime exposure (i.e. 70 years) to radon in the home at the Reference Level (or acceptable level) of 200 Bq/m^3 carries a risk of about 1 in 50 of contracting fatal lung cancer. This is approximately twice the risk of death in a road accident. For people who

smoke, or who have smoked, the risk from radon is up to 25 times greater than for people who never smoked.

Specific guidance on radon prevention measures for new homes is contained in the "Building Regulations 1997, Technical Guidance Document C – site preparation and resistance to moisture" which is published by The Department of Environment, Community and Local Government http://www.environ.ie/en/Publications/DevelopmentandHousing/BuildingStandards/FileDownLoad,1642,en.pdf). The guidance specifies that all new homes, built since 1st July 1998, must be fitted with a standby radon sump which can be activated at a later stage to reduce any high radon concentrations subsequently found. For homes built in High Radon Areas, the installation of a radon barrier as well as a standby radon sump is required.

Results of radon tests completed between 31st May 2012 and 21st October 2013:

County	Number of homes tested for radon	Number of homes in categories of radon concentration				Max (Bq/m^3)	Location of maximum result
		0-199 Bq/m^3	200-799 Bq/m^3	800-1999 Bq/m^3	>2000 Bq/m^3		
Carlow	36	31	5			400	Hacketstown
Cavan	14	14					
Clare	87	71	14	1	1	2000	Ennis
Cork	191	167	22	2		1800	Midleton
Donegal	47	45	2			300	Redcastle
Dublin	160	155	5			500	Naul
Galway	462	350	94	15	3	4200	Ballymoe
Kerry	446	370	66	4	6	5200	Tralee
Kildare	87	86	1			200	Kilteel
Kilkenny	42	35	7			600	Ballyknock
Laois	15	15					
Leitrim	13	12	1			500	Manorhamilton
Limerick	41	36	4	1		800	Rathkeale
Longford	7	2	5			700	Edgeworthstown
Louth	294	277	16	1		900	Dundalk
Mayo	86	74	11	1		1000	Ballina
Meath	90	87	3			300	Rathmolyon
Monaghan	10	9	1			300	Carrickmacross
Offaly	22	22					
Roscommon	21	17	4			500	Boyle
Sligo	74	57	13	4		1700	Easkey
Tipperary	64	59	4	1		1200	Cahir
Waterford	80	69	10	1		800	Waterford
Westmeath	69	64	5			400	Collinstown
Wexford	557	465	85	6	1	2500	Great Island
Wicklow	66	58	6	2		800	Manor Kilbride
Total	**3081**	**2647**	**384**	**39**	**11**		

The column headed Maximum (Bq/m^3) is rounded to the nearest 100