

Environmental **Radon** Newsletter

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Radon Roll-Out Programme

Liam Davey, Department for Environment, Food and Rural Affairs

The Environment Minister, Michael Meacher, announced the formal commencement of the Radon Roll-Out Programme 18 months ago. This article looks at the progress of the initiative, last reported on in Issue 24 of ERN. The programme aims to help more householders take action to reduce radon concentrations in their homes. To achieve this, central Government (formerly DETR, and now DEFRA, Department for Environment, Food and Rural Affairs) is working in partnership with local authorities in areas where there is a 5% or greater probability of homes being above the Action Level for radon.

Following the announcement on 10 July 2000, a series of meetings was held with the 33 participating local authorities. These have formed themselves into 11 regional groups. The meetings started the process of developing Action Plans: documents at the heart of the approach, drawn up by the local authority groups in consultation with DEFRA, the National Radiological Protection Board (NRPB), Building Research Establishment (BRE) and the Department of Health. These set out the activities local authorities will carry out to meet the objectives of the programme, and the resources that DEFRA will provide to support them.

Although work began on implementing the first Action Plan (for the North West Group) in February 2001, various factors have impeded the rate of progress originally envisaged. The outbreak of foot and mouth disease in particular had an impact on the resources of rural local authorities participating in the programme. The period of "purdah" imposed in the run up to the General Election also restricted progress. Time was also taken for DEFRA to consider and agree proposals from some local authorities to target properties with known high test results lying outside greater than 5% probability risk areas.

Progress improved in the second half of 2001, however. Autumn 2001 saw an intensive period of NRPB- and BRE-run training sessions for council officials as well as other seminars aimed at local builders and householders. These were held in Leicestershire, Somerset, Gloucestershire and Shropshire and were generally well attended. Work for the 10 councils in these groups is now beginning in earnest with awareness raising and mail-outs by NRPB to targeted householders happening in the first quarter of 2002.

Two more groups covering Derbyshire, Nottinghamshire and Northamptonshire are now embarking on their Action Plans. We anticipate that the remaining local authority groups in Lincolnshire, Northamptonshire, Devon, Cornwall and Northumberland will start implementing their Action Plans by Spring 2002.

Many of the local authority groups have adopted a similar approach to that of the North West group, which is now some way through its Action Plan. That group completed its programme of seminars for local builders last August, and radon test results are now being sent to homes. The councils in the group are concentrating on meeting the large number of requests for home visits and remediation advice from householders with radon at or above the Action Level. The table shows that an average of 14% of dwellings tested for radon for the first time in the North West group are at or above the Action Level.

Radon measurement results for first time testers in the north west group

Local Authority	Homes monitored	Homes over the Action Level	%
South Lakeland District Council	1,800	250	14
Lancaster City Council	820	100	12
Craven District Council	160	20	12
Richmondshire District Council	430	80	19
TOTAL	3,210	450	14

Source: NRPB

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ERRICCA 2 - a New Forum for Radon across Europe

Chris Scivyer, Building Research Establishment Limited,
ERRICCA Project Co-ordinator

The European Commission has announced that they are to fund a Concerted Action project looking at radon across Europe starting in January 2002. The three year project entitled European Radon Research and Industry Collaboration Concerted Action (ERRICCA 2) is being co-ordinated by the UK's Building Research Establishment (BRE). Also representing the UK are NRPB and the Radon Council Limited.

ERRICCA 2 will establish a European scientific-led industrial forum aimed at reducing risks to health from radiation (principally radon) in the built environment. The forum will consider the following topics and tasks :-

- How to increase public awareness and confidence
- Building materials - the development of common protocols for:
 - measuring radon emanation from building materials
 - testing radon barrier materials
- Protection of new buildings
- Remediation measures for existing buildings
- Common measurement and mapping protocols
- The establishment of a European Radon Website

These topics will be used as the basis for discussion within the new forum, which will bring together scientific and industrial interests on a Europe-wide basis for the first time. The new forum will act as a means for disseminating existing research findings to industry and the public, for clarifying industry needs for further research, and for undertaking collaborative work in common topic areas.

ERRICCA 2 will operate on two levels:

European level

A European Forum, which brings together scientific and industrial representatives from 20 countries, each country providing one scientific and one industrial representative.

National level

A National Forum in each country to identify radon research and information needs and collaborate on research topics. They will meet annually. They will be aimed at radon scientists, national and local governmental representatives (including Environmental Health and Building Control officers), remediation companies, house builders, building contractors, materials suppliers, equipment manufacturers, measurement companies and representatives from the property buying and selling industry. The National Forums will feed ideas and issues into the European Forum and help disseminate output from the European Forum.

Once established, the European and National Forums will be linked via the World Wide Web, creating a network of radon information sources that will be freely accessible to anyone working in radon across Europe.

It is hoped that the first UK National Radon Forum will take place during Spring 2002, at a venue probably located in Derbyshire. However, the date depends on when the first European meeting takes place.

For further information on the UK National Radon Forum, contact Kim Noonan by phone on 01923 664721 or by E-mail at noonank@bre.co.uk or by writing to BRE, Garston, Watford, Herts, WD25 9XX.

Radon in the Northern Ireland Workplace

Rowland Jones, Health and Safety Executive (Northern Ireland)

Employers in Northern Ireland have duties to control health and safety risks under the Health and Safety at Work [NI] Order and the Ionising Radiations [NI] Regulations 2000. These regulations mirror the legislation in Great Britain, and superseded the old Ionising Radiations [NI] Regulations 1985. The Action Level for exposure to radon gas in the workplace is currently set at 400 Bq m⁻³: above this level further controls and remediation measures are required by law and enforceable by the above legal requirements.

The Management of Health and Safety at Work [NI] Regulations also require all employers to carry out a suitable and sufficient 'Risk Assessment' of their undertaking and premises under their control. In designated radon Affected Areas this includes assessing the likelihood of exposure to radon gas and its daughters. The designation of such areas is based on a series of surveys carried out in conjunction with the DOE Northern Ireland Environmental Protection Division, the bulk of the data being obtained in domestic premises.

Workplace Surveys

A series of workplace surveys have been carried since 1990 by the Health and Safety Inspectorate / Health and Safety Executive for Northern Ireland [HSENI] and this work is still ongoing. The methodology involves the use of alpha track detectors supplied by the National Radiological Protection Board (NRPB).

The initial Workplace Survey in 1990 monitored 25 premises in the South East Newry and Mourne area, including 5 public sector buildings and 20 schools. This region was chosen as it was regarded as the greatest risk area for exposure to radon in the province.

One school was found to have radon levels of around 1300 Bq m⁻³ in its Nursery unit. Further checks were carried out, and sub-floor sumps installed which reduced the measured level to 23 Bq m⁻³, well below the 400 Bq m⁻³ Action Level. The Nursery unit was closed for three months to allow remediation and monitoring to take place before the pupils and staff were allowed to return. This was an interesting case as the nursery unit is a solid-floored extension to a school which has a suspended concrete floor with ventilation underneath, and radon levels of around 70 Bq m⁻³. All the other 19 schools were below the Action Level and no major problems were found in the public sector premises.



Subsequent surveys in Northern Ireland indicated that the radon Affected Area designation was not confined to the South East of the province but included the North West. Further workplace surveys were carried out to include areas where 1% to 3% of homes had been found to be above the domestic Action Level of 200 Bq m⁻³. The school with high radon levels in the initial survey fell in this band of radon levels.

In the west of the province there is a show cave complex open to visitors. The staff are subject to restrictions on the time they spend in the caves to ensure that they cannot receive more than three tenths of the permitted dose limits. The estimated doses are now far below this.

In view of the results of radon surveys in Northern Ireland over the past decade, HSENI has required risk assessments and radon measurements in schools that come under the four Education and Library Boards and the Catholic Controlled Maintained Schools. The initial cost of the measurements is approximately £50 per school; well within what could be considered a reasonable cost considering the risks and public perceptions involved.

These school surveys should be completed in 2002. Initial results indicate between 3% and 8% of premises may require further action once the full data becomes available, but these figures are ballpark figures only at this stage. Radon levels around 4000 Bq m⁻³ were detected in one school, emphasising the need for monitoring workplaces in designated Radon Affected Areas. Remedial work has been carried out in the school following advice from NRPB and the Building Research Establishment. Remonitoring using both monthly and quarterly sampling is now being carried out by the Education and Library Board, with HSENI as an independent auditor. Occupancy will be permitted once results show the remediation is successful.

The Northern Rollout Programme: Halfway Through

Phil Greenup, South Lakeland District Council

South Lakeland District Council was one of four Councils from the North West of England selected to participate in the Northern Radon Programme. The other selected Councils were Lancaster City Council, Craven District Council, and Richmondshire District Council. The main aims of the programme were firstly to increase the number of householders who test for radon, and secondly to encourage those households with high readings to carry out remediation works to reduce their radon concentrations to below the Action Level.

It was decided by the group that the best way to achieve these aims was by the personal approach, which had proved most effective in the pilot schemes. Therefore home visits were offered to all householders that had high test results. For South Lakeland District Council this was quite an undertaking. From previous testing in the '5% or greater' areas, 405 households had high readings. When offered a visit, 173 of these householders requested one. The programme of visits are still on-going.

Of the 7259 households who were offered free radon tests under the programme, 1800 (26%) requested a test, of these 250 (14%) were above the Action Level. These households have not yet been offered radon visits, but they will be offered them soon.

The timescales anticipated in the action plan for the programme have slipped. All visits should have been completed by the end of September 2001, however it is unlikely that these visits will be completed prior to March 2002. The reasons for this slippage are numerous, including Foot and Mouth, the General Election and lack of officer time. Statutory functions have had to take priority over the visits. Many of the visits are now being carried out outside office hours. Problems have been

encountered with contacting householders and then arranging visits within office hours.



As with all visits to members of the public, the visits have sometimes been funny, annoying, or surprising and have even produced aggression. One of the most frustrating visits was conducted with the Building Research Establishment (BRE) to a retired doctor. He had one of the highest readings in the district, however he had purposely fudged the measurement by placing the detector on a crack in the basement to get the worst possible result, wasting my time and that of the BRE.

Many householders had carried out some remediation works, such as underfloor ventilation, replacing and adding air bricks, trickle vents, sealing floors, and passive sumps. Most householders appear to be

happy to carry out basic remedial works, however there is an almost across the board abhorrence at the thought of having fans installed within houses.

The concern of many householders regarding high radon levels in their homes has not been related to the health impact, but due to the impact that radon has on the value of their properties. The approach the South Lakeland District Council adopted when writing to homeowners was to be hard-hitting to reflect this fear. However it is difficult to assess whether this approach increased the number of householders who participated in the programme.

So far the programme has been a success, with an extra 1800 people having tested their homes for radon gas. The visits on the whole have been reasonably successful, with many people willing to carry out some remedial works. Arranging and carrying out home visits is very time consuming, but the personal approach does appear to be achieving some successful results.

This newsletter is prepared for the Chartered Institute of Environmental Health by the National Radiological Protection Board. It is published quarterly as an insert in Environmental Health and distributed by the Royal Environmental Health Institute for Scotland. Any suggestions for topics for

future issues should be sent to Jon Miles at NRPB (see address on page 2). The views expressed in the contributions here are not necessarily those of the Chartered Institute of Environmental Health, the Royal Environmental Health Institute for Scotland or the National Radiological Protection Board.