

# Environmental **Radon** Newsletter

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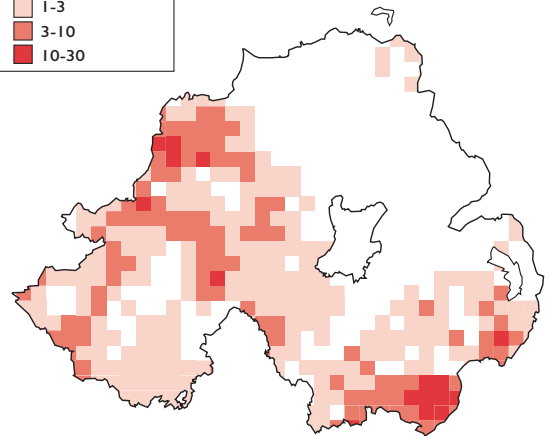
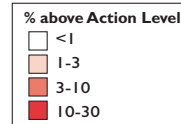
## Radon Map of Northern Ireland

Jon Miles, National Radiological Protection Board

**A** map of radon Affected Areas in the whole of Northern Ireland has been published by the National Radiological Protection Board (NRPB) in formal advice to Government. (Radon Affected Areas: Northern Ireland - 1999 Review, *Documents of the NRPB*, Vol 10, No 4, 1999). This supersedes previous advice published in 1993. A more detailed report was prepared for the Environment and Heritage Service of the Department of the Environment for Northern Ireland by NRPB (Radon in Dwellings in Northern Ireland: Atlas and 1999 Review. NRPB-R308).

The new map has been compiled from measurements made in over 15,000 homes in Northern Ireland with the majority of tests funded by the Environment and Heritage Service of the Department of the Environment for Northern Ireland. These data were analysed by 5 km squares of the Irish Grid to give the probability of the radon concentration in a home exceeding the Action Level of 200 Bq m<sup>-3</sup>. The estimated probabilities range from below 1% to greater than 10% and are shown for each 5 km grid square on the map.

The results confirm that the majority of homes in Northern Ireland are in areas where the indoor radon levels are generally low but that there are



some areas, notably in the southeast and northwest, where elevated levels of radon are found in a significant proportion of homes.

The NRPB Document can be obtained direct from the Information Office, NRPB, Chilton, Didcot, Oxon, OX11 0RQ (cheque for £7.50 +£1 postage and packing, with order) or by credit card on 01235 822742. Limited numbers of the more detailed report are available from the Environment and Heritage Service, Calvert House, Castle Place, Belfast BT1 1FY.

## Radon - The Next Ten Years

Alan Blythe, Consultant

**T**hose I used to think of as my friends on the Radon South West Committee set me the impossible task set of speculating on what the future might hold for all of us on the radon scene over the next ten years. This article is a condensed version of a paper presented to the committee at their Spring Regional Forum.

I decided that if two heads are better than one, then six might be even better still, so I consulted several close friends and colleagues, all acknowledged radon experts, who would be guaranteed to furnish forthright opinions without pulling any punches. These are their views.

### Director of Environmental Services for an unaffected Midlands metropolitan district

- His district has no radon problem.
- Without grants for radon remediation, the radon issue will lose prominence.
- Government commitment is still patently lacking.
- People by and large remain unconvinced.

### Principal EHO (radon specialist) for an affected south-west district

- Easy to be cynical, but it is about time that professionals outgrew this sort of negativism.
- His council is piloting a DETR 'New Deal' project for developing a code of practice for radon affected local authorities (LAs).

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# Mendip Pilot Remediation I

*Martin Crocker*; Mendip District Council

**W**hen 40% of an audience of radon-aware EHOs told me last year that if their own homes were affected by radon, they themselves would not remediate, I knew that things weren't quite right. How can the public be expected to be persuaded to do radon mitigation work if some of the persuaders themselves are not convinced?

At Mendip we've been tussling with public perceptions of radon since before 1990, when the Council started to interact with the radon affected public. In 1992, the major part of the District was embraced by the Somerset Radon Affected Area, and during 1994/95, the Department of Environment, Transport and the Regions (DETR) launched into a focused measurement campaign, which was complemented by a broad-brush promotional campaign resourced by members of the Somerset Radon Affected Area Steering Group. A major review at Mendip in 1998<sup>(1)</sup>, suggested that all of this work (no little investment) left the following position: about 30% of homes had been tested, 7% of the tested homes were above the Action Level and only about 10% of households had bothered to carry out radon remedial works.

Our experience and research, direct with the radon-nonchalant public, implied the need for:

- A direct, 'just do it' message linked with a hard-hitting lung cancer focus, delivered personally in the home.
- A one-stop-shop, to take the (de-motivating) stress out of the process; and to short circuit denial, and preclude dissuasion by well-meaning but over-sensitive diplomats armed with mindfuls of information.

Provocative stuff? I don't think so. It was simply time to break free of the endless radon talks, often gridlocked by the grants argument, and to get out into peoples' homes – where the problem lies.

## Design Factors

- In developing a shape to the DETR-endorsed project that could be acceptable (and exciting) to the Council, we, at Mendip, considered the following factors:

### Demonstrating remedial measures



- The lack of Council resources to run another major promotional campaign.
- The freedom to use the findings of Mendip's public research.
- The need to build in elements that had a measurable impact, and were distinct from the other two pilots (without shooting at our own feet!).
- The need to colour the project with a fresh new slant and give radon back its bite.

## New Deal

New Deal is a Government-backed programme to help get the young and long-term unemployed into meaningful work. When the Community Economic Development Associates (CEDA), the DETR's contractor, threw in the idea of New Deal, we jumped at it. Working with Job Centres, we looked at the potential to employ one or two unemployed persons signed up to New Deal as radon advisors. An appointment was quickly but carefully made, much to the delight of the Employment Agency (and the successful applicant who happens to be an experienced salesman).

For any employer, New Deal is worth looking at: apart from the satisfaction of providing employment and making a local link between offset Government strategies, there is also a substantial financial subsidy available (that amounts to approximately one quarter of the revenue costs of an obligatory six month term of full employment). Most refreshing of all, however, is New Deal's freedom from red tape and paperwork-a factor that so often stifles initiative.

# Project - Interim Report

## That Personal Touch

We wanted to provide face-to-face persuasion of radon-affected householders to carry out remedial works; based upon:

- A dedicated Radon Advisor, accessible locally and via a Freephone, and available to work out-of-hours.
- Personal home visits where possible.
- A one-stop-shop approach to convey the risks, possible solutions and support arrangements with builders, in one fell swoop.
- An agency role with builders.
- Control of information: not leaving people alone with too much (or too little) too soon (or too late).

## Project Set Up

With the project approved by the Council and the funding earmarked for the Radon Advisor post, by March 1999 arrangements with key partners were firmed up:

- With the National Radiological Protection Board (NRPB), the phasing of mailshots to radon affected households (the addresses of which are held in confidence by the NRPB).
- In-house, and with DETR help, the creation of effective publicity material - particularly getting Mendip's contribution to the NRPB mailout to look right. This is crucial because the proportion of public that responds and seeks advice is directly influenced by the effectiveness and contents of the mailing.



## The motivation of non-remediators

State of mind	Motivation needed
Not concerned but could become concerned	<ul style="list-style-type: none"> <li>● Remediation campaign: build in expectation to remediate</li> <li>● Direct 'Just do it', message</li> <li>● Property market (certification or market force)</li> </ul>
Not concerned and never will be	<ul style="list-style-type: none"> <li>● Not cost effective to target, or</li> <li>● Shock treatment, or</li> <li>● Financial offer too good to refuse, or</li> <li>● Housing fitness enforcement</li> </ul>
Concerned but sees operational difficulties	<ul style="list-style-type: none"> <li>● Financial incentive</li> <li>● One Stop advice shop</li> <li>● Professional direction</li> <li>● Accredited and accessible builders</li> <li>● Property market (certification or market force)</li> <li>● Private rented sector enforcement</li> </ul>

- With BRE, the training of the Radon Advisor.
- With BRE, the practical training of a small and accountable number of local builders; and the production of a builders list.
- In house, development of a radon database to trace public responses, allow follow up by the Radon Advisor, and ultimately to enable the evaluation of the project by CEDA.
- With NRPB, the provision of free first-time radon tests and retests, copyable to the Council.
- With housing management, making arrangements to remediate affected Council stock.

## Progress

The first phase of the NRPB mailshot (246 homes) took place in April. The response at the end of May is 12%, and all 30 households have been visited by the Radon Advisor. All, bar one or two, have stated that they will proceed with works and are seeking estimates from nominated builders. Of course, these are very early days; and our 6 week follow up may tell a different story.

Having the luxury of a dedicated worker, and with the mailshots being phased, we are adapting to the

project as it evolves. Every Estate Agent's office locally is being visited (an intriguing domain of research in itself); DIY centres and builders merchants are being briefed as to what materials to have in stock; and the campaign and its remaining three phases of mailouts is being reinforced, at this stage, through a personalised feature in the Council's newspaper, 'Mendip People'.

## Interim Remarks

It has been good fortune that Mendip has had the opportunity to employ a Radon Advisor via New Deal. Our experience of supporting partners NRPB, BRE, and DETR has been extremely positive. There is no fixed idea of how successful the project will prove; but all, no doubt, will be unveiled by DETR when the relative successes (and failings, perhaps), of the pilot projects are dissected for the benefit of authorities nationally.

Whatever strategies are adopted, in a Best Value culture it will be hard to avoid the discomfort of attributing a money value to lives protected from the threat of lung cancer.

(1) Radon Remediation in the Private Housing Sector. A Review of the Effectiveness of Radon Remediation Strategies. Curtis Lakin, Mendip District Council, 1998.

# Radon - The Next Ten Years

(continued from page 1)

- Project uniquely couples radon remediation with retraining of younger unemployed workforce.
- LAs must do more than mitigate their own housing stock, and must persuade elected members genuinely to commit to the whole radon programme.

## A retired Chief EHO of an affected Midlands borough

- Worried that radon campaign 'retired with him'!
- Local estate agents giving out false information (allegedly 'radon is no problem' in the Midlands!).
- Danger of 'professional people' playing down the radon problem to the detriment of the public
- Radon incorporation in housing fitness standard long overdue.

## Senior radon scientist and departmental head at a national government advisory body

- Current anti-radon programme is fully justified; overwhelming evidence linking radon and lung cancer.
- Incomprehensible to accept suggestions that, although radon causes lung cancer in mines, it does not do so in houses (the 'threshold' theory).
- Change in radon policy to give more attention to remediation is a sensible step forward.
- More involvement of Local Authorities and other organisations offers scope for a more informed and responsive radon programme.

## University professor of physics and radon specialist

- Has always doubted the link with lung cancer at normal domestic exposure levels.
- Whole idea of no threshold for radiation effects 'under serious challenge'.
- Given property blight in high radon areas the radon issue will decline.
- Possible to justify looking for and mitigating high radon houses, but wholesale nature of radon issue will not be sustained.
- Better to base Action Level for radon on a dose limit rather than an assumed lung cancer risk.
- ICRP recommendation for occupational exposure limit of 20 mSv y<sup>-1</sup> should be applied to domestic radon exposure, giving an Action Level of 400 Bq m<sup>-3</sup> (twice the current level).
- UK study of radon and lung cancer in SW was 'seriously misrepresented' by NRPB (none of the risk factors were statistically significant).

## COMMENT

So there we have a typically wide range of views, extending across the whole spectrum of informed opinion, varying from local government to authoritative national bodies and science academia. The burning question is "Who do we believe?" and the answer has to be "All of them and none of them, at the same time!"

For us mere mortals, radon practitioners in the field, not blessed with too much scientific baggage which I'm only too happy to leave with the likes of NRPB, BRE and the physicists and medics perhaps we should stick with what we already know to be fundamentally true:

1. Radon is overwhelmingly the major source of ionising radiation exposure for all of us.
2. The risk posed to life from excessive radon exposure at home and work is significant and fully justifies additional appropriate resource allocation.
3. Smokers in radon Affected Areas are particularly at risk.
4. Whilst the NRPB/DETR country-wide radon measurement initiative is impressive, the abysmally low rate of mitigation is a national disgrace.
5. Incorporation of excessive radon into the house fitness standard is long overdue.
6. Radon mitigation renovation grants must be offered on a mandatory, not discretionary, basis, as in Sweden, Finland, Ireland and the Czech Republic.
7. The DETR's own quietly forgotten research on attitudes to radon (carried out by Professor Lee) already underlines the need for real financial incentives to convince the disbelieving British public that radon is a significant threat to their and their children's health.
8. Workplace enforcement advice to local authorities under the IRR 1985 guidance circular needs clarifying and updating.
9. Whilst radon 'cowboy' contractors still exist, the BRE and Radon Council efforts to train and regulate commercial operators have given the radon mitigation industry real integrity and credibility. No more 'competence' certificates for attending a couple of hours training please!
10. Despite the best professional efforts of EHOs, without some real financial incentive from the government - in the form of a targeted mandatory renovation grant, the estimated 2,000 avoidable radon induced deaths per year will continue in the UK.

And it needn't cost that much at all when you consider that, on average, the estimated costs for remediation of most homes is around £700. Relate that to the potential number of lives saved so cheaply and you realise what a marvellous health bargain grant-aided radon remediation could be.

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.