

Environmental **Radon** Newsletter

WINTER 2005

ISSUE 45

All you ever wanted to know about radon

This issue of the Environmental Radon Newsletter is devoted to a listing of all of the radon publications you are likely to need, with details of prices and how to obtain them.

Where no price is listed, the publication is free. For priced publications, check with the organisation responsible for details of postage and packing costs. Web links were tested October 2005.

Department of the Environment, Food and Rural Affairs

www.defra.gov.uk/environment/radioactivity/radon

Email: Defra@iforcegroup.com

Defra Publications

Admail 600

London SW1A 2XX

Telephone 0845 955 6000

Radon - A householder's guide

General guide to the problem of radon in homes

Radon - A guide for homebuyers and sellers

How radon affects house purchase

Radon - A guide to reducing levels in your home

Summary of radon remedial methods

Radon - you can test for it

Guide to obtaining a radon measurement

Radon and your health

Short summary of the radon problem

A good practice guide for radon-affected Local Authorities

Of interest to all local authorities who may be considering running their own local programmes to address the radon problem in their areas. 45 pages. Free download from Defra website above.

Welsh Assembly Government

www.housing.wales.gov.uk/index.asp?task=content&a=e18

Construction and Domestic Energy Branch

Telephone 02920 825111

The Welsh Assembly Government supplies bilingual versions of the first five leaflets above.

Environment and Heritage Service, Department of the Environment Northern Ireland

www.ehsni.gov.uk/environment/radiation/radon.shtml

Industrial Pollution and Radiochemical

Inspectorate (IPRI)

Calvert House

Castle Street

Belfast

Telephone

028 90254773

The Environment and Heritage Service supplies versions of the first four leaflets above, plus:

Radon factsheet

Summary of the radon problem, with map of radon

Affected Areas in Northern Ireland.

Free download from Environment and Heritage Service website.

Scottish Executive

Scottish Executive Development Department

Housing Division 1

First Floor East, Victoria Quay

Edinburgh, EH6 6QQ

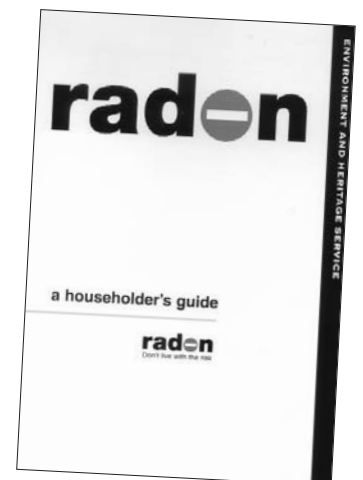
Telephone 0131 244 5575

Radon Affected Areas in Scotland and related information

Maps of known radon Affected Areas in Scotland.

Radon survey of Scottish homes

Short summary of the radon problem.



POINTS OF CONTACT

Building Research Establishment (BRE)
Garston, Watford, WD2 7JR
BRE Radon Hot Line:
Tel: 01923 664707 Fax: 01923 664010
www.bre.co.uk

Radon Survey
Radiation Protection Division, Health
Protection Agency
Chilton, Didcot, OX11 0RQ
Radon Freephone: 0800 614529
Fax: 01235 833891
www.hpa-rp.org.uk/radiation

Department for Environment,
Food and Rural Affairs
Zone 4-F7, Ashdown House
123 Victoria Street, London SW1 6DE
Tel: 020 7082 8497/8498 Fax: 020 7082 8474
www.defra.gov.uk

National Assembly for Wales
Housing Division
Cathays Park, Cardiff, CF1 3NQ
Tel: 01222 825219 Fax: 01222 825391

Environment and Heritage Service
Department of the Environment for
Northern Ireland
Calvert House, 23 Castle Place
Belfast, BT1 1FY
Tel: 01232 254754 Fax: 01232 254700

Scottish Executive Development Department
Housing Division 1
First Floor East, Victoria Quay
Edinburgh, EH6 6QQ
Tel: 0131 244 5575 Fax: 0131 244 5596

Health and Safety Executive
Health Directorate B6
Rose Court, 2 Southwark Bridge
London, SE1 9HF
Tel: 020 7717 6854 Fax: 020 7717 6717

Northern Radon Liaison Group
c/o Environmental Health Department
South Lakeland District Council
South Lakeland House, Lowther Street
Kendal, Cumbria, LA9 4UD

Radon South West Committee
Secretary: Gerald Hudd
46 Parkfield Drive, Taunton
Somerset TA1 5BU
Tel: 01823 355194
email: GAHudd@Somerset.gov.uk

Steering Group on Radon
(Northamptonshire and elsewhere)
Environmental Health Department,
Daventry District Council
Lodge Road, Daventry
Northamptonshire, NN11 5AF.

Derbyshire Radon Steering Group
c/o Environmental Health Department
Derbyshire Dales District Council
Town Hall, Matlock
Derbyshire, DE4 3NN

The Radon Council Limited
PO Box 39, Shepperton
Middlesex, TW17 8AD
Tel: 01932 221212 Fax: 01932 229779

Office of the Deputy
Prime Minister

www.odpm.gov.uk
Email: odpm@twoten.press.net

ODPM Publications
PO Box 236
Wetherby
West Yorkshire
LS23 7NB
Telephone
0870 1226 236

Housing Health and Safety Rating
System. Guidance (version 2)
November 2004.

Provides guidance on technical
aspects of the Housing Health and
Safety Rating System, which replaces
the Housing Fitness Standard.

Free download from
www.odpm.gov.uk/stellent/groups/
odpm_housing/documents/page/odpm_
house_032782.pdf

Building Research
Establishment

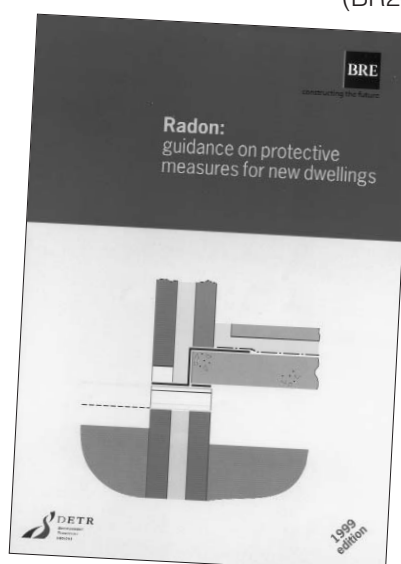
www.bre.co.uk/radon

IHS Rapidoc (BRE Bookshop)
Willoughby Road
Bracknell
RG12 8DW

Telephone 01344 404407

Radon: Guidance on protective
measures for new dwellings,
1999 edition (BR211, £26)

Practical advice on preventing radon
problems in new houses, with maps
of where
protective
measures
are required
in England
and Wales.

Radon: Guidance on protective
measures for new dwellings
in Scotland (BR376, £24)

As above, with maps of where
protective measures are required
in Scotland.

Radon: Guidance on protective
measures for new dwellings in
Northern Ireland (BR413, £24)

As above, with maps of where
protective measures are required
in Northern Ireland.

Buying homes in radon
Affected Areas (BR464, £27.50)

Practical advice on dealing with
radon for anyone involved in
property transactions.

Radon in the workplace
(BR293, £18)

Guidance on the law relating to
radon, on remedial measures and
how to get the work done.

*BRE guides to radon remedial
measures in existing dwellings:*

Radon Sump systems,
second edition
(BR227, £20)Positive Pressurisation
(BR281, £13.50)Sealing Cracks in Solid Floors
(BR239, £12)Protecting Dwellings with
Suspended Timber Floors
(BR270, £13.50)Major Alterations and
Conversions
(BR267, £18)Surveying Dwellings with
High Indoor Radon
Levels (BR250, £18)Dwellings with cellars and
basements
(BR343, £25)Minimising Noise From
Domestic Fan Systems
and Fan-assisted Radon
Mitigation Systems
(GG26, £10.50)Protective measures for
housing on gas-
contaminated land
(BR414, £44)

Buildings and Radon
(GG25, £10.50)

A highly-illustrated guide covering passive radon sumps, communal sumps, spillage of combustion products, extensions and conservatories. This supplements existing guidance.

Radon solution sheets

Set of 18 A4 sheets describing radon remedies.

Available as free downloads from the BRE website, or as paper copies from HPA-RPD (see page 4).

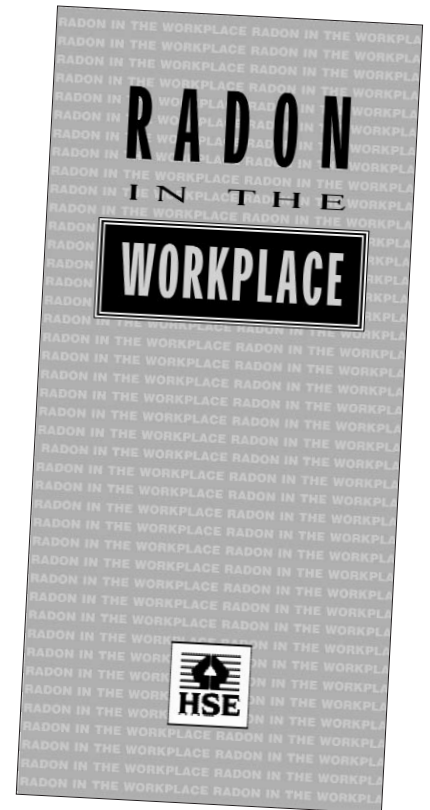
based on the North and South sheets of solid geology.

Note: A new atlas of radon Affected Areas in England and Wales, to be jointly published by the Health Protection Agency and the British Geological Survey, is in preparation.

BR211 Radon Protective Measures (RPM) Site Report

A specialist report for property developers and builders, providing advice on the requirement for radon protective measures in new property construction in accordance with the Stage 2 Geological Assessment for BR211 (1999).

Available from BGS website above and www.bgs.ac.uk/Georeports.
£35.75 plus VAT.



radon solutions No.1

INTERNAL MINI SUMP SYSTEM

Specification
Fans: The most commonly used type of extract fan for a radon sump system is an in-line or other duct mounted centrifugal fan, which has an airtight casing. These are compact, quiet, widely available and can be easily fitted. However, there is no technical reason why other types of fan with similar air flow performance should not be used. Such fans are likely to have a flow rate of around 175 m³/h at a pressure difference of 200 Pascals, and a power consumption of about 70 watts. A list of fan suppliers is given overleaf.

Pipework: 110mm diameter uPVC pipe and fittings as used for domestic soil and vent pipes (except pipes) can be used. This is widely available from DIY stores and builders' merchants.

Sump construction: The sump should be located close to the centre of the dwelling. A simple mini sump can be constructed by locating out or over drilling a 110mm diameter hole in the floor slab and excavating about a bucketful of material from below, allowing out a space approximately 200mm in radius.

Sealing: It is important to seal around the pipework where it cuts the floor slab to prevent air leakage. This can be achieved using a gun-applied bathroom sealant or similar, which can be obtained from a DIY store or builders' merchants.

Roof outlets: The system can exhaust through a vent cow (as shown through the ridge of the roof or via a gas-free type ridge ventilator at the ridge. Both are widely available from DIY stores and builders' merchants.

General points to consider
 For a typical dwelling a single sump is likely to have an outlet over an area of approximately 250mm x 150mm or for a distance approximately 15m from the sump. However, obstructions below the floor slab may reduce effectiveness. Because of a potential risk of spillage avoid locating a sump adjacent to or over open flued combustion appliances such as an open fire or boiler which draws air from the room for combustion.

Care should be taken when breaking out to avoid damaging steel reinforcement or concealed services, eg electricity cables, water mains, central heating pipes and gas and oil supply pipes, similarly take care to avoid ceiling joists and any services in the roof space.

To reduce visual impact pipework can be painted white, or boxed in in the corner of a room. Position the outlet well away from windows, doors and ventilation grilles.

To minimise noise keep pipework as straight as possible, and place the fan away from living rooms, bedrooms, or other quiet areas, but close to the main stairs so that the pipework is always under section. Do not support fans on lightweight

The internal mini sump system with external pipework.

Health and Safety Executive

www.hse.gov.uk/radiation/ionising/radon.htm

Email: ionising.radiation.hd@hse.gsi.gov.uk

Ionising Radiation Policy
 Health and Safety Executive
 7NW Rose Court
 2 Southwark Bridge
 London SE1 9HS

Telephone 020 7717 6832

Work with ionising radiation: Ionising Radiations Regulations 1999 Approved code of practice and guidance
(L121, £20)

This includes a full version of the Ionising Radiations Regulations 1999, with explanations, guidance and information on best practice.

The Ionising Radiations Regulations 1999: Radon in the workplace

(Information Document HSE 560/50)
 Free download from www.hse.gov.uk/LAU/LACS/42-1.htm

A local authority circular, intended for enforcers, which explains the IRR99, gives background information on radon, and guidance on how the regulations should be enforced via improvement notices, etc.

Radon in the workplace

Brief summary of the requirements of The Ionising Radiations Regulations 1999 with regard to radon. Free download from HSE website.

Health and Safety Executive for Northern Ireland

www.hseni.gov.uk

The Ionising Radiations Regulations (Northern Ireland) 2000

Free download from www.opsi.gov.uk/sr/sr2000/20000375.htm

The Radon Council

www.radoncouncil.org

Email: radoncouncil@radon-uk.demon.co.uk

The Radon Council Limited
 PO Box 39
 Shepperton
 Middlesex TW17 8AD
 Telephone - 01932 221212

The Radon Manual

(£30 plus £5.80 postage and packing)
 The training manual used by the Radon Council, with bibliography and list of members.

British Geological Survey

www.bgs.ac.uk/radon

Email: enquiries@bgs.ac.uk

National Geoscience
 Information Service
 British Geological Survey
 Keyworth
 Nottingham
 NG12 5GG

Telephone 0115 936 3143

Radon and background radioactivity from natural sources: characteristics, extent, and relevance to planning and development in Great Britain.

(BGS Technical Report WP/95/2, 1995, £71)

Includes two 1:625 000 scale maps of radon potential in Great Britain

All you ever wanted to know about radon from the HPA

Health Protection Agency, Radiation Protection Division

(formerly National Radiological Protection Board)

www.hpa.org.uk/radiation/radon

Email: information@hpa-rp.org.uk

Press and Information Office
Health Protection Agency
Chilton
Didcot
OX11 0RQ
Telephone 01235 822742

Radon Atlas of England and Wales

(NRPB-W26, 2002, £15, also available as a free download from the HPA website above).

1:10,000 maps showing the probability of high radon levels by 5 km or 1 km square, with district authority boundaries and major towns.

Note: A new atlas of radon Affected Areas in England and Wales, to be jointly published by the Health Protection Agency and the British Geological Survey, is in preparation.

Radon in Dwellings in Northern Ireland: Atlas and 1999 Review

(NRPB-R308. Contact Environment and Heritage Service, Department of the Environment for Northern Ireland, above, for copies.)

Radon Affected Areas: Scotland

(Documents of the NRPB, vol 4 no 6 1993 £5)

Radon Affected Areas in parts of Scotland with small maps.

Exposure to Radon in UK Dwellings

(NRPB-R272, 1994, £10)

Outlines the risks of radon exposure, the factors affecting levels in buildings and how to measure them and summarises the measurement programme.

Radon in the Workplace

(£1.50, single copies free)

A small leaflet that unfolds to an A2 poster. Gives the basic facts about radon in workplaces. Available unfolded.

Radon: A Guide for Professionals

(50p, single copies free)

Information and contacts for professionals in the housing market. Contains the radon map of England. Unfolds to A3 sheet.

Health risks from radon

(£2)

Booklet containing information on the risk of cancer from radon, including a discussion of the evidence.

Radon measurement and advisory services

Booklet on HPA radon services for housing and employment professionals.

Environmental Radon Newsletter archive

Articles by Environmental Health Officers, building experts, government representatives and radon scientists on all aspects of radon.

All previous newsletters in this series are available for free download at: www.hpa.org.uk/radiation/publications/newsletters/environmental_radon

Radon – don't live with the risk

Fold-out leaflet with summary of radon facts. Available either with a map of radon Affected Areas in England and Wales, or Northern Ireland.

Guide to radon remedies in houses

Leaflet indicating which remedial measures are likely to be successful in different house types.

Report on radon potential

(£23.50)

A report for house buyers providing definitive information whether a property is in a radon Affected Area and providing a summary of the data for the neighbourhood.



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jon.miles@hpa-rp.org.uk

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The views expressed in the contributions are not necessarily those of the Chartered Institute of Environmental Health, the Royal Environmental Health Institute for Scotland or the Radiation Protection Division, Health Protection Agency.