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# Radon in UK homes : progress and plans

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# Radon in UK homes

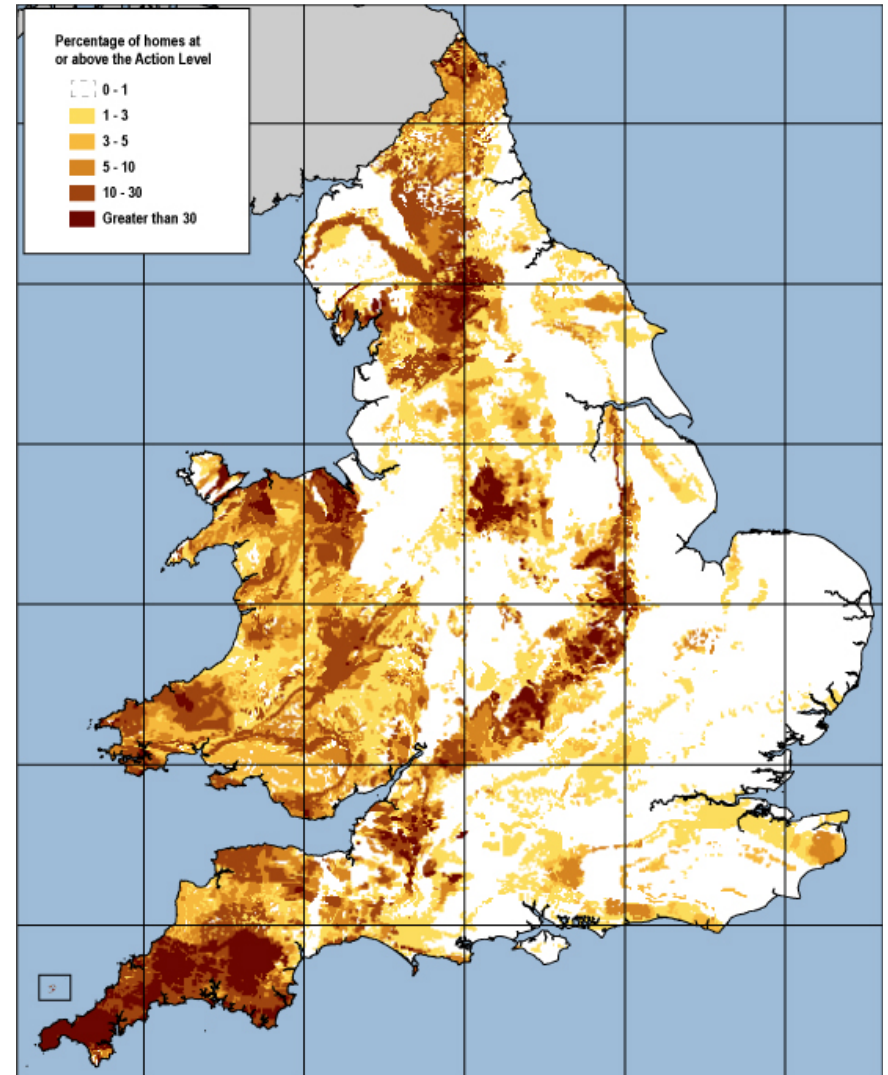
Cannot reliably predict level in a building

Distribution is log-normal over most of range

Can predict likelihood of high levels

Radon potential is “the percentage risk of exceeding the Action Level”

PHE produces radon potential maps with British Geological Survey (BGS)





# Radon in UK homes

Radon level (Bq m <sup>-3</sup> )	Situation	UK radon criteria (Bq m <sup>-3</sup> )
Over 10,000	PHE has measured ~20 homes over this level - highest ~20,000 Bq m <sup>-3</sup>	
2,000	PHE has measured ~800 homes over this level	Annual dose ~100 mSv
1,000	PHE has measured ~4,000 homes over this level	
200	PHE has measured ~70,000 homes over this level	Workplace regulations – 400 Bq m <sup>-3</sup> ACTION LEVEL – 200 Bq m <sup>-3</sup>
100	Average in Cornwall is 114 Bq m <sup>-3</sup>	TARGET LEVEL – 100 Bq m <sup>-3</sup>
10	Average in UK is 20 Bq m <sup>-3</sup>	
1	Outdoor levels typically “few” Bq m <sup>-3</sup>	



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# Targeted domestic radon survey

Identify areas with potential for high levels



Identify individual homes with the highest radon potential



Measurements to establish the level



Reduce if the level is high



Measure again to confirm effectiveness



(Check effectiveness over the long term)



# Identifying areas for targeted surveys

## Requirements

Large but manageable number of homes in areas of high radon potential (5,000 – 50,000 homes)

Typically in areas where at least 5% of homes will need action

Keen and participating local authority

In-house resources to plan and execute

Funding to support “free” measurements



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# Radon pack for individual homes

Leaflet with clear instructions  
and background information

2 passive radon detectors (3  
months)

Pre-paid return envelope

Questionnaire about

the home (rooms, type,  
heating, double glazing,  
owned or rented?)

its occupants (number, age,  
smokers?)





# Methods to improve uptake

Joint “badging” with local authority

demonstrates engagement of local stakeholders

Two reminders

after invitation letter issued

after 3 months to remind householders of need to  
return packs

Phone and email helpdesk

to answer any questions



# Getting greater value from a survey

Provide local training sessions for

- Local government staff (building control, environmental health, public health, housing etc etc)
- Local professionals (estate agents, builders, legal teams)

Engage local smoking cessation teams

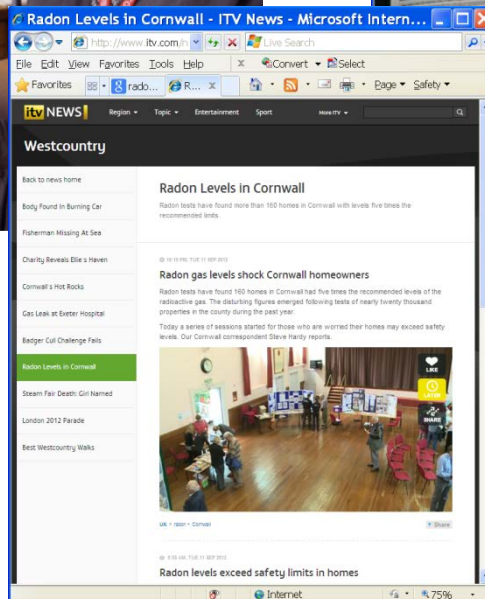
Engage local landlords (eg social housing)





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# Media to boost uptake at key stages





# Individual advice to householders

Householders with high radon levels are advised to reduce these.

Individual advice reports are issued with invitation to attend local “drop-in” sessions.

Advice includes voucher for free post remediation re-test

feeds knowledge on remediation performance

Media announcements encourage attendance



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# Example of partnership working

West Oxfordshire District Council 

Health Protection Agency – CRCE

Health Protection Agency – local team 

Building Research Establishment

Oxfordshire Smoking Advice Service (National Health Service) 

Local social landlords 

 = Radon knowledge added to organisation

# Radon in Scotland 2009-2012

13,000 homes

>5% radon potential

~33-50% participation

6,000 measurements

1,000 homes over AL

16 advice sessions

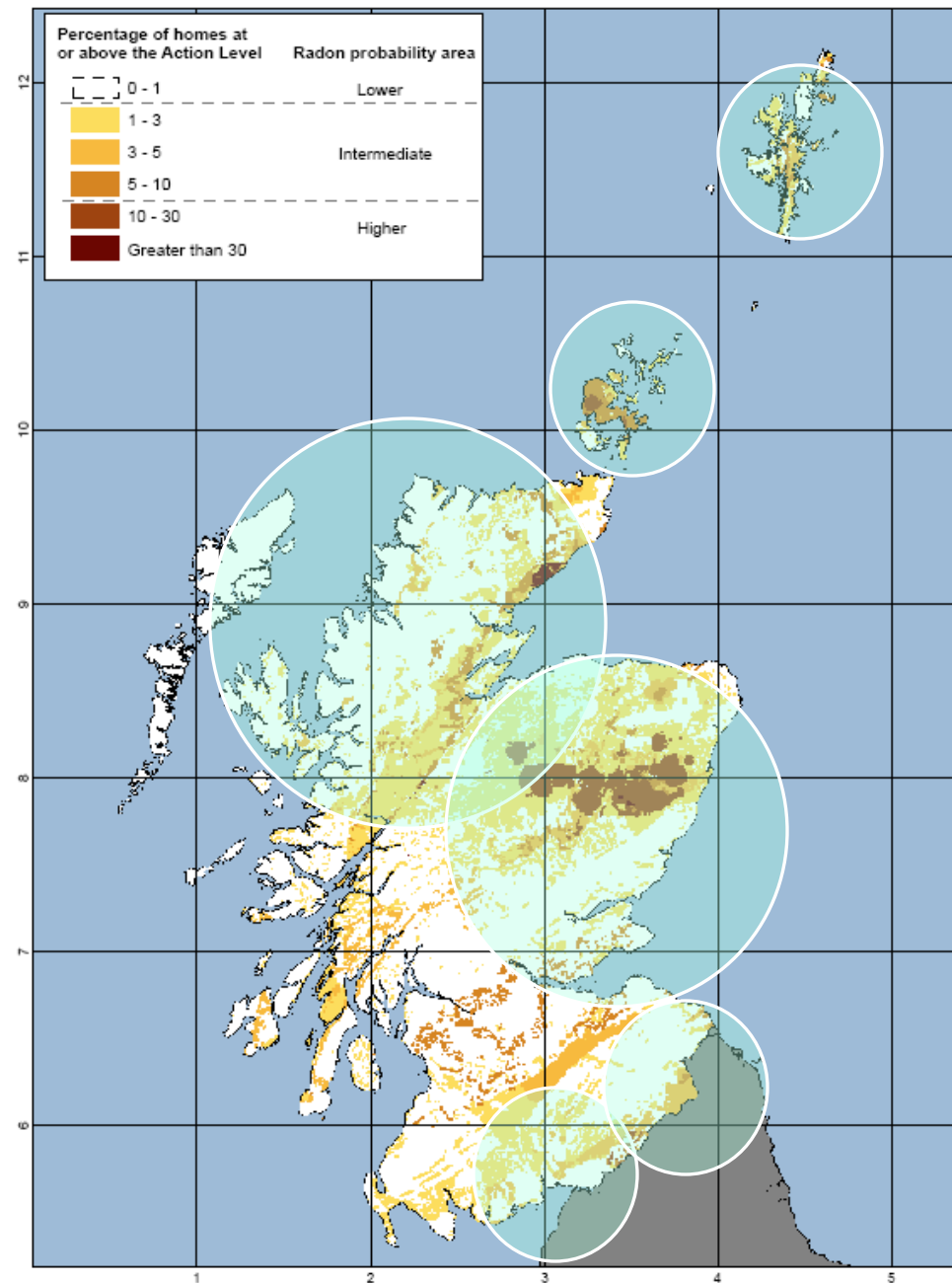


Figure 2 Overall map of radon potential in Scotland (axis numbers are the 100-km coordinates of the National Grid)

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Radon potential classification © Health Protection Agency and British Geological Survey copyright [2011]



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# Targeted radon surveys in England

## West Oxfordshire (2010)

9,000 homes

>5% radon potential

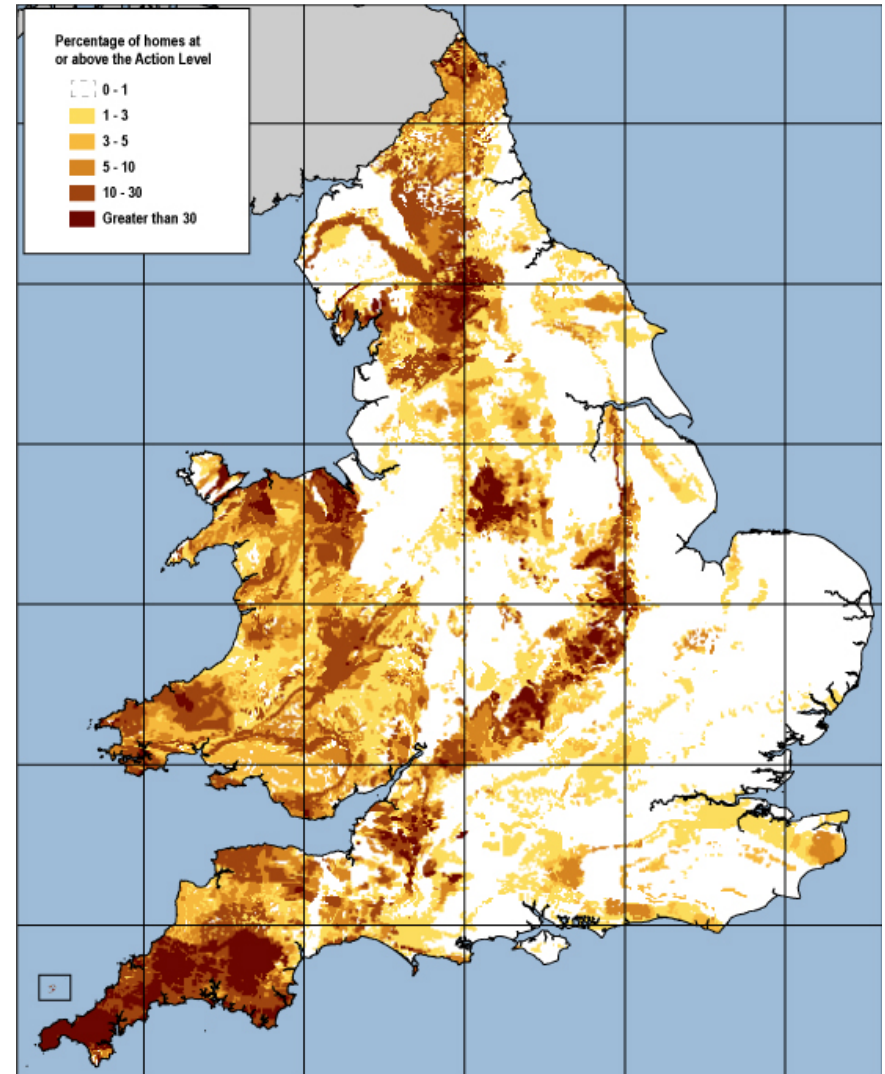
49% participation

## Cornwall (2010-11)

47,000 homes

10-30% radon potential

40% participation







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# Where next on targeted surveys?

We have run

30 targeted surveys in  
15 years, resulting in  
100,000 homes tested

Many areas still need action

New methods to be tried (eg  
online self-help)

Working with new partners

Get local employers to  
consider their premises

