

Radon in Workplaces: New legislation and Guidelines

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Context – NRCS phase 1

- In 2014 National Radon Control Strategy for Ireland (NRCS) was launched
- NRCS identified a need to improve regulations around radon in workplaces (R41)
- It recommended that account to be taken of
 - Experience gained enforcing the 1996 EU BSSD and
 - The requirements of the 2013 EU BSSD

Context - IRRS Mission

- The Mission took place in September 2015

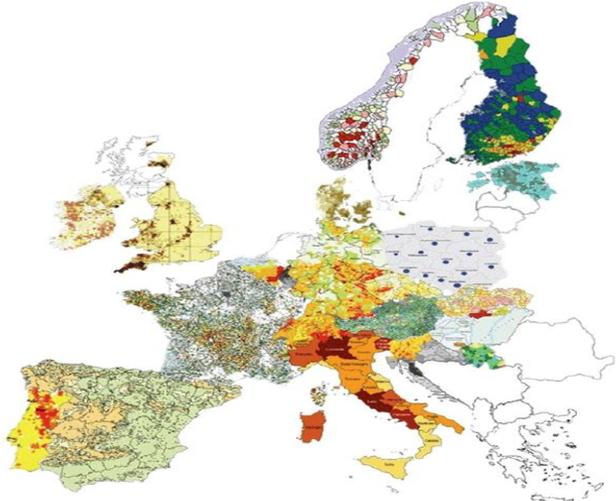


Integrated
Regulatory
Review Service

IRRS

- IRRS noted the need to review and revise the specific regulations addressing radon in workplaces especially underground workplaces to enhance their effectiveness
- Ireland's NRCS was noted as a good practice by the IRRS team

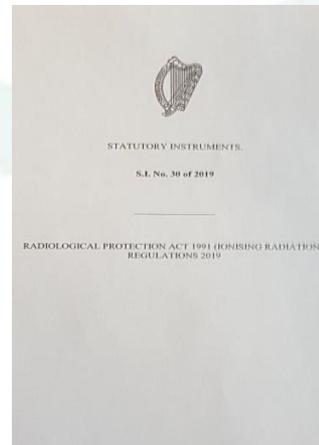
Context – European Council



- Council Directive 2013/59/Euratom (EU BSSD) provided the opportunity for improvement

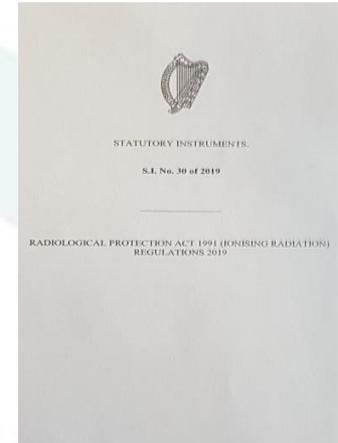
- S.I. No. 30 of 2019, (Ionising Radiation) Regulations 2019.

- Environmental Protection Agency (EPA) is the Competent Authority

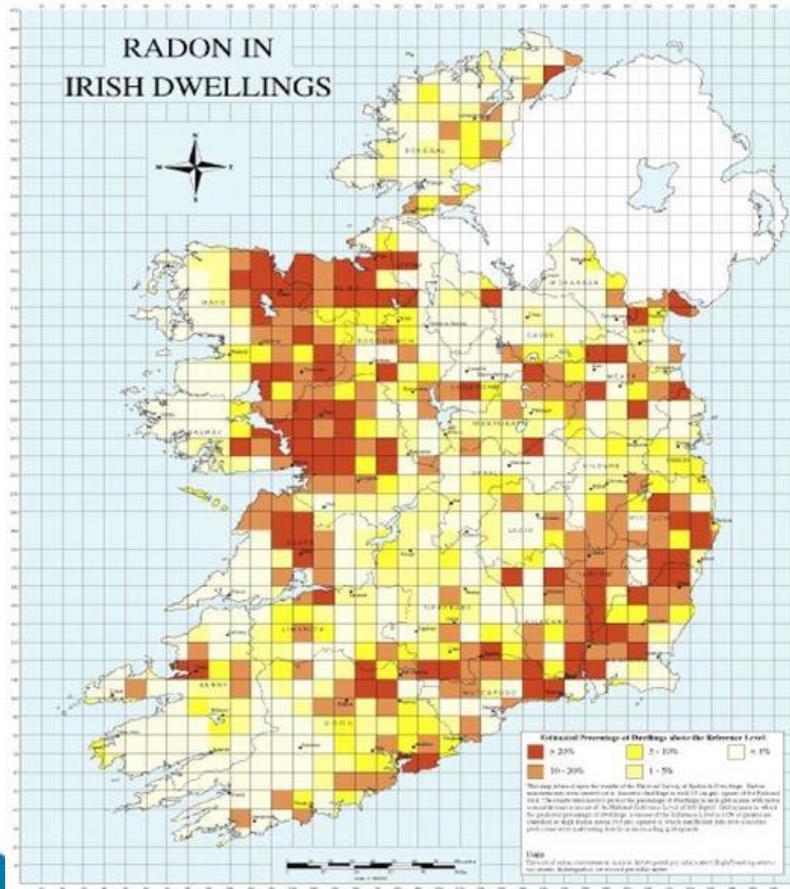


S.I. No. 30 of 2019 (Ionising Radiation) Regulations 2019.

- Regulation 66 deals with radon in workplaces
- It sets out
 - Who must measure
 - The Reference Level
 - The actions the need to be taken
 - Timeframe



Radon map of Ireland



National Radon Map

An interactive radon map is on EPA's radon website

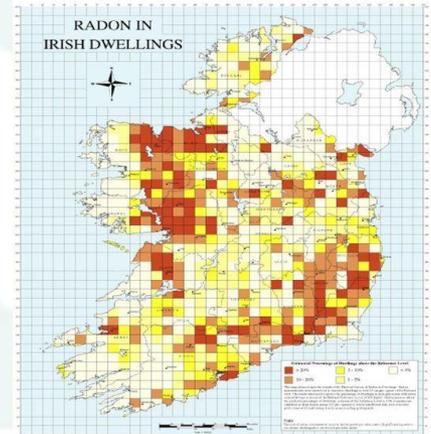
www.radon.ie

High Radon Areas:

10 km grid squares in which 10% or greater of houses are predicted to exceed the national Reference Level

Who must measure

- There is now a general duty on employers in High Radon Areas to measure radon
- This applies to
 - underground workplaces
 - aboveground workplaces in High Radon Areas in ground-floor or basement
 - Other workplaces identified by the EPA as being at risk



Underground workplaces

- These are new requirements
- Underground workplaces are mines and show-caves. Note: basements are **not** underground workplaces
- Radon in underground workplaces is a risk that has to be managed as remedial measures are normally not possible
- Underground workplaces will be subject to inspection



What are we proposing?

- Radon in underground workplaces – develop a regulatory regime
 - during 2019 we will visit each cave operator to advise them of the new regulations
 - The aim is to develop a risk assessment to determine the controls to be put in place in that cave to minimise staff exposure
 - Any future inspections will be against those controls

Underground workplaces

- Radon in underground workplaces - UK
 - Last year we accompanied an UK HSE inspection of a show cave in UK
 - Impressed by the regime in place there a combination of area monitoring and strict attention to staff rostering
- A UK based cave specialist helped devise this system. EPA is collaborating with this expert - in consultation with the show caves in Ireland

Aboveground workplaces



Reference Levels and Measurement

- Reference Level is reduced
 - Now 300 Bq/m³ reduced from the previous value of 400 Bq/m³
- The radon measurements must be carried out in accordance with guidelines issued by the EPA
 - the guidelines include:
 - the testing period should be at least three months (seasonally adjusted)
 - the number of detectors needed and their placement
 - Communicating the results to the customer
 - What to do when the result is > 300 Bq/m³

The EPA holds a list of registered radon measurement services

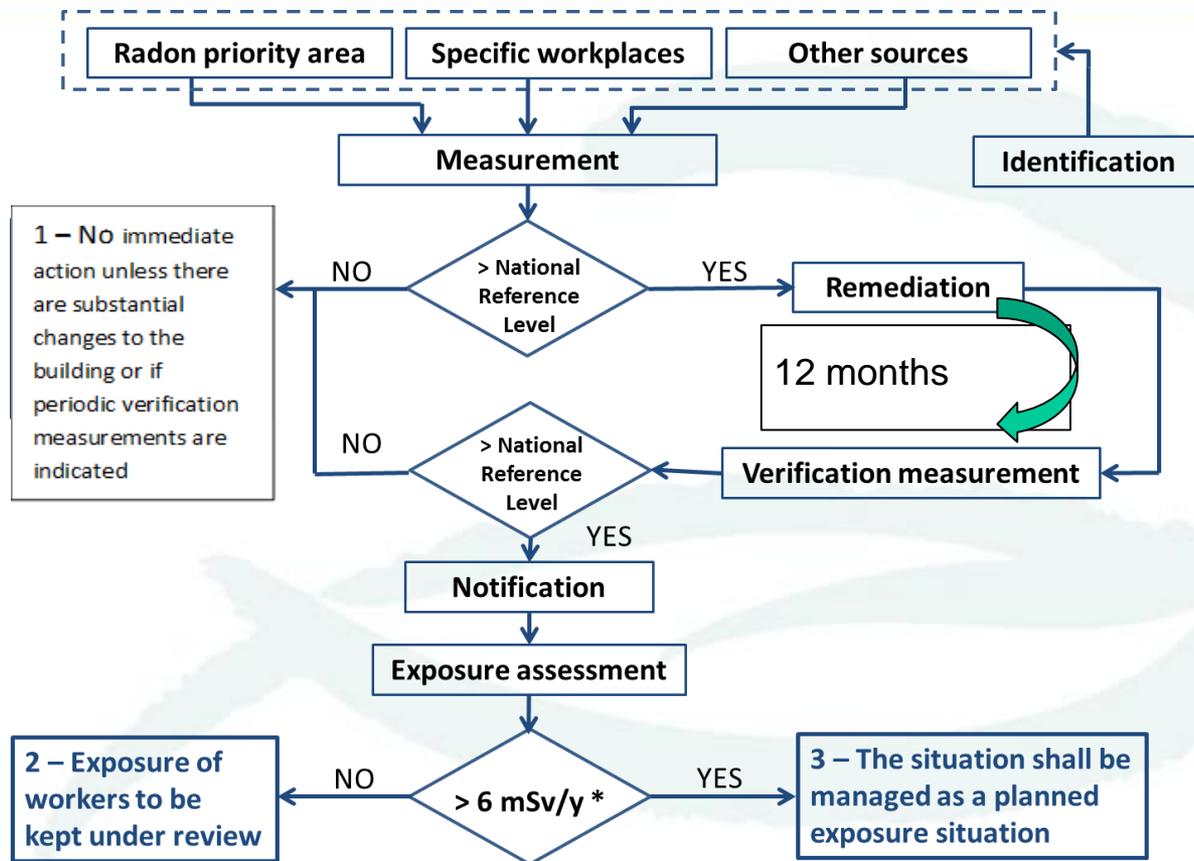
What if radon levels are greater than 300 Bq/m³ in a workplace?

- There's a requirement either to reduce the radon levels or introduce a system of radiological protection. (Such a system would be very onerous for the employer).
- **Remedial work is therefore strongly recommended and the preferred choice.** EPA holds a list of registered Remediation contractors
- Follow up measurements are then required
- Remedial work and follow up measurement must take place within 12 months
- If remediation is unsuccessful then notification is required

What if radon levels in a workplace are still above 300 Bq/m³ following remedial work?

- Notification to competent Authority is required, but when?
 - Remediation may be unsuccessful at the first attempt but may after a second or third attempt be successful. (Above ground workplaces)
 - In Ireland, we are unaware of an above ground workplace where radon levels (or radon exposure) could not be reduced
 - We propose that notification is made if the first remediation attempt is unsuccessful

S.I. No. 30 of 2019 (Ionising Radiation) Regulations 2019



* or a corresponding time-integrated radon exposure value

Summary

- The new regulations are positive. They implement a recommendation of the NRCS and IRRS mission
- EPA and HSA are working in partnership to support employers implement this legislation
- EPA is advising its licensees and registrants of the new requirements. (Similar for HSA)
- Further engagements, for example, with employer networks are also planned

