Minutes of the First Irish National Radon Forum

held on September 16th 2002,
Red Cow Morans Hotel, Dublin

On Monday 16th September 2002 the inaugural meeting of the Irish National Radon Forum was held in the Red Cow Morans Hotel in Dublin. Thirtyfive people representing the Radiological Protection Institute of Ireland (RPII), the Department of Environment and Local Government, County Councils, FAS, Homebond, Consultant Architects, Radon Mitigation Companies, Radon Supply Companies and University College Dublin (UCD) attended the meeting. The Forum generated some press coverage and resulted in TV and Radio interviews. Two further meetings of the Forum are planned over the next 2 years.

The Irish National Radon Forum was established as part of a **E**uropean **R**adon **R**esearch and **I**ndustry **C**ollaboration **C**oncerted **A**ction (ERRICCA2) project which is being funded by the European Commission. This three-year project, which started in February 2002, is being co-ordinated by the UK's Building Research Establishment (BRE). The Radiological Protection Institute of Ireland (RPII) together with the National Technical University of Athens, Greece (NTUA), and Risoe National Laboratory, Denmark (Risoe) are acting in support of BRE as project contractors.

Scientific and Industrial representatives from over 20 countries are working together on this project. The Radiological Protection Institute of Ireland is the Irish Technical/Scientific partner or representative on the European Forum and Remedia Limited is the Irish Industrial partner or representative.

ERRICCA2's remit is to "establish a European scientific led industrial forum aimed at reducing risks to health from radiation (principally radon) in the built environment".

Mr David Pollard of the RPII chaired the opening session and Dr Ann McGarry, Chief Executive of the RPII opened the Forum. In her opening address Dr McGarry welcomed everybody to the inaugural meeting, and wished the Forum well in its deliberations. She reiterated the RPII's continued support in helping to solve the radon problem in Ireland.

Opening Presentations

Dr Jack Madden (RPII)

In this presentation Jack described the background to the establishment of the new Irish National Radon Forum and its links to ERRICCA2. He explained that the aims of the new Irish National Radon Forum are to:

- Introduce ERRICCA2 and its aims and topics
- Disseminate information from the European Radon Forum

- Enable debate and discussion to take place on a National level
- Gain National views and observations to feed into the European Radon Forum
- Offer the participants the chance to contribute to the work of ERRICCA2
- Promote the ERRICCA2 Website links.

There are 6 work packages in the ERRICCA2 project and each work package has a designated Topic Leader. The work packages and Topic Leaders are presented below:

- Website (NTUA)
- Raising Public Awareness (BRE)
- Building Materials (NTUA)
- Protecting New Build (Risoe)
- Mitigation of Existing Buildings (BRE)
- Measurement and Mapping (RPII)

In support of these work packages a European Radon Forum is being established that will be linked to a National Forum set up in each of the 20 member countries. A European Radon Forum will be hosted in turn by each of the 4 project partners in their respective countries. In addition each member country of ERRICCA2 will host 3 National Radon Fora over the course of the project.

The first European Radon Forum was held in London in February 2002 and the minutes of this and all further meetings both at European and National level would be placed on the ERRICCA2 Website once it was commissioned. The minutes of the Irish National Radon Forum would also be available on the RPII Website.

Mr Michael O'Gabhlain (Remedia Limited)

In this presentation Michael, the Irish Industrial Partner in ERRICCA2, outlined some of the industrial aspects of ERRICCA2. He explained that one of the main aims of ERRICCA2 was to get the views of the people working at the coal-face of the radon problem, as it were, ie the radon mitigation companies and the radon supply companies.

The protection of the public from radon exposures has to do with buildings and building construction and this battle is won or lost on the building site. ERRICCA2 would like to collate information from all radon professionals on the methods employed and the problems encountered on site in protecting new build and mitigating existing buildings.

Michael indicated that further work is required in Ireland in looking at different ways to protect the integrity of underfloor radon membranes in the case of floating slab construction.

Michael concluded by stating that there is a strong need for more frequent opportunities for exchanging information between officials, professionals and contractors.

Scientific/Technical Forum

Mr David Pollard (RPII)

In this presentation David gave an overview of the RPII domestic radon programme, the school radon programme and the workplace radon programme.

The RPII national radon survey is predicting that 91000 houses exist in Ireland with radon levels in excess of the national Reference Level, and to date only around 2500 of these high radon houses have been identified. The number of high radon houses which were mitigated is estimated to be of the order of a few tens at most.

A survey of new houses built under the new 1998 Building Regulations in Ennis Co. Clare, which is located in a designated High Radon Area was carried out by the RPII. The results indicate that a significant number of newly constructed houses have indoor radon levels in excess of the national Reference Level, and that the level of awareness among householders of the radon protection measures incorporated into their house is poor.

The RPII completed measurements in 3467 schools throughout the country and high radon levels were found in 26% of measured schools. The installation of radon sumps is proving very effective in reducing indoor radon levels in schools mitigated during phase 1 of the remediation programme.

Currently the RPII is conducting a pilot radon measurement programme in workplaces in Ennis and Tralee. A national Reference Level of 400 Bqm^{-3}, averaged over a 3 month period is now enshrined in national legislation. If radon levels in workplaces exceed 400 Bqm^{-3} then the employers must assess whether mitigation is justified. If mitigation is justified, and the radon levels cannot be reduced, then the employers must implement a system of protection which is equivalent to that for practices.

The RPII is also currently looking at radon levels in show caves, mines and other underground workplaces.

Dr James McLaughlin (University College Dublin)

In this presentation James outlined his views on explaining radon risks to the public. We communicate radon risks to the public in order to keep them informed of the dangers, to protect them from detrimental health effects and to encourage radon remediation if so required.

Radon risks should be communicated to the public through official channels and media channels, through professional organisations, through hosting public meetings in High Radon Areas, through using respected sources ie GP's and through schools.
We should also consider using home financing as a potential communication channel. This would include Banks, Building Societies, Insurance Corporations and Solicitors.

James also indicated that the reasons for such a lack of public concern for radon exposures in the home could be:

No sensory perception of radon
No prompt health effects
No one to blame-no enemy, and
Radon is natural

On this last point James raised the broader issue of whether exposure to indoor radon in domestic dwellings should be treated as a natural phenomenon or whether it should be treated as a result of a practice ie building houses. The radiological protection community currently treats exposure to indoor radon as an intervention and not as the result of a practice.

James also stated that changes in the Building Regulations to include a requirement for post-construction radon testing of new dwellings were needed.

Mr Kevin Sheridan (FAS)

In this presentation Kevin gave an overview of the FAS Training Scheme on Radon Gas Remediation and Prevention. FAS, in conjunction with Roscommon county council,(acting on behalf of Local Authorities), the Building Research Establishment (BRE), UK, with the support of the Radiological Protection Institute of Ireland, the Department of the environment & Local Government, the Department of Public Enterprise and the CIF have developed a training programme in Radon gas remediation and prevention.

Recent European and Irish Safety, Health and Welfare legislation has recognised the effects of radon in the workplace, and requires action to be taken in relation to the exposure to an unacceptable level of radon in the workplace.

The certified training course is aimed at radon remediation contractors and supervisory staff, designers, architects, engineers, and Local authority staff involved in radon gas prevention in new build, rehabilitation and maintenance.

The development of the training programme arose from the need for a comprehensive training course in Radon prevention and remediation under the Building control Regulation (Building Regulations 1997 and Building Control Regulations 1997). The need also arose from requests to FAS by various Government Departments involved in this area, to develop this certified training programme.

The training programme was funded by the Construction Training Committee of FAS and project managed by Roscommon County Council and FAS in conjunction with the Radon Remediation and Prevention Monitoring Group. The pilot training course was held in 1999 and officially launched in September 2001.

Industrial Forum

Mr Niall Walsh (Sustainable Design International)

Niall made a presentation on the need to have a common European Technical Agenda which would incorporate:

- A coherent, Harmonised European Action Programme which would initially cover the period up to the year 2010
- A multi-lingual, Harmonised European Vocabulary dealing with radon protection of buildings
- A reliable, Harmonised European Database of radon related statistics
- A Person-Centred Research and Demonstration Programme which answers the health needs of real people exposed, over prolonged periods of time, to low levels of ionising radiation, and also answers the practical demands of those who plan, design, construct and manage for the protection of that health in the European built environment
- A comprehensive array of radon related Performance Indicators- this includes Benchmarking
- An effective EU regime of Performance Monitoring and Technical Control

Niall also made the point that the topic areas of ERRICCA2 should be strategically positioned within the raft of existing EU legislation and EU Treaties in order to make them more effective.

Mr Michael O'Gabhlain (Remedia Limited)

In this presentation Michael gave an overview of the Flisby 2000 System for use in new buildings. The Flisby 2000 system does not use a membrane but depends primarily on the depressurising effect of a low powered fan. The system is inexpensive to install and costs €7 per annum to run.

Michael also stated that the system complies fully with the Building Regulations and that it has an Irish Agrement Certificate pending. A unique feature of the Flisby System is the provision of a guarantee backed up by post-installation radon measurements in the building.

The Flisby System with modifications can be applied to remedial work in existing buildings.

Mr Tim O'Neill (Radon Control Systems)

Tim presented a talk on the development in Ireland of a radon protection strategy for new buildings. The development of this strategy arose out of the need to protect the health of building occupants from the harmful effects of radon gas, and from the fact that at the time in Ireland there was no standard for the manufacture of, and no code of practice for the use of radon membranes in Ireland.

The radon protection strategy consists of 6 steps:

1. Provide passive protection(radon membranes)
2. Provide active protection (easi-sump and easi-sump cap link)
3. Natural ventilation
4. Test the building for radon
5. Activate easi-sump
6. Retest for radon and maintain fan

In developing this protection strategy there is a need to improve on areas such as:

- Proper sealing of barriers
- Provision for movement within the structure
- Proper sealing of subfloor penetrations

In addition there is also a need to improve on other areas such as:

- Gas permeable layer beneath the subfloor
- Clearly identifiable pipework connection points
- Proper pipework detail

Round Table Discussion

A summary of the main points and issues raised during the Round Table Discussion is presented below:

1) The need for more frequent exchanges of ideas and information between Radon Contractors, Radon Supply Companies and Radiological Protection Professionals.

2) The need for changes to be made to the existing Building Regulations to incorporate mandatory post-construction radon measurements in all new houses. These changes could be incorporated into the relevant Technical Guidance Document which accompanies the Building Regulations.

3) The need to find new and better ways to explain to the general public, to employers and to health professionals the risks associated with exposure to radon in buildings so that better informed decisions could be made.

4) The need for a detailed Radon Protection Strategy in the country in which a code of practice or standard for Radon Mitigation Companies or other Radon Professional would be enshrined.

5) The need to determine the status and future prospects of the proposed Government funded Radon Grant Scheme.

6) The need to strategically position the topic areas of ERRICCA2 within the raft of existing EU legislation and EU Treaties.

The 2nd meeting of the Forum will take place in 2003 but no date, time and location for this 2nd meeting was decided.

Attendees at the National Radon Forum, Dublin, September 16th 2002

Company Name	Contact Person
C J Walsh Consultant Architect	C J Walsh
C & F Productions	Ray Kelly
C & F Productions	David Farmer
Dept. of Environment &Local Government	Joe Twoomey
Dept. of Environment &Local Government	Michael McCarthy
Dept. of Environment &Local Government	Connor Corbett
Dun Laoghaire –Rathdown County Council	David Galbraith
Environment Heritage Service	Ken Ledgerwood
FAS	Kevin Sheridan
FFS Systems	Liam Tinney
Homebond	Eugene Farrell
Kilkenny County Council	John Ormonde
Limerick County Council	Michael Sheehan
Mayo County Council	Michael Sweeney
Mid-West Radon	Seamus Egan
Necoflex Ltd	Peter Mercier
Necoflex Ltd	Tim O'Neill
North Tipperary County Council	Dave Carroll
North Tipperary County Council	John Morrisey
Radiological Protection Institute of Ireland	Jack Madden
Radiological Protection Institute of Ireland	Dave Pollard
Radiological Protection Institute of Ireland	Hugh Synott
Radiological Protection Institute of Ireland	Olwyn Hanley
Radiological Protection Institute of Ireland	Linda Maloney
Radiological Protection Institute of Ireland	Bridget Daly
Radon Barrier Co. Ltd	Kevin Higgins
Radoncare Ltd	Jerry Cunningham
Radon Ireland	Pat Murphy
Radon Laboratory Services Ltd	Joanne Higgins
Remedia Ltd	Michael O'Gabhlain
RIAI	Minka McInerney
South Tipperary County Council	Michael O'Neill
University College Dublin	James McLaughlin
Waterford City Council	Ray Daniels
Wexford Core Drilling	Eugene Monaghan