

Press Release  
All Ireland Nuclear Free Local Authorities Forum

Embargo: Not for publication or broadcast before 00.01 hrs Monday 18th September  
2006

### **Revealed: the price Ireland would pay for a UK nuclear accident**

The possible consequences of an accident at a UK nuclear power plant are revealed today in a set of chilling maps which show how Ireland could be affected by fallout from a radioactive release from a British reactor.

The maps, which will be presented at a forthcoming seminar on the implications for Ireland of a new UK nuclear programme, show that a disaster at the ageing Wylfa nuclear reactor, just 60 miles across the Irish Sea from Dublin, could result in large parts of Central and Southern Ireland facing radiological controls in the event of a wind from the East blowing fallout towards Ireland. The fallout area could reach as far south as County Cork and people living in parts of Counties Cavan, Monaghan, Meath, Longford, Offaly, Leitrim, and Roscommon could face compulsory long-term resettlement to protect them from high radiation levels.

A wind from the South East could contaminate large parts of central Northern Ireland, and people living in Belfast, Armagh, and Omagh could face compulsory long-term resettlement.

The All Ireland Nuclear Free Local Authorities Forum has commissioned maps which apply fallout patterns from the Chernobyl disaster 20 years ago to show how Ireland could be affected if a British nuclear reactor suffered a similar explosion. The maps replot the radiation hotspots resulting from Chernobyl as if a similar radioactive release had occurred at a UK nuclear reactor. The data used in the maps is based on the radiation hotspots map for Chernobyl produced for the United States Central Intelligence Agency and interpretation of the fallout zones follows an approach accepted by the United Nations Development Programme (UNDP).

Despite assurances from the nuclear industry, officials believe that a Chernobyl type accident is possible at a UK nuclear reactor such as Wylfa. A nuclear emergency exercise conducted in 2002 by the Radiological Protection Institute of Ireland was based on the scenario of a containment failure at Wylfa causing a radiological release to spread towards Ireland.

Campaigners point out that the UK government's Nuclear Installations Inspectorate insisted that the Wylfa reactor must shut down for repair between 2000 and 2001 following the discovery that welds to the reactor pipework had cracked, coupled with concern that the graphite reactor core had become crumbly and weak after decades of exposure to radiation. The Inspectorate feared that leakage through the cracks could lead to a sudden shock which could cause the reactor core to move or partially collapse. This could in turn make it impossible to re-insert the control rods, which, as at Chernobyl, would leave the reactor core in a runaway nuclear reaction.

In August four nuclear reactors in Sweden were shut down for safety reasons following a power cut at the Forsmark nuclear reactor. During the incident the reactor control rods were automatically placed into the reactor to shut it down – but plant staff could only guess the position of the rods as the power cut had affected the flow of information to the control room.

Publication of the fallout maps has increased calls for the British government to cancel plans to develop a new generation of nuclear reactors.

Louth County Councillor Michael O’Dowd, Chair of the All Ireland Nuclear Free Local Authorities Forum, said:

“The British government does not need to build new nuclear power stations to meet its future energy needs. Radiation does not respect international boundaries, and a new nuclear programme in the UK would pose unacceptable risks to people and the environment in the Republic of Ireland.”

Dr Ian Taylor of Keep Wales Nuclear Free, who prepared the maps, said:

“Actual fallout patterns following a reactor accident would depend upon wind direction, wind strength, and rainfall. Of course, the weather pattern and pattern of radioactive fallout would not exactly mimic that following the Chernobyl incident, but it is vital that we understand the extent of the Chernobyl contamination pattern because it shows just how far-reaching and severe the effects of an accident at a UK nuclear site could be.”

Dr Gordon Thompson, an international expert in nuclear safety and security based at the Institute for Resource and Security Studies at Cambridge, Massachusetts, said:

”The Caesium-137 isotope dominated the offsite radiation exposure from the 1986 Chernobyl accident, and the same would be true for a range of possible release scenarios at a UK commercial nuclear power plant. The Chernobyl pattern of deposition has the virtue of being a real case - the only one of its kind. Thus, it can be instructive to present this case.”

For more information please contact:

Michael O’Dowd: +353 87 224 5532

Stewart Kemp: +44 7771 930196

Technical interpretation:

Dr Ian Taylor: +44 1654 781315

Dr Gordon Thompson +1 617-491-5177 (RoI / UK –5 hours)

Notes for Editors

1. The fallout maps will be presented at the seminar ‘A New UK Nuclear Programme: Implications for Ireland’ organised by the All Ireland Nuclear Free Local Authorities Forum at the D Hotel, Drogheda, Saturday 30th September 2006.

An online interactive map showing the consequences for the UK of a major accident at UK nuclear power station by applying Chernobyl fallout patterns can be found at: <http://www.no2nuclearpower.org.uk/Chernobyl-UK.php>

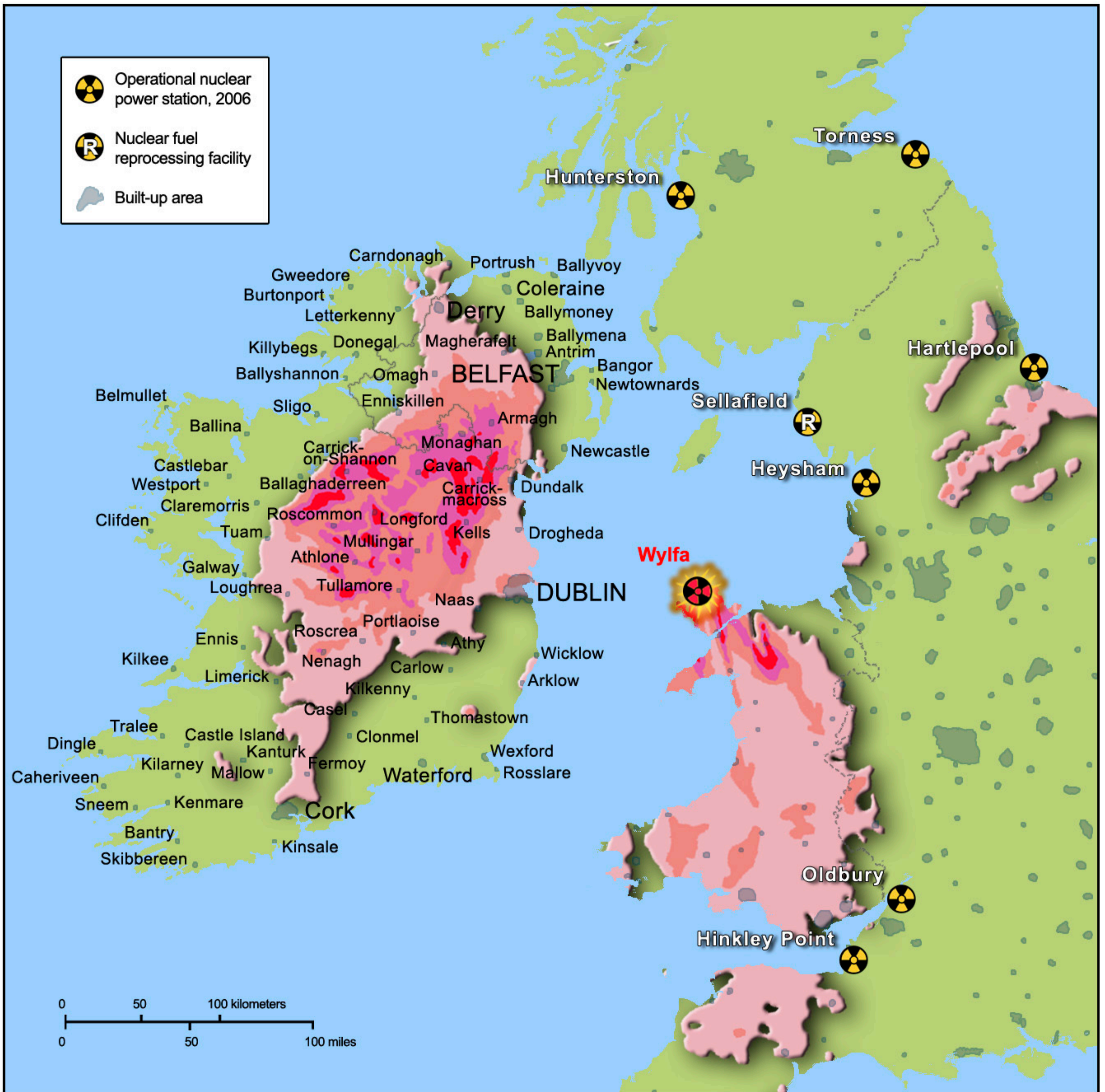
Map images should be credited to 'Keep Wales Nuclear Free' campaign and may be freely reproduced.

2. Mapping is based on the radiation hotspots map for Chernobyl produced for the United States Central Intelligence Agency Handbook of International Economic Statistics 1996. A high-definition version of the map can be viewed at: [http://www.lib.utexas.edu/maps/commonwealth/chornobyl\\_radiation96.jpg](http://www.lib.utexas.edu/maps/commonwealth/chornobyl_radiation96.jpg)
3. Interpretation of the zones on the maps follows the explanation used by the UNDP-partnered site: <http://www.chernobyl.info/index.php?userhash=12747487&navID=38&IID=2#>
4. Information about Wylfa is derived from a report for Greenpeace by nuclear engineer John Large, available at: <http://www.greenpeace.org.uk/contentlookup.cfm?ucidparam=20010314114624&CFID=712028&CFTOKEN=90306941>

The 2002 exercise conducted by the Radiological Protection Institute of Ireland assumed that containment failure at Wylfa was caused by a seismic event, but a more contemporary scenario would be likely to consider the consequences of a radioactive release caused by a terrorist attack or an aircraft crash.

5. Over 350,000 people were evacuated or resettled in Belarus, Russia and Ukraine as a result of the Chernobyl explosion. Information and statistics about the Chernobyl accident are available at: <http://www.chernobyl.info/index.php?userhash=12747487&navID=38&IID=2#>
6. The All Ireland Nuclear Free Local Authorities Forum was formed at an inaugural meeting in Dublin in September 2005 to represent the views of local councils in both the Republic of Ireland and Northern Ireland on nuclear issues. The Forum has ten member authorities, representing councils on both side of the Irish border.

# Chernobyl fallout applied to Wylfa nuclear power station, Anglesey



## Fallout zones following the 1986 accident at Chernobyl nuclear power station

Sources - Fallout map: CIA Handbook of International Economic Statistics, 1996  
 Zone descriptions: follow explanation used by UNDP partnered site, www.chemobyl.info



Greater than 40 Ci/km<sup>2</sup> **Compulsory resettlement (Belarus & Russia)**

15 to 40 Ci/km<sup>2</sup> **Compulsory resettlement (Ukraine)**

5 to 15 Ci/km<sup>2</sup> **Assisted resettlement (all areas)**

1 to 5 Ci/km<sup>2</sup> **Strict radiological control**

Ci/km<sup>2</sup> = Curies per square kilometer of Caesium 137