



Department  
of Energy &  
Climate Change

## **Call for Evidence**

# **Managing Radioactive Waste Safely: Review of the Siting Process for a Geological Disposal Facility**

## **Response form**

13 May 2013

# Call for Evidence

Please use this form to answer questions on the Call for Evidence on Managing Radioactive Waste Safely: Review of the Siting Process for a Geological Disposal Facility.

The closing date for the submission of responses is **10 June 2013**.

Responses can be returned by email (preferable) or post.

Email address: [radioactivewaste@decc.gsi.gov.uk](mailto:radioactivewaste@decc.gsi.gov.uk)

Or by post to: The Managing Radioactive Waste Safely team  
Department of Energy and Climate Change  
55 Whitehall  
London  
SW1A 2EY

In order to help us analyse responses, please provide details of your organisation.

When the call for evidence ends, we may publish or make public the evidence submitted. Also, members of the public may ask for a copy of responses under freedom of information legislation.

If you do not want your response - including your name, contact details and any other personal information – to be publicly available, please say so clearly in writing when you send your response to the call for evidence. Please note, if your computer automatically includes a confidentiality disclaimer, that will not count as a confidentiality request.

Please explain why you need to keep details confidential. We will take your reasons into account if someone asks for this information under freedom of information legislation. But, because of the law, we cannot promise that we will always be able to keep those details confidential.

The responses to this Call for Evidence will inform a public consultation that will follow in the autumn.

We would like to keep stakeholders who are interested in the MRWS process up to date on developments. If you would like to be kept up to date please sign up at the end of the form.

# Introduction

1. The UK Government's policy for the long-term management of higher-activity radioactive waste is geological disposal<sup>1</sup>. In 2008 the Managing Radioactive Waste Safely (MRWS) White Paper<sup>2</sup> was published which outlined a framework for implementing geological disposal based on the principles of voluntarism and partnership.
2. Three local authorities formally expressed an interest in the MRWS programme: Copeland and Allerdale Borough Councils, and Cumbria County Council. In January 2013, the three local authorities voted on whether to proceed to stage 4 of the process. The two boroughs voted in favour, but the county voted against. The Government had in 2011 given a specific undertaking that the existing site-selection process would only continue in west Cumbria if there was agreement at both borough and county level. The county's decision therefore ended the existing site selection process in west Cumbria.
3. Shepway District Council in Kent had also taken soundings from local residents, but subsequently decided against making a formal expression of interest in the current MRWS process.
4. The Government remains firmly committed to geological disposal as the right policy for the long-term safe and secure management of higher-activity radioactive waste. The Government also continues to hold the view that the best means of selecting a site for a geological disposal facility (GDF) is an approach based on voluntarism and partnership.
5. Evidence from abroad shows that this approach can work, with similar waste disposal programmes based on these key principles making good progress in countries like Canada, Finland, France and Sweden.
6. The fact that two local authorities in west Cumbria voted in favour of continuing the search for a potential site for a GDF demonstrates that communities recognise the substantial benefits that are associated with hosting such a facility – both in terms of job creation and the wider benefits associated with its development.

## Purpose of the call for evidence

7. In line with the Secretary of State's written Ministerial statement of 31 January 2013<sup>3</sup>, Government has been considering what lessons can be learned from the experiences of the MRWS programme in west Cumbria and elsewhere. We are now inviting views on the

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<sup>1</sup> Radioactive waste disposal is a devolved matter. The Scottish Government has a separate policy and supports long-term interim storage and an on-going programme of research and development. The Welsh Government has reserved its position on geological disposal of radioactive waste while continuing to play an active part in the MRWS process. The Department of the Environment in Northern Ireland supports the MRWS programme.

<sup>2</sup> Managing Radioactive Waste Safely: A Framework for Implementing Geological Disposal  
<https://www.gov.uk/government/publications/managing-radioactive-waste-safely-a-framework-for-implementing-geological-disposal>

<sup>3</sup> See <https://www.gov.uk/government/speeches/written-ministerial-statement-by-edward-davey-on-the-management-of-radioactive-waste>

site selection aspects of the ongoing MRWS programme in this call for evidence, particularly from those who have been engaged in (or have been interested observers of) the MRWS process to date. The responses to this call for evidence will inform a consultation that will follow later in the year.

## Background

8. Higher-activity radioactive wastes are produced as a result of the generation of electricity in nuclear power stations, from the associated production and processing of the nuclear fuel, from the use of radioactive materials in industry, medicine and research, and from military nuclear programmes.
9. As one of the pioneers of nuclear technology, the UK has accumulated a substantial legacy of higher activity radioactive materials. Some of it has already been processed and placed in safe and secure interim storage on nuclear sites. However, most will only become waste over the next century or so as existing facilities reach the end of their lifetime and are decommissioned and cleaned up safely and securely.
10. These higher-activity wastes can remain radioactive, and thus potentially harmful, for hundreds of thousands of years. Modern, safe and secure interim storage can contain all this material – but this method of storage requires on-going human intervention to monitor the material and to ensure that it does not pose any risk to human or environmental health. While the Government believes that safe and secure interim storage is an effective method of managing waste in the short to medium term, the Government is committed to delivering a permanent disposal solution.
11. In October 2006, following recommendations made by the independent Committee on Radioactive Waste Management, the Government announced its policy of geological disposal, preceded by safe and secure interim storage. The Government subsequently announced that it would pursue a policy of geological disposal with site selection on voluntarism and partnership. This remains Government policy.

## Geological disposal

12. Geological disposal involves isolating radioactive waste in an engineered facility deep inside a suitable rock formation to ensure that no harmful quantities of radioactivity ever reach the surface environment. It is a multi-barrier approach, based on placing packaged wastes in engineered tunnels at a depth of between 200 and 1000m underground, protected from disruption by man-made or natural events.
13. Geological disposal is internationally recognised as the preferred approach for the long-term management of higher-activity radioactive waste. It provides a long-term, safe solution to radioactive waste management that does not depend on on-going human intervention.

# Response form

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Department of Energy and Climate Change  
Room M07  
55 Whitehall  
London  
SW1A 2EY

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|--------------------------------------|--|
| Name                                 | REDACTEDREDACTED   |
| Organisation / Company               | Westlakes Nuclear Limited  |
| Organisation Size (no. of employees) | REDACTED   |
| Organisation Type                    | REDACTEDREDACTEDREDACTED   |
| Job Title                            | REDACTED   |
| Department                           |  |
| Address                              | REDACTEDREDACTEDREDACTEDREDACTEDREDACTEDREDACTEDREDACTEDREDACTEDREDACTEDREDACTED |
| Email                                | REDACTEDREDACTED   |
| Telephone                            | REDACTEDREDACTED   |
| Fax                                  | N/A  |

|   |        |
|---|--------|
| Would you like to be kept informed of developments with the MRWS programme?       | Yes/No |
| Would you like your response to be kept confidential? If yes please give a reason | Yes/No |

The Government is interested in your views on the geological disposal facility site selection process outlined in the 2008 Managing Radioactive Waste Safely (MRWS) White Paper. To assist us you may wish to consider the following issues in your response:

- What aspects of the site selection process in the MRWS White Paper do you think could be improved and how?
- What do you think could be done to attract communities into the MRWS site selection process?
- What information do you think would help communities engage with the MRWS site selection process?

### **Site selection process**

Volunteerism and partnership concepts should not be abandoned just yet! As noted below, this approach would have worked ethically and successfully for Stage 4 in West Cumbria apart from the existence of two-tiers of local government.

Widening the invitation and search area. Going beyond White Paper para 6.16, maybe the door should be more explicitly opened to industrial volunteers, particularly concerns that have access to large salt deposits that are generally regarded as particularly favourable for disposal (eg WIPP in USA). This is a rather specific point, but it is worth re-examining the possibility of deep sub-seabed sites, particularly those that can offer salt formations. The OSPAR commission permits sub-seabed CO2 disposal subject to conditions (2007), so maybe radioactive waste can be looked at again. Coastlines aren't fixed over geological time! Offshore areas are likely to include essentially static and very slowly moving / diffusing groundwater conditions favourable to geological disposal. The protection of safety and the environment is the driver, and if an offshore location can achieve a disposal safety case justification, surely this should be on the agenda.

### **Attracting communities into the site selection process**

These suggestions are mainly about clarifying the 'rules of engagement'.

1. Design and publish a new and simple definition of 'communities'. The West Cumbria case of the actual community affected as represented by the Borough Councils being over-ridden by the County shouldn't be repeated. MRWS White Paper Box 6 is relevant – having two layers of decision-making body was foreseen (para 6.19), but proved unworkable. This issue is tied up with 'who is the planning authority for waste developments' – such frameworks are essentially aligned to landfills, so something new should be identified for a one-off national radwaste facility.
2. Contrary to the spirit of para 6.2, MRWS White Paper Table 2 (and Section 6 in general) now looks too ponderous and formulaic. It's logical enough, and it's good to indicate some sort of direction of travel, but with the benefit of hindsight communities might want more freedom to work out themselves just how things may unfold. There are conflicting pressures, because there is also a need for Government to be more forthcoming in some areas (see next point).
3. Experience shows that the right of withdrawal process needs strengthening, The policy

and ministerial commitment should be enough in theory, but Councils are suspicious about political and other changes undermining commitments, and want to get as much as they can legally nailed down.

4. The above sentiment applies to the benefit package as well. Councils want something enshrined early on that will withstand future national political and economic changes. Otherwise how can councillors defend to their electors a decision to proceed?
5. These observations point to the need to re-consider bespoke legislation (White paper para 5.6)
6. Summarising the above, the MWS white paper is too prescriptive in places, but still manages to leave potential communities wondering what they might be getting into.
7. With regard to Section 7, Figure 1 suffers from the same formulaic issue as Section 6. The 'unsuitability test' may be an idea whose time has gone. It would be better to do a rounded geological appraisal to determine initial views about positive as well as negative potential. This would make more sense to stakeholders. In any event, it would be good to insert some form of external review and validation to build confidence through all technical steps. As noted later in this response, regulatory oversight is not enough for some stakeholders. CoRWM is essentially aligned to process, and is not constituted to provide fully detailed technical oversight. A partly international expert team might be advisable, clearly separated from Government. IAEA?
8. Any proposal for a subsurface retrievable *storage* facility for ILW would be likely to be seen as a 'Trojan Horse' for permanent disposal of all higher activity waste including used fuel. If this is acknowledged up front, and steps are taken to insert strong hold points and transparent decision making, then this could offer an attractive way forward. Building an underground ILW store would be a useful achievement in its own right. The science of the site would become much better understood, and the response of the ground and groundwater to the excavation would help the performance assessment.
9. The 'storage' approach might assist in letting the local waste *disposal* authority off the decision making hook, but as note earlier, it would be better to sort out a more focused approach to decision making bodies altogether.
10. The successful implementation of underground storage would provide reassurance about the next step to disposal status if this can be justified. On the other hand, if the safety justification cannot be made, the store would just be another interim facility.
11. There is a regulatory issue that needs to be ironed out with regard to the vires of EA and ONR. The waste store would be a nuclear licensed site, with all the process, procedures and reassurance that this status provides. It would also be a disposal site in waiting. A clear exposition of regulatory roles, responsibilities and expectations would help reassure communities.
12. The 'storage or disposal' issue has been kicked around for at least 20 years, and CoRWM expended a lot of effort on retrievability / reversibility. The first stage of a facility could easily be deemed warehouse-type storage (particularly in a hard rock environment). People may think the concept of underground caverns is novel and uncertain, but there's plenty of evidence about sound and safety-sensitive deep underground operational facilities. Consider the controlled environment of the machine hall of the Dinorwig Pumped Storage Scheme in Wales, for example, built around 35 years ago.
13. The re-introduction of *storage* should be discussed with the present CoRWM because in 2006 the original CoRWM explicitly opted for *disposal* ('no intention to retrieve').

14. The reliance on regulators to only authorise appropriate developments has been undermined in the minds of some stakeholders by the perceived failure of financial regulators in the case of banking. Cynicism about regulators is therefore a problem, and Government may have to implement an additional ('enshrined') oversight / authorisation mechanism to reassure communities. See earlier.
15. Clearly no radioactive waste could be put underground (even for storage) until the appropriate regulatory authorisation has been obtained.

### **Information to help communities engage**

See comments above about making greater use of enshrined or confirmed positions. Communities don't want to 'buy a pig in a poke'. Government needs to come off the fence about these issues early on to overcome potential disquiet and distrust. In other words, switch to more open 'selling' tactics that communities can identify and respect as such. Draft sales messages could be aired in the consultation document.

Later on, for each potential community there should be a full exposition early on of what the disposal (or initial storage) scheme might entail. Numbers of construction workers, amount of traffic, noise and visual impact, possible development schedule. A full SEA or EIA is fine, but big reports aren't great for general communication. Early in the community engagement process people need to have an understanding of roughly what the scheme might look and feel like. Generic information on various possible scenarios would be useful in the consultation document.

This is an initial response to suit time available. A follow-on might be provided later on, particularly if discussions in the media or with acquaintances trigger more ideas.



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Department of Energy & Climate Change  
3 Whitehall Place  
London SW1A 2AW  
[www.gov.uk/decc](http://www.gov.uk/decc)

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