



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.



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?

After considering the issues listed by DECC, we have structured our response according to the following topics:

- The overall MRWS strategy as defined in the White Paper
- Implementation of MRWS in practice
- Ideas for improving MRWS

### **Overall MRWS Strategy**

When the MRWS Site Selection process was launched a number of important details had not been clearly defined. This lack of detail introduced uncertainty, and in some cases confusion, into the process because certain aspects had to be clarified as the process evolved.

Most importantly, the White Paper does not provide a clear definition of what constitutes a community, which led to the debate about whether both district and county had to be in favour. It does not tackle issues such as the case in which the footprint of a GDF is within one community but the expected location for discharge of any radionuclides that migrate from the facility is within an adjacent community, or in which site investigations must be carried out in a neighbouring community. How would transport through adjacent communities be handled if they were not in favour of a GDF?

The White paper does not set out a clear strategy for how communities would be provided with information so that they can make informed decisions about entering the first stage of the process. As a result, there tended only to be interest from communities already familiar with the nuclear industry. The initial call for volunteers did not appear to be backed up by comprehensive information about what volunteering would mean for a particular community.

The White Paper contains inadequate detail concerning the benefits package available to the volunteer community and how it would be agreed.

The White Paper contains inadequate detail on the right of withdrawal. Ideally the White Paper should have included a timetable for putting the necessary legislation on the statute book for this aspect of the process to be considered truly credible.

### **Implementation of MRWS**

In our view one of the major failings of the MRWS process as actually implemented was the lack of a 'GDF champion', especially during the latter stages of the process (post October

2012). As a result, a number of assertions made by opponents of the scheme went unchallenged when technical or other inaccuracies should have been corrected.

The role of RWMD was to provide information when requested by DECC or the Partnership but not to be proactive in promoting a GDF. The official point of contact was DECC but DECC lacked suitably qualified and experienced staff and so had to rely on RWMD to provide technical information. RWMD may not have been the appropriate organisation to provide technical information for a number of reasons.

- RWMD is a direct descendent of Nirex so, regardless of the reality, many people would find it hard to separate the current process from the process followed during the 1990s and Nirex's reputation.
- While the RWMD programme is 'generic', RWMD also has the job of providing advice concerning disposability (the 'LoC process') for which reference assumptions are required. These reference cases are built around an example site with similar characteristics to the Sellafield system studied by Nirex. Although published RWMD reports cover implementation in a range of geological environments, the 'body language' of the most prominent of the reports, for example 'Steps Towards Implementation' and the generic DSSC, gave the impression that RWMD were not truly committed to considering all geological environments equally.
- As the implementing organisation, RWMD had a vested interest in the process proceeding as fast as reasonably possible, so it is hard to see how they could be seen as providing independent advice.

It might have been beneficial for DECC to have been able to provide technical information that could be seen as unbiased through experts not associated with RWMD.

Despite the efforts of the West Cumbria MRWS Partnership, there was surprisingly little dissemination of information about the project within Cumbria. We came across individuals and organisations we would have expected to be well informed about the project but who had very little knowledge and had not received information.

Potential community benefits associated with hosting a GDF were not 'sold' to West Cumbria. There was scepticism and mistrust about what was being offered. Real programmes with real timetables were required.

### **Ideas for Future Improvements**

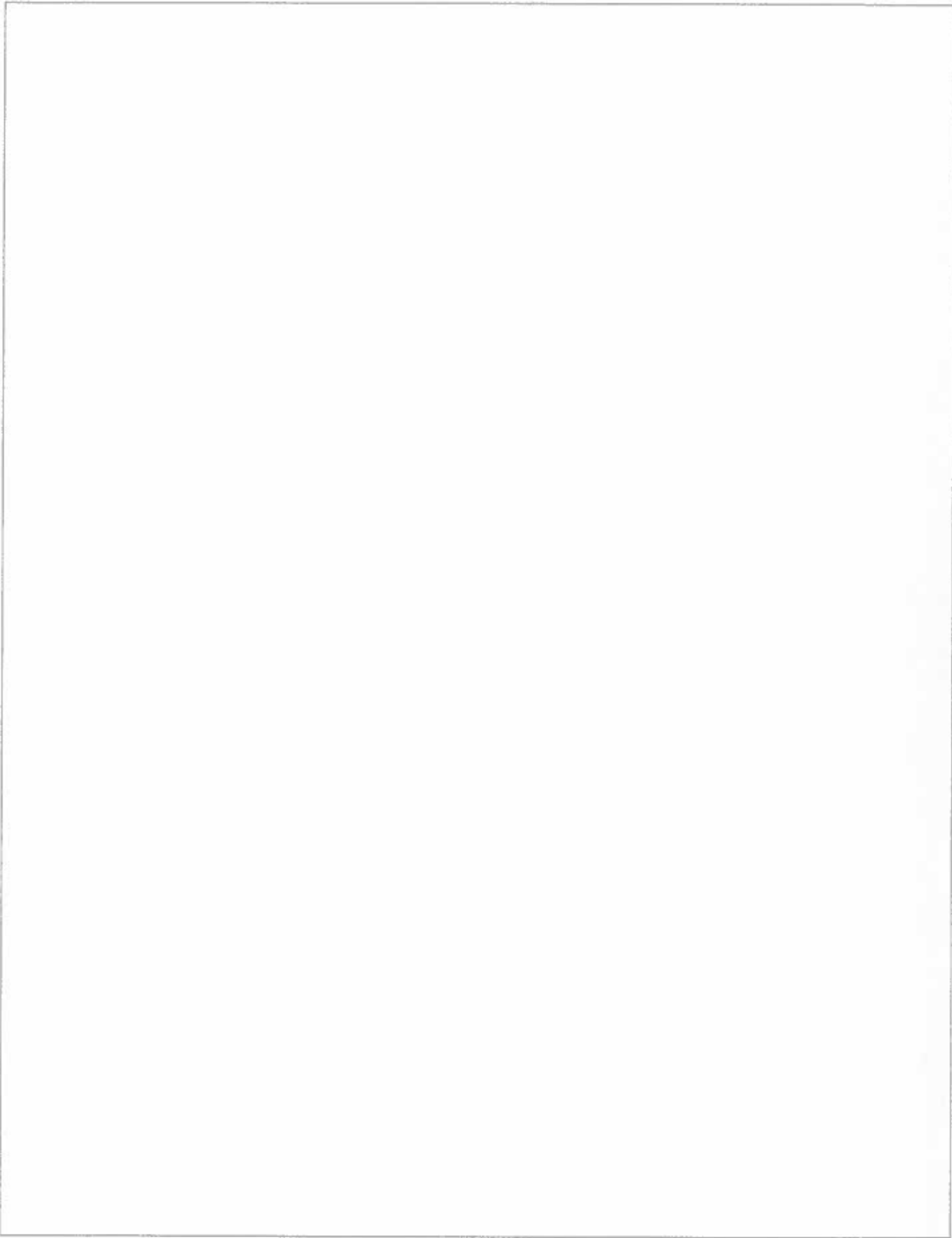
We have the following recommendations to improve the MRWS programme in the future:

- A country-wide desk study that identifies those areas that might be suitable to host a GDF is required. DECC then needs to approach potentially suitable areas and positively sell the benefits of hosting a GDF to them. This would include providing reasonably comprehensive descriptions and illustrations of what a facility developed in each potentially suitable area would look like. Most of the basic information required to carry out such a study already exists in work previously carried out for Nirex/RWMD or the Environment Agency (EA). Unless they are pro-actively approached, potentially suitable areas are unlikely to volunteer unless they are already familiar with the nuclear industry and perhaps looking to replace nuclear industry jobs that are being lost. Communities would still have to volunteer, but the supply of relevant information would be targeted on those who might be suitable. In addition, there is no point in wasting resources targeting areas of the county that would definitely be ruled out in the Stage 2 geological screening.
- DECC needs to carry out work that sets out the potential disbenefits of hosting a GDF

in context and then publicise the results. For example, the implications of a GDF need to be set in context (e.g. expected dose from a GDF if releases were at the maximum permitted compared with the dose received during a transatlantic flight) and the consequences (costs, ongoing doses to workers and potential for releases of radioactivity) of 'doing nothing' need to be quantified and publicised in order to dispel the urban myths that surround a GDF. The approach to independently endorsing the work and publicising it widely needs to be developed and implemented, to ensure that a GDF is not viewed as a form of blight.

- An independent body is needed to oversee the provision of technical information to volunteer communities. This should be a technically competent body that can demonstrate a degree of independence from RWMD (it may be difficult for it to be completely independent owing to the small number of suitably qualified individuals available in the UK). It could take the form of a body like CoRWM 1. Possibly the EA or a respected international body such as the IAEA could be asked to oversee the information provided to ensure it is factual and unbiased.
- More imaginative solutions are required. In particular, finding a site that is suitable to take all higher activity wastes should be seen as a bonus not a pre-requisite. Sites that are suitable for part of the baseline inventory should be sought. The option of disposal offshore accessed from onshore should be properly explored – is West Cumbria excluded from that option?
- The benefits package needs to be properly thought out and 'sold' as benefits of hosting a GDF rather than compensation for hosting one.





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