

REDACTEDREDACTEDREDACTEDREDACTED

Please use this form to respond to this 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

Or by post to: The Managing Radioactive Waste Safely team

Department of Energy and Climate Change

Room M07

55 Whitehall

London

SW1A 2EY

Name	REDACTED
Organisation / Company	REDACTED REDACTED
Organisation Size (no. of employees)	REDACTED
Organisation Type	REDACTED REDACTED
Job Title	n/a
Department	n/a
Address	REDACTED REDACTED REDACTED REDACTED REDACTED
Email	REDACTED REDACTED
Telephone	REDACTED
Fax	n/a

Would you like to be kept informed of developments with the MRWS programme?	Yes
Would you like your response to be kept confidential? If yes please give a reason	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?

1. Improvements to the Site Selection Process

1.1 Faster Assessment of Potential Geological Suitability

I think that one of the difficulties encountered in West Cumbria was that there were serious doubts about the geological suitability of the area and it was evident that these would not be resolved until relatively late in the site selection process. The prospect of uncertainty continuing for many years made hosting a geological disposal facility (GDF) unattractive to some members of local authorities (LAs), who compared it with other nuclear and non-nuclear related projects that would bring inward investment to the area. This may also have been a factor in other areas where no expression of interest was made.

My suggestion is to change the MRWS site selection process so that there is a faster assessment of potential geological suitability. I would also suggest involving the British Geological Survey (BGS) in the assessment, rather than leaving it entirely to the Nuclear Decommissioning Authority's (NDA's) Radioactive Waste Management Directorate (RWMD). This is because I think BGS is seen as a more neutral party than RWMD and is trusted to a greater extent.

I envisage that BGS, under contract to Government, would carry out the sub-surface screening as in Stage 2 of the current MRWS site selection process. This would be done as soon as practicable after the submission of an Expression of Interest (EoI). Then BGS, under a new contract with Government, would assess those rock formations that had not been screened out and identify those that were most promising from the point of view of the characteristics that influence the long-term safety of a GDF. BGS would also consider the size of a GDF that the formations might accommodate and likely ease of GDF construction. RWMD would contribute to this assessment. Although the assessment would be largely desk-based (i.e. it would rely on existing information), it would be recognised in setting out the site selection process that geophysical surveys might be needed to reduce major uncertainties about the location and extents of rock formations in a particular area.

When the most promising rock formations had been identified by BGS and its findings accepted by Government, RWMD would identify potential locations for the surface facilities of a GDF. As in the present Stage 4, if there were a significant number of possible combinations of underground and surface locations, RWMD would carry out a multi-attribute assessment of these in order to identify a smaller number for further study. The multi-attribute assessment would involve local communities and other stakeholders. Its results would be submitted to Government for the decision on the sites to be taken forward to Stage 5. As in the current site selection process, Stage 5 would involve

geophysical surveys and the drilling of investigative boreholes to assess the suitability of the underground locations.

1.2 Decisions about Participation

I do not think it is helpful to make the first Decision to Participate (DtP) a stage in the site selection process, nor to make continued participation the default position that can only be changed by exercising the Right of Withdrawal (RoW). The impression given is that the DtP is a “cliff edge” and that communities will have few opportunities to consider the advantages and disadvantages of continuing to participate after the DtP. I believe it would be better to allow for communities to make a series of Decisions about continued Participation (DaPs), one after each stage in the site selection process. This would empower communities and put the emphasis on the positive reasons for carrying on, rather than the negative reasons for withdrawing. It would be more consistent with the partnership approach.

1.3 Underground Investigations

Stage 6 of the current site selection process is “underground operations”. I do not think that this stage was well thought through when the 2008 White Paper was written. Despite advances in surface-based investigative techniques, it is likely that significant uncertainties will remain about underground conditions at candidate sites at the end of Stage 5. To take the final decision to construct a GDF at a particular site before these uncertainties had been resolved would constitute poor management of the risks of the geological disposal project.

I think that Stage 6 should be “underground investigations”, not “underground operations”. The decision at the end of Stage 5 would then be about which site (or sites if more than one is likely to be needed) should be the subject of underground investigations, not at which site the GDF(s) will be constructed. The final decision on GDF construction would be taken after underground investigations have been carried out and the results evaluated. For the reasons given by CoRWM (in its document 2543), the underground investigations should include R&D, as well as characterisation of the host rock and overlying formations.

Such an approach would allow Government to take the final decision on GDF construction on the basis of more extensive and more accurate information than in the current site selection process, including a better indication of likely acceptability to regulators and improved estimates of the costs of GDF construction and operation. It would be more consistent with the way that commercial organisations take decisions (e.g. decisions to construct new nuclear power stations).

I would also suggest that the final community DaP be at the end of Stage 6, that is that the ability to exercise the RoW continue throughout the underground investigations. This would provide communities with reassurance that they will not be “steam rolled”.

1.4 Stages in the Site Selection Process

For clarity, I set out the stages that I envisage in an improved site selection process, with an indication of the points when there would community decisions about participation.

Stage 0: Government issues invitation to express an interest

Stage 1: community submits an EoI

Stage 2: BGS carries out sub-surface unsuitability test

Community DaP

Stage 3: BGS-led assessment of geological suitability
Community DaP
Government decision on rock formations to be considered in Stage 4
Stage 4: RWMD-led assessment of potential candidate sites (combinations of locations for underground and surface facilities)
Community DaP
Government decision on sites to take forward to Stage 5
Stage 5: RWMD-led surface-based investigations for candidate sites
Community DaP
Government decision on site(s) to take forward to Stage 6
Stage 6: RWMD-led underground investigations at candidate site(s)
Community DaP
Government decision on construction of GDF(s).

2. Attracting Communities

2.1 Benefits of Hosting a Geological Disposal Facility

The benefits of hosting a GDF are of two types: the employment, infrastructure improvements and other social and economic benefits generated by GDF construction and operation (which I will call “direct GDF benefits”), and the Community Benefits Package (CBP) to be provided by Government. I think there is a need for greater clarity about both of these types of benefit in the early stages of the site selection process, preferably in ways specific to the areas being investigated. It is essential that hosting a GDF be seen by LAs and others as at least as attractive as other ways of securing inward investment to an area.

I suggest that during communities’ consideration of whether to submit an EoI they be provided with information about the potential direct GDF benefits to their area. This would include information about which roads and other transport infrastructure would need to be improved, as well as information about employment, contributions to the local economy etc. It would include benefits during site investigation, as well as those during GDF construction and operation. The intention would be to present a GDF as a prestigious project, which is worth hosting (as in the current Canadian site selection process). Emphasising the associated R&D activities for a GDF, including those underground (see Section 1.3), would help in this respect. The information about direct benefits to the area would then be refined as the site selection process moved through its various stages and considered at each DaP.

LAs are well aware that there has been more experience with CBPs since the 2008 White Paper was written. The Hinkley Point C experience will inevitably be cited. While the exact scope of any CBP must be a matter for negotiation, communities will expect some indication of the potential size and nature of a CBP early in the GDF site selection process.

2.2 Other Means of Attracting Communities

Previous attempts to attract communities have been overshadowed by the MRWS process in West Cumbria. It would probably be sensible to try some of the means again, particularly talking to LAs at nuclear sites where decommissioning is proceeding most rapidly. I also think that the improvements to the site selection process that I suggest in Section 1 would help to reassure communities who have previously shied away from considering an EoI.

Information for Communities

3.1 General and Area Specific Information

To date, much of the information produced by Government and by RWMD that is relevant to the MRWS site selection process has been general. As such, it does not directly answer questions of the type “what would a GDF mean for us?”. To enable people to engage with the MRWS process they need information that is directly relevant to them. In West Cumbria such information tended to be produced by or at the request of the West Cumbria MRWS Partnership (WCMRWSP). I believe that Government should have been more proactive in requiring RWMD to produce area-specific information on the potential impacts (see Section 3.2) and benefits (see Section 2.1) of a GDF.

3.2 Earlier Information on GDF Safety and Environmental Impact

RWMD's emphasis to date has been on producing the type of detailed safety information that will be required by regulators and on preparing for site specific environmental impact assessments (EIAs). This approach neglects the needs of communities in the early stages of the MRWS site selection process. I suggest that RWMD should begin to prepare area-specific GDF safety assessments and EIAs in Stage 3 (see Section 1.4) or earlier. These should be described in concise, accessible documents in which all the simplifications, approximations and assumptions are transparent. They could draw on existing generic information but might entail additional analyses and calculations.

3.3 Inventory of Wastes for Geological Disposal

I think that the use of reference and upper inventories of wastes for geological disposal has been confusing for everyone. The idea should be dropped. Instead it should be made clear that the inventory of wastes that may require geological disposal depends on decisions yet to be taken (e.g. on new build and advanced nuclear fuel cycles) and that the inventory of wastes that could safely be placed in any particular GDF depends on the characteristics of the host rock formation. Communities should be given information about the range of possible inventories and it should be made clear to them when and how they would be consulted about inventory decisions for a GDF in their area. The provision of inventory information to communities should be seen as an exercise that is separate from RWMD's technical work, but related to it and to the UK Radioactive Waste Inventory.

3.4 Use of Websites

I notice that, with the transition to GOV.UK, the old MRWS website has been replaced by something more basic with a few links to other information (some of which are either out of date or too general or both). The parts of the NDA website that deal with geological disposal are cluttered and do not present a clear picture of what RWMD is doing. While WCMRWSP existed, its website was a good source of information about what was happening in the MRWS process in West Cumbria. However, it became rather detailed and did not provide an overview of MRWS as a whole. Other websites (e.g. the Environment Agency's, CoRWM's) focus on the work of particular organisations.

In the short term it would seem essential to ensure the relevant GOV.UK page¹ is correct and up to date. It would also be desirable for NDA to rethink how it presents information about geological disposal on its website. In the longer term, as the MRWS site selection process moves forward, there will be a need for all the organisations involved (including LAs) to develop co-ordinated website strategies.

¹ <https://www.gov.uk/managing-radioactive-waste-safely-a-guide-for-communities>

4. Other Issues

4.1 Accountability and Responsibility for Making Decisions

I think it would be helpful to communities, and others, for Government to set out clearly the lines of accountability in the MRWS site selection process, where the responsibilities for taking decisions lie, and the roles of advisory groups and discussion fora. There is a particular need to explain how RWMD is accountable to Government, both directly and through the NDA executive and board, now and when it becomes a wholly-owned subsidiary of NDA. I also think it is important that communities understand which decisions will be taken by Government (hence my inclusion of such decisions in the list of stages in Section 1.4). Government might also consider what purpose the Geological Disposal Implementation Board serves, and whether the Geological Disposal Steering Group is sufficiently open and accountable.

4.2 Financing Geological Disposal

There is some information in the public domain about the costs of geological disposal of both legacy and new build wastes but there is little detail of the costs to particular organisations such as Government, NDA's Site Licence Companies (SLCs), EDF (for wastes from existing nuclear power stations) and the Ministry of Defence (MOD). This may be one of the reasons why there has been so little publicly available work on ways of meeting these costs.

I think it is important to take a holistic view of UK geological disposal costs, in which all of the components are considered explicitly (including the costs of a CBP (or CBPs)). It should be made transparent how money spent by one part of Government (e.g. DECC) could save money for others (e.g. MOD) and for electricity consumers (via EDF and new build operator costs).

I also believe that there is an urgent need to consider innovative ways of financing geological disposal as a whole. The aim should be to ensure that "UK plc" only spends as much as is absolutely essential to get the geological disposal job done and to avoid adding to Government debt. This requires new thinking, not a continuation of the emphasis on NDA's costs and on new build operators' contribution to a GDF.