



Department  
of Energy &  
Climate Change

# **Managing Radioactive Waste Safely: Implementing Geological Disposal Annual Report April 2012 – March 2013**

July 2013

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# Introduction and background

## Introduction

1. In its November 2010 response<sup>1</sup> to the House of Lords Science and Technology Select Committee's report *Radioactive Waste Management: a Further Update*<sup>2</sup> (March 2010), the Government committed to producing an annual report to Parliament. The purpose of the annual report is to set out the Government's progress towards meeting its stated aims in relation to the management of higher activity radioactive waste. This is the third annual report.

## Background

2. In June 2008, the UK Government published a White Paper, *Managing Radioactive Waste Safely: A Framework for Implementing Geological Disposal*<sup>3</sup>. This set out a staged approach to implementing the geological disposal of higher activity radioactive waste. Geological disposal involves isolating radioactive waste within engineered, multi-barrier facilities, typically between 200m and 1,000m deep, inside a suitable rock formation to ensure no harmful quantities of radioactivity ever reach the surface environment.
3. The White Paper invited communities to express an interest in opening up without commitment discussions with Government on the possibility of hosting a geological disposal facility (GDF) at some point in the future. An 'Expression of Interest' from the local council marked the beginning of a staged siting process of site selection and assessment. The six stages described in the White Paper are:
  - **Stage 1** 'Expression of Interest' - an open invitation for communities who wish to register interest in discussions about participation in the siting process, without commitment to host a facility;
  - **Stage 2** a high level geological screening that ensures that obviously unsuitable areas are discounted at an early stage;
  - **Stage 3** community consideration leading to a Decision to Participate;
  - **Stage 4** follows a positive Decision to Participate and involves the identification and assessment of potential candidate sites for geological disposal;
  - **Stage 5** comprises more in depth surface investigations on remaining potential sites;

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<sup>1</sup> <http://www.parliament.uk/documents/lords-committees/science-technology/ScienceGovandPolicy/RespRWM.pdf>

<sup>2</sup> <http://www.publications.parliament.uk/pa/ld200910/ldselect/ldsctech/95/95.pdf>

<sup>3</sup> <http://www.official-documents.gov.uk/document/cm73/7386/7386.pdf>

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- **Stage 6** involves underground operations including construction of the GDF.
4. The key principle underpinning the Managing Radioactive Waste Safely (MRWS) process is, and will always be, safety. A GDF can be built in a range of geological environments which exist across the UK, and no facility will be built and operated if the demanding safety case requirements of the independent statutory regulators are not met.
  5. The independent regulators – the Office for Nuclear Regulation (ONR) and the Environment Agency (in England) and Natural Resources Wales (in Wales)<sup>4</sup> will ensure robust, independent regulation in relation to statutory responsibilities for ensuring that national, EU and international safety, security and environmental legislation and standards are met.

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<sup>4</sup> Radioactive waste disposal is a devolved matter. At this stage the Welsh Government has reserved its position on the policy of geological disposal.

# 2012-13 Update

## MRWS siting process in action: West Cumbria

6. Three local authorities in west Cumbria (Allerdale Borough Council, Copeland Borough Council, and Cumbria County Council) had progressed through the staged siting process described in the White Paper, reaching Stage 3 – the point at which a formal ‘Decision to Participate’ is required to progress into Stage 4 – the desk-based identification and assessment of potential candidate sites for a GDF.
7. A West Cumbria MRWS Partnership had been set up by the three councils, to ensure that a wide range of community interests were involved in discussions. In August 2012, they published *The Final Report of the West Cumbria Managing Radioactive Waste Safely Partnership*<sup>5</sup>. This report describes the three rounds of public and stakeholder engagement that the Partnership conducted, and summarises their consideration of issues related to participation in the siting process. This was presented to the councils in order to inform their deliberations on whether to participate in Stage 4 of the siting process.
8. On 30 January 2013, the councils in west Cumbria took their individual decisions on whether to participate in Stage 4. This was not a decision on whether to host the facility, but on whether to carry out further work to identify and assess potentially suitable sites in west Cumbria. Allerdale Borough Council’s Executive and Copeland Borough Council’s Executive voted in favour of further participation in the process. Cumbria County Council’s Cabinet voted against. An earlier agreement had been reached by DECC and councils in west Cumbria about how the MRWS siting process would operate in west Cumbria, requiring ‘three green lights’ of agreement at the Borough, County, and Central Government level for the process to proceed. Therefore, Cumbria County Council’s decision brought the current MRWS site selection process in west Cumbria to a close.

## MRWS siting process in action: Shepway, Kent

9. In May 2012, Shepway District Council conducted local ‘soundings’ on whether they should submit an Expression of Interest to Government, to open up without commitment discussions about the possibility of hosting a GDF in the Romney Marsh area at some point in the future. Activities included:
  - a media launch with articles appearing in a number of local newspapers;
  - a dedicated website;
  - letters enclosing a leaflet and a reply form sent to over 10,000 residents; to over 600 local businesses; and to all parish and town councils in the district;
  - presentations to organisations and groups that requested them;
  - a series of seven all-day public exhibitions was held so that the public and interested parties had the opportunity to speak directly to members of the Shepway project team and officials from DECC and the Nuclear Decommissioning Authority about the proposal.

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<sup>5</sup> <http://www.westcumbriamrws.org.uk/images/final-report.pdf>

10. These local soundings concluded in July 2012. Of those who expressed a view, 63% did not want Shepway District Council to submit an Expression of Interest to find out more about hosting a GDF. 33% were in favour of finding out more. At a meeting on 19 September 2012, the council discussed whether it should submit an Expression of Interest to Government in participating in the siting process for a GDF. In the ensuing vote, Members voted against submitting an Expression of Interest.

## Government response to votes in Cumbria

11. Responding to the outcome of the votes in west Cumbria, the Secretary of State for Energy and Climate Change published a [Written Ministerial Statement](#) on 31 January 2013 that made clear that the UK Government remains committed to geological disposal as the right policy for the safe and secure management of higher activity radioactive waste, and continues to hold the view that the best way to find a site for a GDF is an approach based on voluntarism and partnership-working with interested communities.
12. The Secretary of State for Energy and Climate Change also announced that the UK Government would reflect on the experience of the process in west Cumbria, although the invitation for communities to come forward and express an interest in the current MRWS site selection process remains open. He made it clear that no potential changes to the current approach on site selection (as set out in the 2008 MRWS White Paper) would be introduced without further public consultation.

## Review of the MRWS siting process

13. The period of reflection announced by the Secretary of State in January 2013 provided an opportunity for UK Government to look back over the operation of the MRWS siting process since 2008, speaking to those involved, to see what lessons could be learned. The focus was on what worked well and what did not work, with a view to identifying any particular aspects of the siting process where improvements could be made.
14. This process has been enhanced by a public 'Call for Evidence', the purpose of which is to inform a public consultation later in the year (see 'Next Steps').

## Committee on Radioactive Waste Management (CoRWM)

15. CoRWM continues to play a key role in the delivery of the MRWS programme by providing independent scrutiny and advice on the Government and NDA's proposals and plans, including the current review of the MRWS site selection process.
16. This year the Government welcomed a new Chair and new members to CoRWM. After 5 years of service, Professor Robert Pickard's term of appointment as Chair of the committee came to an end in 2012. Following an open recruitment process, in accordance with the requirements of the Office of the Commissioner of Public Appointments (OCPA), Laurence Williams, Professor of Nuclear Safety at the University of Central Lancashire, and former HM Chief Inspector of Nuclear Installations, formally took up the post of Chair on 1 November 2012.

17. The terms of appointment of eight Committee members also expired on 31 October 2012. Government conducted a further OCPA-compliant process to appoint new members. This process took account of a review of CoRWM members' skills-set, to ensure that the Committee continues to be able to offer robust and authoritative advice. The process concluded with the appointment of six Committee members from 26 November 2012.
18. Further information on CoRWM is available on its website at <http://corwm.decc.gov.uk>.

## International developments

19. Geological disposal is the preferred approach internationally for safely and securely managing higher activity radioactive waste in the long-term. There are a number of geological disposal programmes in other countries, which are at various stages of development. Key recent developments in some of these programmes are set out below:
  - **Canada** - The process to identify a willing host for a GDF was launched in 2010 and 21 communities expressed interest in learning more about the process.<sup>6</sup> NWMO closed the invitation for communities to express interest in the process in September 2012, and 17 communities have now moved into Stage 3 of the site selection process, which involves a preliminary assessment of potential suitability for hosting a repository;
  - **Finland** - Posiva submitted its application for a construction licence for a final repository for nuclear spent fuel in December 2012.<sup>7</sup> The repository is due to be constructed in Olkiluoto, Eurajoki. Waste emplacement, provided a licence is granted by the regulator, is expected to start in 2020;
  - **France** - A public debate on Andra's Cigéo project for the management of higher activity waste was launched in June 2013.<sup>8</sup> Public comments will be considered ahead of Andra's application for a licence to build and operate Cigéo which could be submitted to the French Nuclear Safety Authority in 2014<sup>9</sup>;
  - **Germany** - A draft bill was introduced for debate in the German parliament on 17 May 2013 to establish a 24-member commission to find a geological disposal facility for waste from Germany's nuclear power stations<sup>10</sup>. The commission would be expected to formulate search criteria by 2015, and to have found a location for a facility by 2031. The introduction of the draft bill follows a procedural compromise in April between government and opposition parties in both the German parliament and the upper Bundesrat, in which the sixteen German states are represented;
  - **Sweden** – An international review team appointed by the OECD Nuclear Energy Agency and commissioned by the Swedish government has reviewed the application from SKB (the Swedish Nuclear Fuel and Waste Management Company) to build a final repository

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<sup>6</sup> [http://www.nwmo.ca/uploads\\_managed/MediaFiles/2089\\_ar2012\\_english\\_web.pdf](http://www.nwmo.ca/uploads_managed/MediaFiles/2089_ar2012_english_web.pdf)

<sup>7</sup> [http://www.posiva.fi/en/news/other\\_topical\\_issues/posiva\\_submits\\_construction\\_licence\\_application\\_for\\_final\\_repository\\_to\\_the\\_government.html](http://www.posiva.fi/en/news/other_topical_issues/posiva_submits_construction_licence_application_for_final_repository_to_the_government.html)

<sup>8</sup> <http://www.xn--cigo-dpa.com/en/calendar-public-debate>

<sup>9</sup> [http://www.world-nuclear-news.org/WR\\_Public\\_comment\\_on\\_French\\_waste\\_disposal\\_16051311.html](http://www.world-nuclear-news.org/WR_Public_comment_on_French_waste_disposal_16051311.html)

<sup>10</sup> <http://www.dw.de/bundestag-debates-nuclear-waste-disposal/a-16821122>

for spent nuclear fuel at Forsmark. Their conclusion is that the SKB safety analysis provides a satisfactory and credible platform for the licensing process. It is hoped that construction will start by 2020;

- **United States** - In January 2013, the Department of Energy published its Strategy for the Management and Disposal of Used Nuclear Fuel and High-Level Radioactive Waste.<sup>11</sup> The Strategy sets a goal to identify a final site for a repository by 2026, and to construct a repository and begin operations by 2048. It states that the site selection and implementation process for a facility should be based on a phased, adaptive, and consent-based approach.

20. The provisions and requirements of the European Union's 2011 Directive on radioactive waste and spent fuel management (Council Directive 2011/70/Euratom) will be implemented in the UK by the deadline of 23 August 2013 using our existing legislative regime. This is primarily the Nuclear Installations Act 1965 and the existing suite of 36 standard nuclear site licence conditions under it, and the relevant provisions of the Environmental Permitting Regulations (England and Wales) 2010 and the Radioactive Substances Act 1993 (in respect of Scotland and Northern Ireland). The Directive, which came into force in August 2011, requires responsible and safe management of spent fuel and radioactive waste from generation to disposal. The programme of work to establish a geological disposal facility in the UK will therefore help to show compliance with the overarching aims of the Directive.

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<sup>11</sup> <http://energy.gov/downloads/strategy-management-and-disposal-used-nuclear-fuel-and-high-level-radioactive-waste>

# Next steps

21. Key activities over the next 12 months include:

- In May 2013, the UK Government announced a 'Call for Evidence,'<sup>12</sup> the responses to which will help inform a public consultation on potential amendments to the siting process. The Government currently anticipates that a consultation will be published later in the year;
- Following any consultation, the Government will make any necessary revisions to the MRWS siting process for a GDF and will set out an amended approach. The Government will make clear in any revised siting process how local communities can explore the opportunities presented by finding out more about hosting a GDF and participating in the MRWS programme.

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<sup>12</sup> <https://www.gov.uk/government/consultations/managing-radioactive-waste-safely-call-for-evidence-on-the-siting-process-for-a-geological-disposal-facility>

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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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