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Consultation

Review of the Siting Process for a Geological Disposal Facility

September 2013

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The consultation can be found on DECC's website:
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Executive summary

The purpose of this consultation is to gather views on how aspects of the siting process for a geological disposal facility (GDF) for higher activity radioactive waste could be revised and improved.

In light of the recommendations of the independent Committee on Radioactive Waste Management (CoRWM), and in line with the approach taken by most other countries, the UK Government continues to believe that geological disposal, preceded by safe and secure interim storage, is the right policy for the long-term management of higher activity radioactive waste. To identify potential sites for a GDF, the UK Government continues to favour an approach based on voluntarism (that is, the willingness of local communities to participate), working in partnership with communities that may ultimately host a facility.

Building on experience to date, and a public Call for Evidence in early 2013, the UK Government has recognised that there are ways in which the current siting process for a GDF (as set out in the 2008 Managing Radioactive Waste Safely White Paper) could be improved, in order to help communities to engage in it with more confidence and, ultimately, to help deliver a GDF. This document sets out the UK Government's proposal on how this could be achieved and highlights the main issues for consideration.

In general, the proposal is to provide more information, at a much earlier stage in the process, on issues such as geology and socio-economic impacts. We also propose that a revised process should offer a clear commitment to an ongoing Right of Withdrawal for any communities that become involved, with a final decision involving the local population directly.

None of this would replace the statutory planning and regulatory processes that must apply to a development of this nature. Rather, it represents an additional layer of consent — giving local communities the opportunity to decide whether or not they wish to proceed with the development of a GDF. All the usual opportunities for the public to have a say in the process through planning, safety, security and environmental permitting processes will remain.

A summary of the proposed revised siting process on which we are seeking views, focusing on the main changes from the current siting process, is set out below and illustrated in Figure 1.

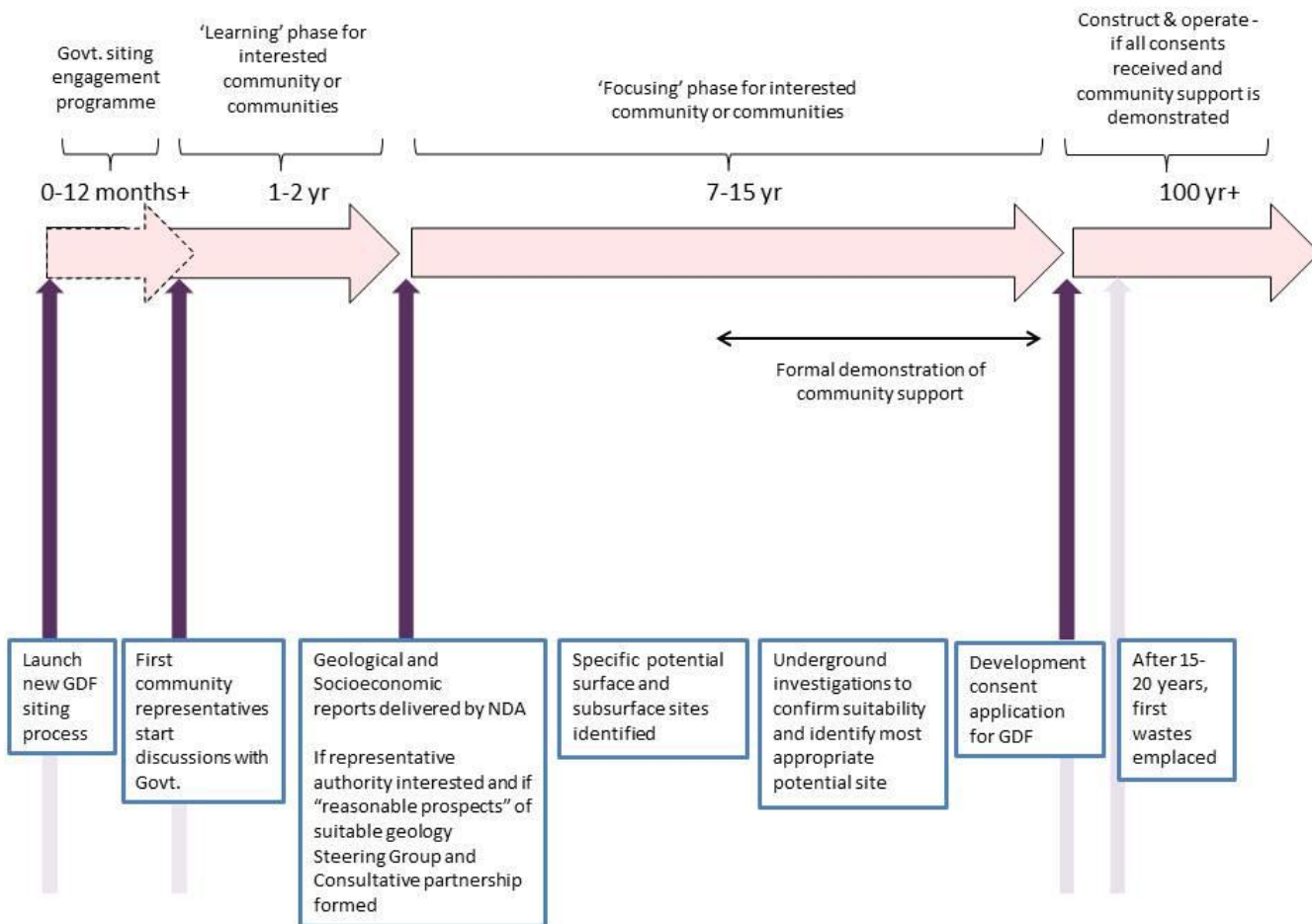
- As a first step, there would be a period of public information sharing and discussion, during which the UK Government would seek to raise awareness of the GDF project nationally.
- Clear, easy-to-access information on regional geology, the inventory of waste for disposal, and the generic socio-economic impacts of hosting a GDF would be provided up-front, as the basis for informed initial discussions with any interested communities.
- There would also be greater clarity at an early stage about the scale and timing of community benefits and the likely investment in an area.
- As a GDF will be a nationally significant infrastructure development, it is proposed that it should be designated as such, and brought within the Nationally Significant Infrastructure

Project planning regime, as set out in the Planning Act 2008. A National Policy Statement on a GDF would be developed soon after the launch of the revised siting process. This would set out the assessment principles against which planning applications in relation to a GDF would be considered. The National Policy Statement would be subject to an Appraisal of Sustainability.

- The siting process would be recast as a more continuous process, consisting of two main phases ('Learning' and 'Focusing'). To ensure that communities are not pressured into making commitments before they are ready, the UK Government would not prescribe 'decision points' throughout this siting process.
- Communities would retain an ongoing Right of Withdrawal throughout the siting process. Clarification would be made about the level of public authority which represented potential host communities throughout the siting process (the 'representative authority'). This would be the District Council or nearest equivalent (noting differences across devolved administrations).
- The 'Learning' phase would involve the production of independent reports on local geology and the potential socio-economic impact of a GDF on the local area, paid for by the UK Government and delivered to the representative authority. If both the representative authority and the UK Government wished to proceed beyond this phase, then the 'Focusing' phase would begin.
- The 'Focusing' phase would seek to identify potentially suitable sites within a community that has agreed to participate in the process and investigate them in more detail. Our aim is that community benefits could start being paid during this phase. This phase of work would be overseen by a decision making 'Steering Group', consisting of the representative authority with UK Government and the Radioactive Waste Management Directorate (RWMD) of the Nuclear Decommissioning Authority as the developer. A 'Consultative Partnership' of wider local interests would also be formed in this stage.
- At a suitable point in the 'Focusing' phase, there would be a requirement for a demonstration of community support as the final step of the siting process. Without a positive demonstration of community support, development of a GDF could not proceed.

Beyond this point, any proposed development would, of course, remain subject to statutory planning and regulatory regimes, and their accompanying public and stakeholder engagement and consultation requirements.

Figure 1: Illustration of the proposed, revised siting process – this covers the process for community engagement. Other requirements, such as environmental and sustainability appraisal, nuclear licensing and other regulatory consents, have been omitted, but are addressed elsewhere in this document. It is important to stress that the timescales indicated are purely illustrative; we envisage that, in practice, the phases will take as long as is necessary so that all involved are content.



This consultation document sets out some background on geological disposal policy, the case for changes to some aspects of the current siting process, and the UK Government’s proposed amendments, in more detail. Views are being sought on these proposals and a number of specific questions for respondents to consider are provided throughout the document.

Chapter 1 – Introduction

Purpose of the consultation

- 1.1 The 2008 Managing Radioactive Waste Safely (MRWS) White Paper¹ (referred to in this document as ‘the White Paper’) set out the framework for managing the UK’s higher activity radioactive waste in the long-term. UK Government policy is that this should be through geological disposal, coupled with safe and secure interim storage and ongoing research and development to support its implementation.
- 1.2 The White Paper explained the waste that would be managed through geological disposal, and how the UK Government would prepare and plan for this. It also set out the means of regulation and independent scrutiny, and the siting process for a geological disposal facility (GDF) based on a voluntarism and partnership approach (a process that is additional to the planning and regulatory processes that will be required to develop a GDF). This document seeks views on revisions and improvements to the siting process aspects of the White Paper, but not to other aspects of it.
- 1.3 This consultation document is being published following a period in which the UK Government considered the lessons that could be learned from the operation of the siting process to date, and a wider ‘Call for Evidence’ which ran in May and June of this year (see paragraphs 1.54 – 1.56).
- 1.4 This consultation document sets out the UK Government’s proposal on how aspects of the siting process for a GDF could be improved, in order to help communities engage in it with more confidence, and ultimately to help deliver a GDF.
- 1.5 Views are being sought on the proposals set out in this consultation document. Specific questions for respondents to consider are included throughout the document, and are listed together in Chapter 5. That Chapter also includes details of how to respond to the consultation, and information on next steps.

Government positions

- 1.6 This consultation document is being issued jointly by the UK Government, the Welsh Government and the Northern Ireland Executive.

UK Government

- 1.7 In light of the recommendations made by the independent Committee on Radioactive Waste Management (CoRWM – see paragraph 1.21)², and the experiences of various radioactive waste management programmes overseas, the UK Government continues to believe that geological disposal, preceded by safe and secure interim storage, is the right

¹ ‘Managing Radioactive Waste Safely – A Framework for Implementing Geological Disposal’, June 2008 <http://bit.ly/13LFztm>

² ‘Managing Our Radioactive Waste Safely – CoRWM’s recommendations to Government’, July 2006 <http://bit.ly/15R4QpL>

policy for the long-term management of higher activity radioactive wastes (see paragraphs 1.26 – 1.31).

- 1.8 The UK Government also continues to hold the view that the best means of selecting a site is through an approach based on voluntarism and partnership (see paragraphs 1.33 – 1.37).

Welsh Government

- 1.9 Radioactive waste disposal is a devolved issue and the Welsh Government has participated in the MRWS programme since its inception in 2001. It is committed to securing the long-term safety of radioactive wastes and to the implementation of a disposal framework appropriate to the needs of Wales.
- 1.10 Current Welsh Government policy is set out in the White Paper, which states that the Welsh Government has reserved its position on geological disposal. The White Paper states that should a community in Wales wish to express an interest in hosting a GDF, it should do so to the Welsh Government which would, at that point, consider its position and the specific expression of interest.
- 1.11 The Welsh Government considers that this consultation discusses issues about which the people of Wales have a right to be informed and upon which they should have an opportunity to comment. The Welsh Government has therefore issued the consultation document in Wales. In order to ensure that the interests of Wales are taken into account in the development of policies in this area, the Welsh Government will continue to play a part in the MRWS programme. However, at this time, the Welsh Government is retaining its policy of reserving its position on geological disposal and therefore does not confirm that it will support the future implementation in Wales of the proposals contained in this consultation paper, or the adoption of policies consistent with them.

Northern Ireland Executive

- 1.12 The Northern Ireland Executive has responsibility for ensuring that any proposed GDF for higher activity radioactive waste will not have an adverse impact upon the environment, health or safety of Northern Ireland. Northern Ireland continues to support the MRWS programme outlined in the White Paper, in recognition that it is in the best interests of Northern Ireland that the UK's higher activity radioactive waste is managed in the safest and most appropriate manner. However, at this time, the Northern Ireland Executive is retaining a policy of reserving its position on geological disposal and therefore does not confirm that it will support the future implementation in Northern Ireland of the proposals contained in this consultation, or the adoption of policies consistent with them.

Scottish Government

- 1.13 The Scottish Government did not sponsor the White Paper but remain committed to dealing responsibly with radioactive waste arising in Scotland. On 20 January 2011, the Scottish Government published Scotland's Higher Activity Waste Policy 2011³. The Scottish Government Policy is that the long-term management of higher activity radioactive waste should be in near-surface facilities. Facilities should be located as near to the sites where the waste is produced as possible. Whilst the Scottish Government does not support deep geological disposal it continues, along with the UK Government and other devolved administrations, to support a robust programme of interim storage and an ongoing programme of research and development.

³ <http://bit.ly/13LFV3c>

UK Policy Background

- 1.14 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 defence-related nuclear programmes.
- 1.15 As a pioneer of nuclear technology, the UK has accumulated a substantial legacy of higher activity radioactive waste and material. Some of it has already arisen as waste and has been placed in interim storage at nuclear sites across the UK. However, much of it 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.
- 1.16 The aim of geological disposal is to isolate and contain higher activity radioactive waste, permanently and deep underground, while the radioactivity within it decays, thus ensuring that no harmful quantities of radioactivity reach the surface. It also provides the highest practical level of security for the wastes. This is achieved without requiring ongoing human intervention. Whilst storage is an effective method of managing waste in the short to medium term, it would require ongoing human intervention (to monitor and maintain the material and its storage facilities) for the hundreds of thousands of years it will take for the radioactivity in the waste to decay. It is not considered appropriate to pass the burden of such active management on to future generations. The UK Government is therefore committed to delivering a safe, permanent geological disposal solution as soon as is reasonably practicable.
- 1.17 The implementation of geological disposal is also key to the restoration of existing nuclear sites and their release for other uses — by enabling safe disposal of the higher activity wastes from decommissioning and clean-up, as well as wastes currently in interim storage at nuclear sites including Sellafield. However, it is important that timely progress is made in retrieving and processing waste from legacy facilities so that it can be safely stored until such time as a GDF is available.
- 1.18 To illustrate this, the Nuclear Decommissioning Authority (NDA) will spend a total of £3.2bn during the current financial year (2013/14) on cleaning up Britain's nuclear legacy, with over half of this (£1.7bn) to be spent on reducing hazard at Sellafield. These record levels of expenditure reflect a sustained commitment by the UK Government to clean up Britain's nuclear legacy at Sellafield and elsewhere.
- 1.19 The retrieval of materials from the legacy facilities at Sellafield, in order to put them into safe interim storage, is a national priority, and will be needed for as long as it takes to identify a site for, and construct, a GDF. This process needs to be seen as a necessary precursor to a GDF rather than an alternative, for the reasons set out above.

- 1.20 In 2001, the UK Government and devolved administrations initiated the MRWS programme, with the aim of addressing radioactive waste management in the long-term⁴.
- 1.21 In July 2006, CoRWM recommended⁵ that geological disposal, coupled with safe and secure interim storage, was the best available approach for the long-term management of the UK's legacy of higher activity radioactive wastes. CoRWM's original task was to make recommendations that not only provided for safety and security, but which would do so in a way that would be acceptable on environmental and societal grounds, and at a cost that was not disproportionate. CoRWM stated that the aim should be to progress disposal as soon as practicable, consistent with developing and maintaining public confidence.
- 1.22 In October 2006, the UK Government and the devolved administrations published a response⁶ to CoRWM's recommendations, explaining that geological disposal, preceded by safe and secure interim storage, should be the means by which the UK's higher activity radioactive waste is managed in the long-term.
- 1.23 The 2006 Government response accepted that there is a requirement for ongoing research and development to ensure optimised delivery of the geological disposal programme, and the safe and secure storage of the radioactive waste in the interim. The NDA has a supplementary function under the Energy Act 2004 to carry out research into matters relating to the functions it has been given by direction of the Secretary of State under the Energy Act 2004, and therefore carries out research related to the design, construction and operation of future facilities for intermediate level waste and high level waste. Ultimately, such research and development will have to support the preparation of a facility safety case that meets regulatory requirements.
- 1.24 Government also noted the point raised by CoRWM that other long-term management options could emerge as practical alternatives for some wastes in future. In line with this, the NDA is undertaking appropriate horizon scanning activities, including learning from and engaging with overseas programmes, which could have the potential to improve the long-term management of some of the UK's higher activity radioactive wastes. At the moment, no credible alternatives have emerged that would accommodate all of the categories of waste currently destined for disposal in a GDF.
- 1.25 On 25 June 2007, the UK Government, in conjunction with the devolved administrations of Wales and Northern Ireland, published an MRWS consultation document⁷. The Scottish Government did not sponsor the 2007 MRWS consultation document (see paragraph 1.13). The consultation closed on 2 November 2007. A Summary and Analysis of

⁴ *Managing Radioactive Waste Safely: Proposals for Developing a Policy for Managing Solid Radioactive Waste in the UK*, September 2001 <http://bit.ly/15Rum8m>

⁵ *Managing our Radioactive Waste Safely – CoRWM's Recommendations to Government*, July 2006 <http://bit.ly/15R4QpL>
NB - CoRWM renewed this commitment to geological disposal in its 2013 Annual Report.

⁶ *Response to the Report and Recommendations from the Committee on Radioactive Waste Management (CoRWM), UK Government and the devolved administrations*, October 2006 (PB 12303)

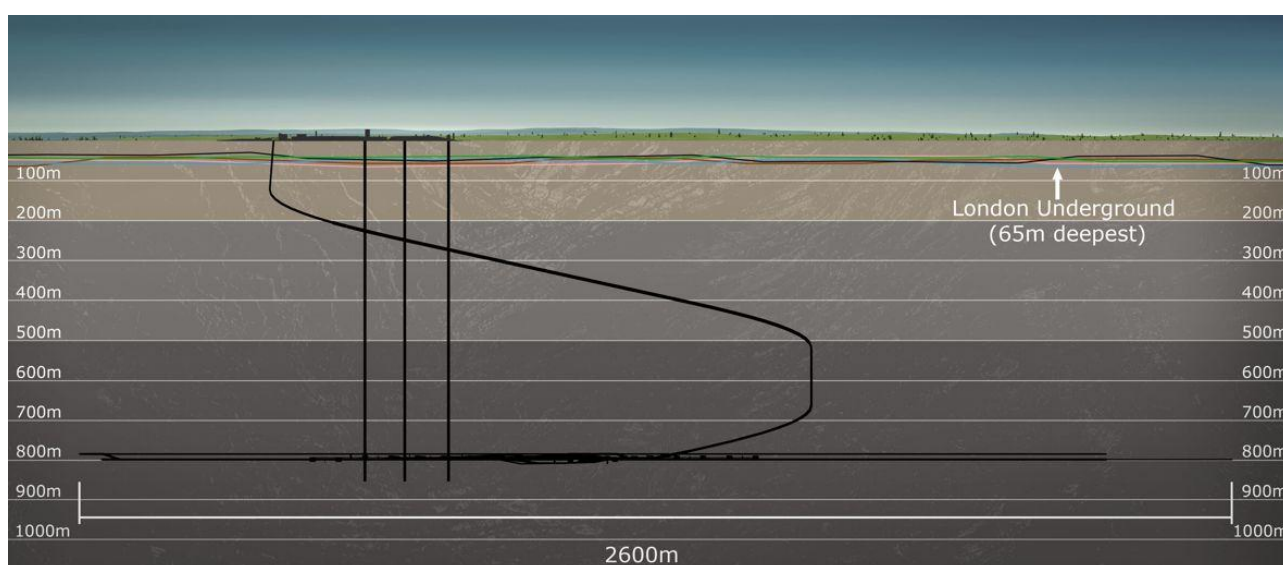
⁷ *Managing Radioactive Waste Safely: A Framework for Implementing Geological Disposal*, 25 June 2007
<http://bit.ly/18UaEcX>

Responses was published on 10 January 2008⁸ and taken into consideration in the development of the White Paper (see paragraph 1.38).

Geological disposal

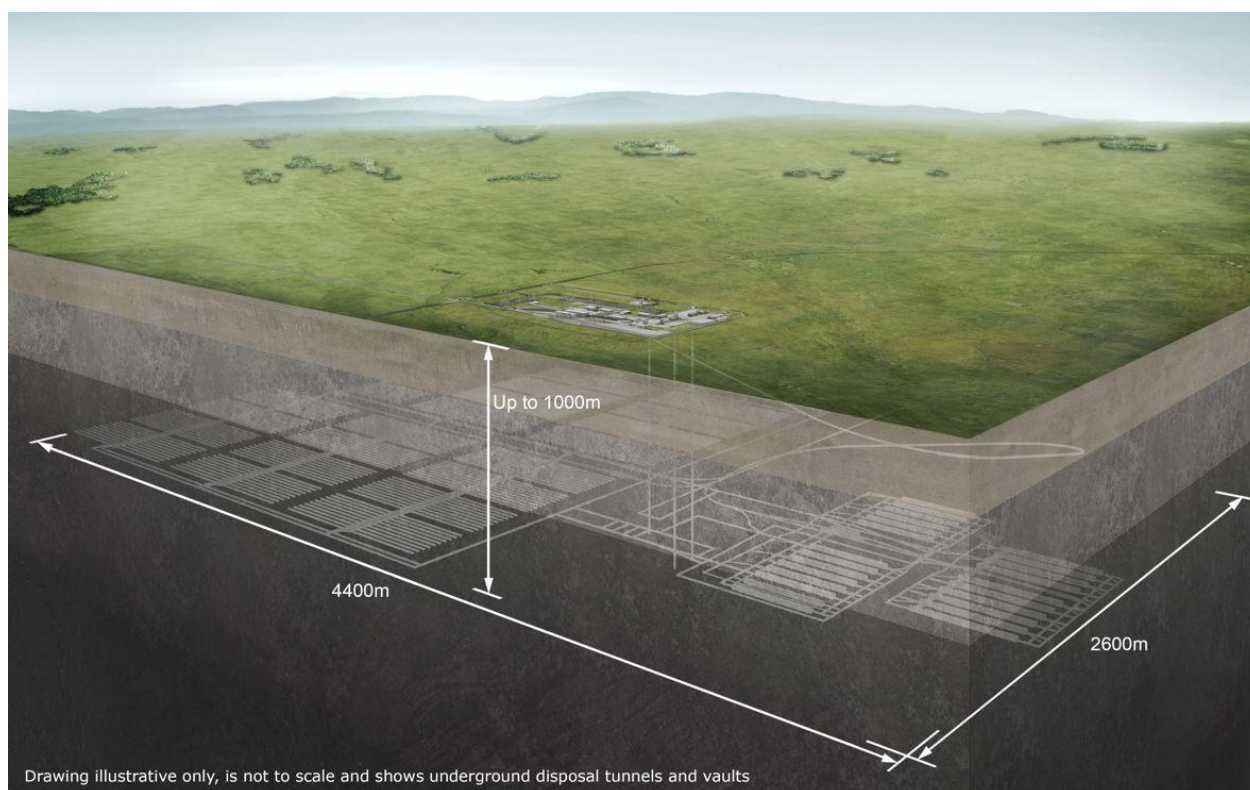
1.26 Geological disposal involves isolating radioactive waste deep inside an underground facility constructed in a suitable rock formation. This ensures that no harmful quantities of radioactivity ever reach the surface environment. It is a multi-barrier approach, based on placing packaged wastes in engineered tunnels at a depth of between 200 and 1000m underground, to protect them from disruption by man-made or natural events (e.g. flooding, coastal erosion, earthquakes or terrorist action) which primarily affect the surface.

Figure 2 – Cross section demonstrating the depth of a GDF



⁸ 'Summary and Analysis of Responses to the Consultation on Managing Radioactive Waste Safely: A Framework for Implementing Geological Disposal', 10 January 2008 <http://bit.ly/15W12wm>

Figure 3 – Demonstration of potential scale of a GDF



1.27 Geological disposal provides a long-term, safe solution to radioactive waste management that does not depend on ongoing human intervention. The benefits of implementing geological disposal include:

- Removing the burden of responsibility from future generations to actively manage this hazardous⁹ material;
- Removing the safety and security risks and ongoing costs inherent in having to indefinitely maintain and protect surface storage facilities for this material which will remain hazardous for many years;
- Mitigating risks from societal changes, climate change or malicious attacks, any of which could lead to a failure to manage the waste effectively.

1.28 Geological disposal is internationally recognised as the preferred approach for the long-term management of higher activity radioactive waste, protecting both human health and the natural environment.

1.29 The July 2011 EU Council Directive (2011/70 Euratom¹⁰ – establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste)

⁹ There is a distinction between the terms ‘hazard’ and ‘risk’. A ‘hazard’ is something (e.g. an object, a property of a substance, or an activity) that can cause harm. A risk is the chance that an individual, or something that is valued, will be adversely affected by the hazard. As set out in this paragraph, geological disposal mitigates and removes risks, by putting hazardous material beyond reach.

¹⁰ <http://bit.ly/pAvyqQ>

stated that *“Deep geological disposal represents the safest and most sustainable option as the end point of the management of high-level waste and spent fuels considered as waste¹¹.”*

- 1.30 The Nuclear Energy Agency (NEA - a specialised agency within the Organisation for Economic Co-operation and Development) stated in 2011 that *“there are no credible alternatives to geological disposal¹²”*. In pointing to a strong international consensus that geological disposal is the preferred approach, the NEA also stated that geological disposal is *“technically feasible; it can be made safe for current and future generations”* and that *“Whatever further technical advances may be gained, the need for geological disposal for some classes of waste will persist”*.
- 1.31 In line with this, the UK Government remains committed to implementing geological disposal in the UK.
- 1.32 A further issue is ‘retrievability’ – that is, the potential to retrieve waste packages from a disposal facility at a later date. The UK Government’s view is that the decision about whether or not to keep a geological disposal facility (or vaults within it) open once facility waste operations cease can be made at a later date, in discussion with the independent regulators and local communities. In the meantime, the planning, design and construction can be carried out in such a way that the option of retrievability is not excluded.

Voluntarism and partnership

- 1.33 In accepting the original CoRWM recommendation that geological disposal should be pursued for the long-term management of higher activity radioactive waste, the UK Government also agreed to explore how an approach based on voluntarism (that is, the willingness of local communities to participate) and partnership could be made to work in practice¹³.
- 1.34 CoRWM concluded in their original report¹⁴ that a process should be adopted whereby communities were willing participants, working in partnership with an implementing body. This view was based on their consideration of successful programmes overseas and the previous failure of more prescriptive and closed processes both in the UK and overseas. CoRWM considered that a process based on willingness to participate could potentially ensure equity, efficiency and increase the likelihood of successfully completing the process.
- 1.35 In principle, an approach based on willingness to participate, with a ‘Right of Withdrawal’, should allow progress to be made only at a speed local communities are comfortable with. It should also force an implementing body to address issues of concern to local communities before any final decisions can be made. This discipline should improve both

¹¹This does not impact on Scottish higher activity waste policy, which does not apply to HLW or spent fuel.

¹² *‘Geological Disposal of Radioactive Wastes: National Commitment, Local and Regional Involvement’*, 2011 <http://bit.ly/19HfjBh>

¹³ *‘Response to the Report and Recommendations from the Committee on Radioactive Waste Management (CoRWM)’*, October 2006 (PB 12303)

¹⁴ *‘Managing our Radioactive Waste Safely – CoRWM’s Recommendations to Government’*, July 2006 <http://bit.ly/15R4QpL>

the quality and public acceptability of final proposals for development of a GDF in any given area.

- 1.36 This continues to be borne out by experience in overseas programmes. Those based on engagement with local communities continue to progress in a mutually acceptable way (e.g. Sweden). Processes perceived to involve imposition on an unwilling community have failed (e.g. the initial GDF development at Yucca Mountain in the USA. Subsequently, the Blue Ribbon Commission on America's Nuclear Future recommended¹⁵ the adoption of a new, consent-based approach to selecting GDF sites).
- 1.37 The White Paper stated that, in the event that at some point in the future, voluntarism and partnership does not look likely to work, the UK Government reserves the right to explore other approaches. That remains the position. However, this consultation document does not address that, and does not explore alternatives to voluntarism.

UK Government Framework for Implementing Geological Disposal

- 1.38 The White Paper¹⁶ was published in June 2008. It set out a high level summary of the waste to be managed through geological disposal, how the UK Government would prepare and plan for geological disposal, the means of regulation and independent scrutiny, and the siting process based on a voluntarism and partnership approach (a process that is additional to the planning and regulatory processes that will be required to develop a GDF).
- 1.39 Geological disposal remains the UK Government's policy, and therefore it is only the siting process elements of the White Paper that are being consulted on in this document.
- 1.40 The siting process was originally set out in stages, to allow all those involved to take stock at each stage before deciding whether or not to move to the next. This approach was developed after public consultation and after consideration of international precedents¹⁷.
- 1.41 The White Paper explained the key players in the siting process as follows:
- **UK Government** is responsible for the overall policy of geological disposal, will take final decisions, and engages with stakeholders to ensure that the objectives of the programme are met;
 - The **Nuclear Decommissioning Authority (NDA)** – specifically its **Radioactive Waste Management Directorate** (referred to in this document as **RWMD**) – is the implementing organisation, responsible for delivering a GDF;
 - **Communities** have a potential interest in hosting a GDF – with **local government** being the 'Decision Making Body' for the potential 'host community' (i.e. the community in

¹⁵ <http://bit.ly/U2DVPO>

¹⁶ 'Managing Radioactive Waste Safely – A Framework for Implementing Geological Disposal', June 2008 <http://bit.ly/13LFztm>

¹⁷ 'Stepwise Approach to Decision Making for Long-term Radioactive Waste Management: Experience, Issues and Guiding Principles', 2004 <http://bit.ly/14LjeJZ>

which any facility will be built). The costs they incur by engaging in the siting process are met by the UK Government, through the provision of an 'Engagement Package';

- **Independent regulators** – 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;
- **Committee on Radioactive Waste Management (CoRWM)** – provides independent scrutiny and advice to Government on the plans and programmes for delivering geological disposal.

1.42 The siting process set out in the White Paper can be summarised as follows –

- **Stage 1: Expression of Interest** - When the White Paper was launched, the Department for Environment, Food and Rural Affairs (Defra) wrote to local authorities in England inviting them to express an interest in holding without commitment discussions with Government on the possibility of hosting a GDF at some point in the future. The Welsh Government wrote to local authorities in Wales, drawing to their attention the proposals in the White Paper.
- **Stage 2: Initial screening out of unsuitable areas**¹⁸ - Once a local authority made an Expression of Interest, the British Geological Survey (BGS)¹⁹ was asked to apply a 'sub-surface unsuitability' test to the area. This eliminated areas that were obviously unsuitable and avoided further unnecessary work.
- **Stage 3: Community consideration leading to Decision to Participate** - Corresponded to the period during which the local Decision Making Body decided whether to make a formal commitment to participate in the siting process (but without commitment to host a GDF). Stage 3 ran in parallel to Stage 2, although a Decision to Participate could only be made if Stage 2 did not lead to the whole area associated with the community being 'screened out'. Following this Decision to Participate, the UK Government expected a formal 'Community Siting Partnership' would be set up. This was intended to be a partnership of local community interests, providing a forum for the host community and RWMD to exchange information and views.
- **Stage 4: Desk-based studies in participating areas** – During this stage, more detailed desk-based assessments focusing on the suitability of a site or sites were to be undertaken, a process overseen by the Community Siting Partnership. The assessment was to be reviewed by independent regulators, and subject to independent scrutiny by CoRWM. On the basis of these assessments, and recommendations from the Community Siting Partnership, the local Decision Making Body would decide whether to proceed to the next stage. Central Government would then decide on one or more candidate sites to take forward into the next stage.

¹⁸ The initial sub-surface screening criteria were developed by two expert groups – the Criteria Proposal Group and the Criteria Review Panel – and consulted on publicly. See *'Managing Radioactive Waste Safely – A Framework for Implementing Geological Disposal'* Annex B, June 2008, <http://bit.ly/13LFztm>

¹⁹ The British Geological Survey is the UK's national centre for earth science information and expertise, providing expert impartial advice on all aspects of geology.

- **Stage 5: Surface-based investigations of remaining candidates to identify a preferred site** – This stage would have involved RWMD seeking to obtain planning permission to undertake surface-based investigations at the remaining candidate site or sites, which would include seismic surveys and the drilling of exploratory boreholes. On the basis of these further assessments, and the recommendations of the Community Siting Partnership, the community would have decided whether to proceed to the final stage of the siting process. This would have been the community's final opportunity to exercise the 'Right of Withdrawal' from the siting process.
- **Stage 6: Underground operations** - Underground investigative work (to confirm a site's suitability) and construction of a GDF would begin. The White Paper stated that, to obtain planning permission for a GDF itself, the UK Government was 'inclined to look towards'²⁰ the Nationally Significant Infrastructure Planning regime established by the Planning Act 2008 (if a GDF was to be developed in England)²¹ but did not commit to this approach. It was from this stage that the 'Community Benefits Package' would become payable, in recognition of the essential service the community would be providing to the nation.

1.43 In the following sections we discuss experience of how the initial stages of this process worked in practice and set out proposals for changes that take account of stakeholder feedback and lessons learnt.

Operation of the MRWS siting process

- 1.44 In 2008-9, three formal Expressions of Interest were received by the UK Government – from Allerdale Borough Council, Copeland Borough Council and Cumbria County Council (in respect of the areas of Allerdale Borough Council and Copeland Borough Council). These councils will be referred to collectively in this document as 'councils in west Cumbria'.
- 1.45 In 2012, Shepway District Council in Kent took 'soundings' from local residents on making an Expression of Interest in the siting process, but ultimately decided against doing so.
- 1.46 Councils in west Cumbria proceeded through part of the staged process described in the White Paper, reaching the point at which a formal 'Decision to Participate' was required to progress further.
- 1.47 On 30 January 2013, councils in west Cumbria took their individual decisions on whether to participate in the next stage of the siting process. This was not a decision on whether to host a GDF, but on whether to carry out further work to identify and assess potentially suitable sites in west Cumbria. Allerdale Borough Council and Copeland Borough Council both voted in favour of proceeding. Cumbria County Council voted against.

²⁰ 'Managing Radioactive Waste Safely – A Framework for Implementing Geological Disposal', June 2008 <http://bit.ly/13LFztm> paragraph 5.30

²¹ As planning is a devolved matter, the White Paper also indicated the Welsh Government's view that development consent for a GDF within Wales would be undertaken through the existing statutory consents regime and that the Planning Service in Northern Ireland would consider the implications of the (then) planned planning reform in England.

- 1.48 An earlier agreement²² (neither foreseen by the siting process set out in the White Paper, nor prescribed by it) had been reached by DECC and councils in west Cumbria about how the MRWS siting process would operate in west Cumbria. This required ‘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 siting process in west Cumbria to a close.
- 1.49 The UK Government continues to favour an approach to siting a GDF that is based on voluntarism (that is, the willingness of local communities to participate) and partnership working.
- 1.50 Evidence from abroad shows that this approach can work, with similar waste disposal programmes based on these principles making good progress in countries like Canada, Finland and Sweden.
- 1.51 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 developments.
- 1.52 In a Written Ministerial Statement on 31 January 2013²³, the Secretary of State for Energy and Climate Change confirmed that the UK Government remains committed to the policy of geological disposal, but announced that the Government would also take the opportunity to reflect on the experience of the siting process to date. This statement made clear that any changes to the current siting process (as set out in the White Paper) would need to be the subject of consultation.

Preparation of this consultation document

- 1.53 The UK Government has considered what lessons can be learned from the operation of the siting process since 2008, building on discussions with those that have been involved so far.
- 1.54 To support this consideration, in May 2013, the UK Government announced a ‘Call for Evidence’ to allow a wider range of stakeholders to input to its review of the siting process and how it could be taken forward.
- 1.55 The questions that framed this Call for Evidence were –
- 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?

²² <http://bit.ly/15RxiBQ>

²³ <http://bit.ly/WjlgjK>

- What information do you think would help communities engage with the MRWS site selection process?

1.56 The evidence provided during this period has helped shape the proposals set out in this consultation document. A summary of key points raised²⁴ is set out in Box 1 below.

Box 1 - Key messages from the review

- Need for earlier information on geology – with a number of respondents calling for geological screening prior to volunteering
- Clarity needed on the scale, nature and timing of community benefits
- Clarity needed on the nature and timing of the Right of Withdrawal
- Proposals for the introduction of new independent bodies to either peer review the process or to make decisions
- Earlier provision of information about a GDF, and greater clarity about the process
- Support for voluntarism as the right approach on which to base a siting process
- Lack of trust in the current siting process, DECC and / or RWMD
- Greater clarity needed about the decision making process
- Current storage facilities at Sellafield should be made safer and plans for extended interim storage should proceed in parallel with a GDF
- Greater clarity needed on the inventory of waste for disposal in a GDF

1.57 Informed by this period of evidence gathering, this consultation document looks at aspects of the current siting process that could be revised or improved, in order to help communities to engage in it with more confidence, and ultimately to help deliver a GDF. In framing its proposals, the UK Government has also taken into account relevant UK, EU and international legislation and conventions, and international experience of implementing geological disposal facilities.

1.58 This consultation document focuses on proposals for revising the current siting process – it does not focus on the precise mechanisms that may be used in delivering each element of a new process, such as primary legislation, new policy statements, updated guidance or other approaches. These will be developed in line with the substance of any revised siting process that emerges from this consultation exercise.

²⁴ Responses to the Call for Evidence available at <http://bit.ly/10Bf1Y>

1.59 Through this consultation document, the UK Government invites views on its proposals for revising the current siting process. Specific questions for respondents to consider are included throughout the document and are listed together in Chapter 5. That Chapter also includes details of how to respond to the consultation, and information on the next steps in the process.

Chapter 2 - Decision Making and Roles

- 2.1 Many key aspects of the current siting process, as set out in the White Paper, were left 'open' - for later decision and agreement by participants. This was with a view to maximising local flexibility but, in practice, led to uncertainty.
- 2.2 We believe that a more transparent and unambiguous **decision making process**, with clearly defined **roles and responsibilities**, could play a key role in enabling more effective participation.
- 2.3 This Chapter sets out the UK Government's preliminary view for how these aspects of the siting process could be revised and improved.

Decision making in the siting process

The case for change

- 2.4 When the White Paper was launched, the specific details of the siting process had not been tested in practice in the UK, either in the field of radioactive waste management or in the development of other major infrastructure projects.
- 2.5 Although there was an expectation (based on the available evidence) that a staged process with clear decision making points and a Right of Withdrawal would assist in the identification of a site, the experience of the process to date suggests that has not worked as well as originally intended.
- 2.6 Numerous respondents to the Call for Evidence, including those in areas involved in the siting process to date, expressed a desire for more information, earlier in the process (i.e. before any decisions were taken).
- 2.7 Decision making roles at the local level were not specified in the White Paper²⁵. This was intentional, to enable local communities to shape the decision making process themselves. The experience in Cumbria exposed the difficulties local decision making bodies had reaching agreement on the level at which decisions should be taken, and there were matters which had to be clarified on a case-by-case basis through direct Ministerial intervention²⁶.
- 2.8 The White Paper stated that "*Before making an Expression of Interest, Government suggests that the local authority should have canvassed opinion*", through existing fora or

²⁵ 'Managing Radioactive Waste Safely – A Framework for Implementing Geological Disposal', June 2008 <http://bit.ly/13LFztm>

²⁶ <http://bit.ly/18bKB5Y> 7 November 2011

specifically convened meetings with potential local partners²⁷. In practice, this placed a burden on local authorities with an accompanying lack of clarity on what was required, which became a barrier to entry into the siting process. There were different interpretations of what was required in different places, leading to mismatched expectations and practical difficulty for councils attempting to engage publicly on the detail, prior to any detailed information being made available to them. Furthermore, because the current siting process did not make community engagement funding available until *after* a community formally engaged in the process, the costs of canvassing opinion needed to be met by the local council(s). This proved particularly problematic for smaller councils, where such funding can be a relatively large proportion of their total annual budgets.

- 2.9 Councils in west Cumbria were concerned that the UK Government had not enshrined in legislation the ‘Right of Withdrawal’ from the siting process – which at present is exercisable up until the point at which underground operations are due to begin²⁸. For example, the first reason cited by Cumbria County Council leaders for their decision not to move to Stage 4 of the siting process was “*The Right of Withdrawal not enshrined in statute*”²⁹.
- 2.10 Allied to concerns about the Right of Withdrawal, a number of community leaders alluded to a perceived lack of democratic mandate for involvement in the siting process. This was cited as a further reason for the decision by Cumbria County Council not to proceed to Stage 4 in the siting process³⁰.
- 2.11 This evidence has led the UK Government to conclude that several aspects of the decision making process could be improved in order to help communities to engage in it with more confidence in the future.

Proposed amended approach

- 2.12 On the basis of the evidence set out in the preceding section, the UK Government proposes an amended approach for the decision making aspects of the siting process, set out here for public consultation. It is a process of two phases, intended to allow communities to find out more about the process for siting a GDF, while having a continuous Right of Withdrawal. These phases are called ‘Learning’ and ‘Focusing’ – and are described in paragraphs 2.43 – 2.64. The proposed changes are intended to put the decision making process on a clearer footing, and to enable those involved to make properly informed decisions.

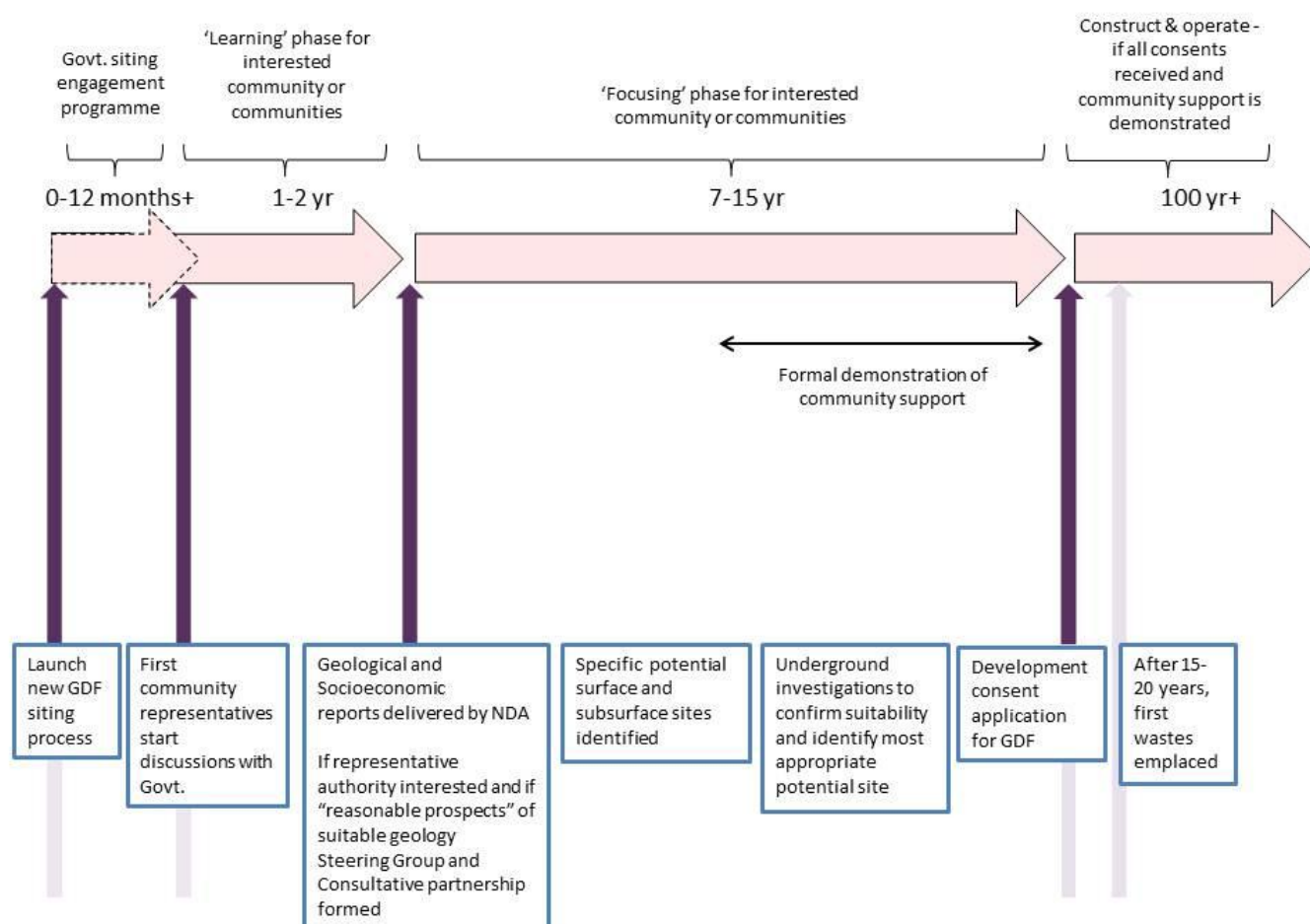
²⁷ ‘Managing Radioactive Waste Safely – A Framework for Implementing Geological Disposal’, June 2008, paragraph 6.18 <http://bit.ly/13LFztm>

²⁸ Ibid. section 6.38

²⁹ Cumbria County Council letter, 7 Feb 2013 <http://bit.ly/WCpql5>

³⁰ Ibid.

Figure 4: Illustration of the proposed, revised siting process – this covers the process for community engagement. Other requirements, such as environmental and sustainability appraisal, nuclear licensing and other regulatory consents, have been omitted, but are addressed elsewhere in this document. It is important to stress that the timescales indicated are purely illustrative; we envisage that, in practice, the phases will take as long as is necessary so that all involved are content.



Raising national awareness before seeking volunteers

2.13 It is proposed that, as part of its announcement of the launch of any revised siting process, the UK Government would make clear that it would not formally begin the first of these phases, the 'Learning phase' (see paragraphs 2.43 – 2.51) in any community until a national public awareness and engagement programme has been initiated and progressed.

2.14 This approach has a number of potential benefits:

- It helps ensure that a local community interested in exploring what hosting a GDF could entail has time to consider what issues it would like to explore in the 'Learning' phase before embarking on it;
- It ensures a greater general awareness and understanding of the issues, leading to a more balanced and well informed debate on GDF across the country;

- It provides time for potentially interested community representatives to find out more about this issue and ask questions of UK Government and RWMD, without the risk of pressure to take early decisions.

2.15 The duration of this period of awareness raising and engagement would depend on levels of interest and engagement achieved. The UK Government would keep this under review, but it is anticipated that it could be up to a year after the launch of a revised siting process.

The 'offer'

2.16 As part of this national public awareness and engagement programme, the UK Government would set out clearly the 'offer' to any community that may be interested in a hosting a GDF, together with easy-to-access, public domain, information about geological disposal and the basic geology in their area (see paragraph 3.15).

2.17 The offer would be an open and transparent assessment of what the implementation of a GDF might mean for any community, setting out the process a community would follow if it wished to become involved in the siting process. This information would make it easier for communities which might be interested in joining the siting process to understand, from the outset, what the nature of the project (and the possible local impacts) would be.

2.18 It would comprise information about geological disposal, such as:

- What it is, and why it is needed;
- A description of the potential physical layouts of a GDF, both above and below ground;
- The safety requirements and how a GDF can meet all the necessary safety criteria;
- The types and amounts of radioactive waste to be placed in a GDF;
- The process by which a site will be identified, and who will be involved;
- What other countries are doing to manage their radioactive waste in the long-term;
- A description of the regional geology of England, Wales and Northern Ireland, broken down into 13 geological regions (see paragraph 3.15);
- A description of the generic socio-economic impact of a GDF, including a description of the potential local jobs and supply chain impacts;
- An indication of what additional benefits, beyond those directly created by GDF investment, a community might expect to see (see paragraphs 4.10 – 4.12);
- An offer to produce more detailed geological and socio-economic reports specific to a potentially interested community (see paragraph 2.50).

A more continuous process, enabling informed decision making

- 2.19 Recognising the problems inadvertently created by requiring formal decision points prior to the start of each stage of the current siting process (i.e. sometimes before information could be gathered on which to make an informed decision), it is proposed that the revised siting process should be recast as a more continuous one, with the community's position protected through an ongoing Right of Withdrawal, and with no artificial decision points required by central Government.
- 2.20 This new, more continuous process would have two phases – 'Learning' and 'Focusing' (described in paragraphs 2.43 – 2.64). There would clearly still be decisions to be made throughout such a process, not least to enter the process initially, to form the consultative partnership bodies required in later stages, and finally to agree (or not) to proceed with the development of a GDF. The process in any given area could also only progress at the pace at which the representative authority³¹ was prepared to move, but the UK Government would not require several formal 'hold' points that create unnecessary pressure to make commitments to proceed. The community, through its representative authority, could continue to progress through the siting process as long as it wished to, while retaining a Right of Withdrawal (see paragraphs 2.22 – 2.36).
- 2.21 To provide further democratic accountability, it is proposed that, at the point where a community's Right of Withdrawal finally lapsed, a demonstration of community support would be required (see paragraphs 2.37 – 2.42).

Representative authority

- 2.22 In line with the principles of voluntarism, and the process described in the White Paper³², it is proposed that the potential host community should maintain a Right of Withdrawal throughout the siting process.
- 2.23 The White Paper stated that local government would have decision making authority for their host community, and would therefore be the body that could exercise the Right of Withdrawal. However, it did not specify which tier (or tiers) of local government should have this decision making authority. It is now proposed that, in order to provide greater clarity on where local decision making power sits, the UK Government should specify the level at which a host community's Right of Withdrawal is exercised.
- 2.24 A GDF would be a repository for the UK's higher activity radioactive waste. Yet it would be situated in a comparatively small geographical area. The impacts of the implementation and operation of a GDF will, therefore, be experienced by a specific community in a specific area. This community will be providing a vital service to the nation, and its interests must be represented effectively in any revised siting process.
- 2.25 This has led to a consideration of the appropriate level of local government that represents the interests of the affected community by holding the Right of Withdrawal - and also to the

³¹ See paragraphs 2.22 – 2.36

³² *'Managing Radioactive Waste Safely – A Framework for Implementing Geological Disposal'*, June 2008
<http://bit.ly/13LFztm> sections 6.38 to 6.45

question of whether one level, or more than one level, of local government should be involved formally in the siting process.

- 2.26 It is evident from international experience³³ in selecting a site for a GDF that a principle of subsidiarity³⁴ is generally applied. The aim of this principle is to guarantee a degree of independence for a lower authority in relation to a higher body or for a local authority in relation to central government. In the UK context, this principle has been reinforced by the Localism Act 2011. As set out in the Guide accompanying the Localism Act: “*we think that power should be exercised at the lowest practical level, close to the people who are affected by decisions, rather than distant from them*”³⁵.
- 2.27 In applying the principle of subsidiarity to the siting process for a GDF in the UK, and determining the lowest *practical* level, not only must the proximity of the local government body to the people affected be considered, but also the General Power of Competence, referred to in the Localism Act 2011. For a local government body to exercise power over a development, it must have the capability to exercise this power.
- 2.28 In England, the lowest tier of local government is the Parish Council. The UK Government is of the view that, although Parish Councils will have an important consultative role in any siting process, the majority of Parish Councils do not have the full-time staff or resources required to manage a process or project on the scale of the development of a GDF. In addition, international experience³⁶ indicates that it should be a directly elected body which acts as the democratic community representative in such a siting process, and not all parish councillors are directly elected.
- 2.29 The next lowest level of local government in England is the District (a designation that includes the four principal types of district-level council in England – metropolitan boroughs, London boroughs, non-metropolitan districts, unitary authorities, as well as the City of London and the Isles of Scilly). Unlike the majority of Parish Councils, District Councils have full-time staff, and all Councillors are democratically elected.
- 2.30 As a result of this consideration, it is proposed that there should be one representative level of local government that holds the Right of Withdrawal (on behalf of the community that it represents), and has the final decision on proceeding, subject to demonstration of community support. It is proposed that this level should be the relevant District Council in England.
- 2.31 Wales has a single tier of county and county borough councils. Many, but not all, areas also have a town or community council, similar to civil parishes in England. Should a community (as distinct from, but not excluding, a town or community council) in Wales wish to express an interest, the Welsh Government will consider what policy changes and decisions are necessary and will consult the people of Wales. This consultation will include the appropriate level at which community interests should be represented. In advance of

³³ ‘Geological Disposal: Overview of international siting processes’, September 2013 <http://bit.ly/1aC9gTa>

³⁴ Official Journal of the European Union – EU Consolidated versions of the Treaty on European Union and of the Treaty establishing the European Community: <http://bit.ly/1ehc0GZ>

³⁵ <http://bit.ly/YdWsea>

³⁶ ‘Geological Disposal: Overview of international siting processes’ September 2013, <http://bit.ly/1aC9gTa>

decisions in the light of any consultation, the Welsh Government considers that county and county borough councils in Wales should represent the interests of their local communities in these matters. The Welsh Government also accepts that town and community councils may wish to make representations to both the Welsh Government and to their county or county borough council.

- 2.32 Northern Ireland has a single tier of district councils. However, before a district council may make an expression of interest, the Northern Ireland Executive will consider what policy and legislative changes are necessary to allow this process to proceed. This could involve consulting with all the people of Northern Ireland.
- 2.33 In this consultation document, the term ‘representative authority’ will be used in reference to this level of local government which, it is proposed, should be able to exercise the Right of Withdrawal on behalf of the community it represents.
- 2.34 The UK Government recognises, however, that the County Council (where one exists in the area in question) has a major and legitimate interest in the outcome of the siting process. As such, it is important that the County is represented in, and able to influence, the siting process. It is for this reason that the UK Government proposes that the County should play a prominent role in a body that will guide the siting process, to be known as a ‘Consultative Partnership’. This is explained later in this Chapter (see paragraphs 2.54 – 2.56).
- 2.35 Parish Councils (where these exist in the area in question) would also need to be involved in the siting process. A consultative role for this tier of local government would also be provided for by the Consultative Partnership established in a volunteer area.
- 2.36 The process established here for seeking community consent in the area most affected by a GDF development does not reduce the need to assess the impacts of a development more widely, and for the views of the County and others to be fully heard through the Consultative Partnership, as well as in statutory planning and regulatory processes.

Requirement for a demonstration of community support

- 2.37 It is proposed that the community, through its representative authority, should maintain its Right of Withdrawal throughout the siting process, up until the point at which a demonstration of community support will be required. This demonstration of community support would be a new requirement in the siting process.
- 2.38 The rationale for this proposal is that the UK Government needs to be satisfied that there is community support for a GDF. The requirement for a demonstration of community support would:
- Provide a clear measure of public support at the level of the community which is most directly affected by the GDF project;
 - Reinforce the UK Government’s commitment that a community can withdraw from the process if it does not wish to take the final decision to volunteer to host a GDF.

- 2.39 It is proposed that, without this demonstration of community support, development of a GDF could not proceed and the process in respect of the site (or sites) under consideration would cease.
- 2.40 If community support was confirmed, the potential host community would have agreed to host a GDF and development of a GDF could proceed, subject to the regulatory and planning processes required for developing the site being successfully completed.
- 2.41 There are a number of potential different ways of meeting this requirement for a demonstration of community support. Some suggestions already received include the use of extensive opinion polling, citizens' panels, community hearings and a referendum in a suitably defined area. A combination of these (or any other comparable alternatives) could also be employed. Before coming to a final view, the UK Government wishes to invite views both on the possible means of achieving a final demonstration of community support, and on the timing of such a test.
- 2.42 With regard to the timing, it can be argued that this should come before major expenditure of public funds on borehole drilling and underground investigations at a preferred site, with the Right of Withdrawal ending as the community expresses its willingness to proceed, subject to the normal regulatory and planning processes, which would take precedence from that stage onwards. However, there is a counterargument that ending the unilateral Right of Withdrawal too early reduces community confidence in the process, and forces people to decide to make a commitment prior to all the necessary information being available on the expected local impacts of development.

Question 1: Do you agree that a test of public support should be taken before the representative authority loses the Right of Withdrawal? If so, what do you think would be the most appropriate means of testing public support, and when should it take place? If you do not agree with the need for such a test, please explain why.

The 'Learning' phase

- 2.43 As outlined in paragraphs 2.13 - 2.15, the UK Government will not open the process for requests from interested communities to begin the 'Learning' phase until the public awareness and engagement programme has been initiated and progressed. After that point, there would be no specific time period within which a community had to enter the 'Learning' phase, though the UK Government would review the progress of the siting process from time to time.
- 2.44 Before that point, any local bodies could approach the UK Government to find out more about the siting process, and whether it could be relevant to their local area. But in order to pursue any initial approach further, the UK Government would need to contact the representative authority to explain that interest had been expressed from within the community it represented, and to seek views on how to progress.
- 2.45 The purpose of these initial discussions would be to raise awareness and understanding within the representative authority of what the GDF project is all about, the potential for local development, and what could be delivered through the 'Learning' phase, without commitment.

- 2.46 If, after these initial discussions, the representative authority concluded that a GDF could be of interest to the community it represented, it is proposed that, in order to help better determine what it might mean, the UK Government would ask the representative authority to consent to RWMD commissioning two reports, on geology and socio-economics (see paragraph 2.50), for the representative authority to consider, on a no-commitment basis. This would mark the beginning of the 'Learning' phase.
- 2.47 There would be no initial limit to the number of communities that might consent to the commissioning of these reports and so enter the 'Learning' phase.
- 2.48 The representative authority may wish to become actively engaged in the siting process at the point that the two reports were commissioned, or to reserve its position pending the delivery of this information. At this early stage, before the nature of the proposal or its practicality would be clear, the UK Government does not think it appropriate to set any requirement for formal community support. Assessment of community support should be undertaken when there is clarity on what is proposed, after a period of consultation and engagement (see paragraphs 2.37 – 2.42).
- 2.49 It is expected that the fact that the representative authority had consented to the commissioning of the reports would be made public.
- 2.50 The reports would be produced at RWMD's expense, over a 1-2 year period, and would consist of -
- Geological report – an assessment of the known geological data of the local area (or part of the local area, if specified by the representative authority). This includes the application of the current unsuitability criteria, complemented (if necessary) by new aerial geophysical investigations. It would be carried out on an impartial basis by the British Geological Survey (see paragraph 3.16);
 - Socio-economic report – an independent study on the socio-economic prospects for the local area (and surrounding area) and on the potential impact of GDF investment. This report would include proposals for the types of investment that could be of most benefit to the area (to inform considerations of any Community Benefits Package that would accompany a GDF). The purpose of this report would be to enable the representative authority to evaluate whether a GDF could make a meaningful contribution to the socio-economic welfare of the area.
- 2.51 Upon receipt of these reports, the UK Government, the representative authority and RWMD would collectively assess whether they offered 'reasonable prospects' of the area being potentially suitable to host a GDF. If it was agreed that they offered 'reasonable prospects', then the UK Government and the representative authority could agree that it would be worth moving to the 'Focusing' phase of the siting process, and a formal Steering Group and Consultative Partnership to oversee the process would be formed.

The 'Focusing' phase

- 2.52 The purpose of this phase would be to narrow down the potentially suitable specific area(s) for both the surface and subsurface facilities (or to conclude that no potentially suitable

areas existed), and then to investigate these areas in more detail. If it were to proceed through to its conclusion, this phase would form the bulk of the siting process, potentially running for over a decade in total in any eventual host community area. RWMD, on behalf of the UK Government, would undertake the technical work programme entailed in this phase.

2.53 A 'Steering Group' would be formed that would comprise the local representative authority (representing the people most affected by the potential development), the UK Government and RWMD (as the developer). It would be chaired by the Leader of the representative authority. The Steering Group would have three main functions during the 'Focusing' phase:

- To review continuously the viability and acceptability of the locality as the potential host site;
- To guide UK Government and RWMD (as the developer) on the execution of the 'Focusing' phase; and
- To engage and communicate with the wider local community.

2.54 At the start of the 'Focusing' phase, it would also be a requirement that a 'Consultative Partnership' should be convened. The Steering Group would be free to appoint to the Consultative Partnership any stakeholders that had an interest in the siting process (e.g. members of neighbouring authorities, business representatives, Parish Councils, local public services, residents groups, or non-governmental organisations). In a two-tier local authority area, we would expect the County Council to play a prominent role. The Consultative Partnership would appoint a Chair, and also identify a member who would act as the channel for the exchange of information between the Steering Group and the Consultative Partnership.

2.55 With the identified member of the Consultative Partnership acting as channel, the Steering Group would engage directly with the Consultative Partnership, to update them on progress of the siting process and to ensure that issues raised by the Consultative Partnership were addressed within the siting process.

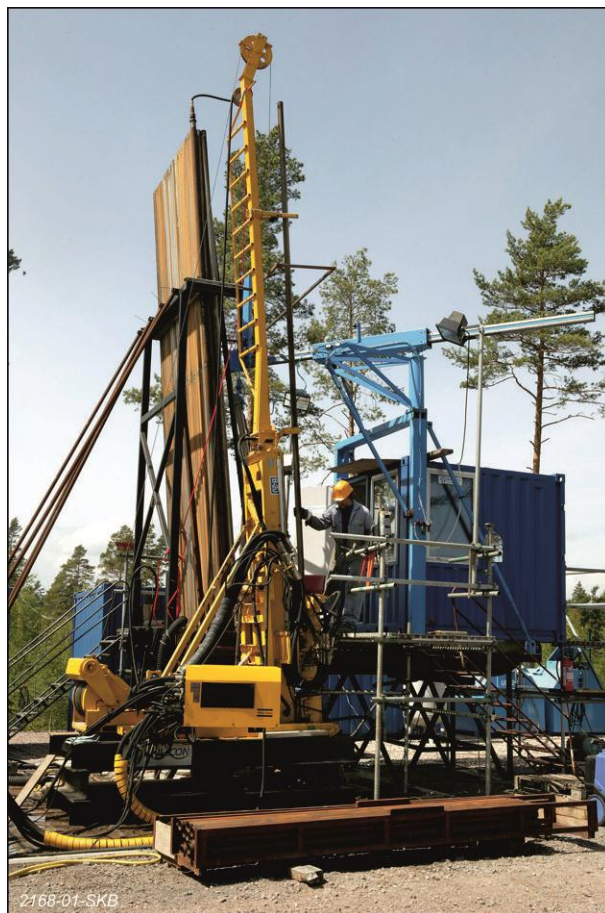
2.56 The representative authority, the UK Government and RWMD (as the developer) would be members of the Consultative Partnership.

2.57 Reasonable costs incurred by both the Steering Group and the Consultative Partnership – including costs of community engagement - would be covered by the engagement funding provided by the UK Government, as they have been through the previous process that occurred in west Cumbria.

2.58 When the Steering Group had concluded which specific surface and subsurface area(s) would be preferred, it would signal that it was ready for the developer (RWMD) to submit an application for planning permission for the relevant intrusive (borehole) investigations (see paragraphs 3.38 – 3.40).

2.59 More than one representative authority might be progressing through the ‘Focusing’ phase at this point, but the UK Government would need to consider whether it was appropriate to proceed with borehole investigations in some or all of them.

2.60 On receipt of the relevant consents and permits, the next 5-10 years of the ‘Focusing’ phase would be spent assessing the geological suitability of the subsurface rock volume(s) proposed to potentially host a GDF, and planning in detail the layout and design of both the surface and subsurface facilities. It would include the undertaking of exploratory borehole investigations and seismic surveys.



Borehole drilling rig, Sweden (courtesy SKB)

2.61 Towards the end of the ‘Focusing’ phase, a single site should have been identified in each area, and detailed development plans drawn up. These plans would form the basis for the RWMD development consent application for a GDF itself in the area that is finally selected.

2.62 Preparation of the development consent application would require very extensive public consultation, taking into account wider interests.

2.63 At an appropriate point in the ‘Focusing’ phase, and as informed by responses to this Consultation, the final test of community support would be taken (see paragraphs 2.37 – 2.42). Once that test had been taken, and subject to community support being demonstrated, the right of the representative authority to withdraw from the siting process would cease.

2.64 If development consent is granted, underground operations and construction of a GDF could proceed, provided required regulatory consents are granted. In recognition of the significant commitment made by the community, a substantial proportion of the remaining Community Benefits Package could be released after this point.

Question 2 – Do you agree with the proposed amendments to decision making within the MRWS siting process? If not, how would you modify the proposed phased approach, or, alternatively, what different approach would you propose? Please explain your reasoning.

Roles in the siting process

The case for change

- 2.65 Experiences of the siting process to date, taken together with information provided during the Call for Evidence, point to the need for clarity in the way that certain roles and responsibilities were set out in the White Paper. The current lack of clarity presents a potential barrier to communities becoming involved in the siting process and reduces the likelihood of a willing host community with suitable geology being identified.
- 2.66 The approach taken both by the UK Government and RWMD to engagement was largely passive, limited to making information available, but not actively engaging with potential host communities until they chose to take the 'first step'.
- 2.67 By being labelled 'Decision Making Bodies' in the context of the siting process, councillors engaged in the siting process felt that they were forced into adopting a neutral position on both a GDF and involvement in the siting process. This reduced the quality of local debate and stifled valid discussion.
- 2.68 The work of regulators may have been less visible to stakeholders and the general public than it should have been, given their fundamental and ultimately decisive role in relation to the operational and environmental safety of a GDF. The Nuclear Energy Agency has stressed the importance of the regulators' role and how they are perceived in radioactive waste management internationally³⁷.
- 2.69 There was no defined role for non-governmental organisations (NGOs), who may be prepared to provide a constructive challenge function in the process, helping to ensure that it is robust.

Proposed amended approach

- 2.70 Where changes are proposed to the roles of the key players in the current siting process (see paragraph 1.41), they are intended to provide greater clarity on responsibilities and / or to improve the visibility of key organisations earlier in the process, for the benefit of potential host communities. The main proposed changes are set out below.

UK Government

- 2.71 The UK has been generating higher activity radioactive waste for over fifty years, either in national defence or energy industries, and it is in the long-term national interest that a permanent solution for disposal of this waste is implemented. It is proposed that the UK Government assumes a more active role in raising awareness of the siting process for a GDF nationally, and in bringing the opportunity to engage to the attention of potential host communities. This includes holding a national public awareness and engagement programme (paragraphs 2.13 – 2.15), making more information available earlier in the

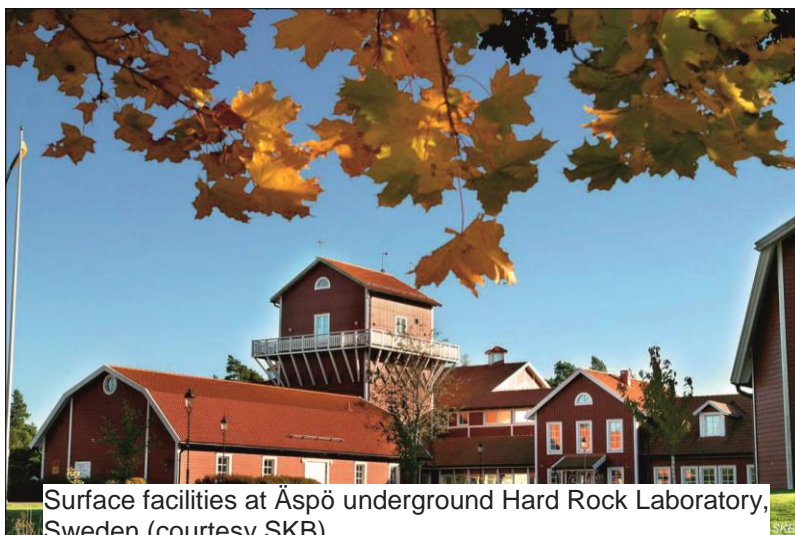
³⁷ 'The Regulator's Evolving Role and Image in Radioactive Waste Management Lessons Learnt within the NEA Forum on Stakeholder Confidence', NEA 2003 <http://bit.ly/14LjeJZ>

process (see paragraphs 2.16 – 2.18 and 2.50), and adopting a more proactive approach to stakeholder engagement and communications in general.

NDA / RWMD

2.72 The NDA is responsible for decommissioning and cleaning up the UK’s civil nuclear facilities (which have come to the end of their working life) and for the implementation of geological disposal. It is proposed that the NDA should advocate geological disposal as an essential enabler for its decommissioning and waste management responsibilities.

2.73 RWMD is the NDA’s implementing organisation for geological disposal. RWMD will be responsible for taking forward the siting process, obtaining planning, nuclear site licence and environmental permissions, and constructing and operating a GDF. It is proposed that RWMD should play a leading role in helping local communities engaged in the siting process to understand the range of issues related to the implementation of a GDF. With this in mind, it is proposed that RWMD would be a member of the ‘Steering Group’ that would be established in the ‘Focusing’ phase (see paragraph 2.53).



Surface facilities at Äspö underground Hard Rock Laboratory, Sweden (courtesy SKB)

Local government

2.74 The role of locally-elected bodies in the siting process remains crucial. As set out in paragraphs 2.22 – 2.30, it is proposed that, in order to provide greater clarity over where local decision making power sits, the UK Government should specify the level at which a host community’s Right of Withdrawal is exercised – and that this ‘representative authority’ should be the District Council (or its equivalent) in England.

2.75 As indicated in paragraph 2.31, in advance of decisions in the light of any consultation, the Welsh Government considers that county and county borough councils in Wales should represent the interests of their local communities in these matters.

2.76 Whilst district councils in Northern Ireland would be best placed to represent the interests of their local communities, the Northern Ireland Executive will need to consider what policy and legislative changes are necessary to allow them to undertake this role, should this be indicated by any decisions made in light of this consultation.

2.77 The role that the representative authority would perform in a revised siting process is set out in detail in paragraphs 2.43 – 2.64. In summary its role is to:

- Represent the interests of the community affected by the GDF project in the discussions with the UK Government;

- Decide whether or not the Right of Withdrawal from the siting process should be exercised;
- Ensure emerging community concerns are addressed by the relevant bodies; and
- Take the final decision to volunteer to host a GDF, subject to the final test of community support.

2.78 In a two-tier local authority area, the County Council should be a member of the Consultative Partnership and play a prominent role in it. The Consultative Partnership would appoint a Chair, and also identify a member who would also act as the channel for the exchange of information between the Steering Group and the Consultative Partnership.

2.79 Through the Chair of the Consultative Partnership, the Steering Group would engage directly with the Consultative Partnership to update them on progress of the siting process and to ensure issues raised by the Consultative Partnership are addressed within the process.



Receipt of HLW transport cask at CLAB (central underground interim storage facility for spent nuclear fuel), Sweden (courtesy SKB)

Regulators

2.80 It is proposed that both the Office for Nuclear Regulation (ONR) and, in England, the Environment Agency (EA) should play a more prominent role, engaging with communities throughout the siting process – but in a way that does not undermine their independence. In Wales, responsibility for the environmental regulation of any GDF would rest with Natural Resources Wales. The EA would consult with colleagues in the Northern Ireland Environment Agency throughout the siting process, to ensure that any environmental issues specific to Northern Ireland are addressed.

2.81 While it is not for regulators to make judgements on the suitability of potential volunteer areas at points of the process that would prejudice later regulatory permissions, there is scope for them to explain their role in the siting process and increase public confidence in the stringent safety and environmental protection standards that a GDF will have to meet in order to obtain a nuclear site licence and environmental permits.

External stakeholder engagement

2.82 The UK Government welcomes a wide range of views in the development of its proposals and plans for implementation of a GDF. Constructive challenge can lead to more effective policy and delivery. In support of a revised siting process, the UK Government is keen to explore options for more effective engagement with NGOs and other groups, some of whom may be opposed to the implementation of geological disposal.

2.83 As part of the governance of the current siting process, the Geological Disposal Implementation Board (GDIB), chaired by the DECC Minister, exists to allow the membership to hold the UK Government to account for delivery of the GDF project. In

order to give NGOs a more clearly defined role in relation to the siting process, we propose that the format and structure of GDIB be examined and a new external stakeholder group considered, in consultation with current GDIB members and other key stakeholders. It may be that multiple channels for challenge are needed, and the UK Government is open-minded about what these should be.

2.84 Consistent with responses to the Call for Evidence, the UK Government is exploring potential ways in which technical statements (made by bodies such as the UK Government, RWMD, or campaigning organisations) could be independently verified and peer reviewed.

2.85 There are a number of options for achieving this, including:

- Using CoRWM. In addition to the Committee's current role in providing advice to Ministers and scrutinising Government policy, CoRWM's terms of reference could be revised to allow them to provide advice to volunteer communities or potential volunteer communities;
- A 'pool' of peer reviewers could be identified and called upon by (potential) volunteer communities to review work. The pool could be built up flexibly using recommendations on a case by case basis from the membership of learned societies such as the Royal Society, Royal Academy of Engineering and the Geological Society; or
- An entirely new independent advisory body could be established.

Question 3 – Do you agree with this approach to revising roles in the siting process set out in the White Paper? If not, what alternative approach would you propose and why?

Chapter 3 - Technical delivery

- 3.1 Geological disposal involves immobilising radioactive waste within multiple, engineered barriers, and then isolating it deep inside a suitable rock formation to ensure that no harmful quantities of radioactivity ever reach the surface environment. The delivery of such a highly engineered piece of infrastructure requires a robust, objective, technical process, underpinned by sound scientific and engineering evidence.
- 3.2 The technical aspects of the process cannot, however, be considered in isolation. They must be consistent with, and supportive of, the voluntarism and partnership approach to siting described in the preceding Chapter. Potential host communities must have access to the information and advice they need to have confidence in a revised siting process.
- 3.3 This Chapter explores the technical aspects of the programme – **geology, planning**, and the **inventory** for disposal – in terms of how they impact on the siting process.

Geological settings

The case for change

- 3.4 One of the key messages from local authorities involved in the west Cumbria and Shepway processes was that there was insufficient geological information provided to councils at an early enough stage to inform their decision making. In particular, the position required by the White Paper - that the potential suitability of the geology would only be addressed *after* a Decision to Participate - left an information void and local questions and concerns unanswered.
- 3.5 Responses to the Call for Evidence have suggested that the geological aspects of the siting process should be given greater consideration at an earlier stage. The majority of respondents have called for earlier consideration of geological information in the siting process, with some seeking a technical screening of areas with the 'most suitable' geology before inviting volunteers to join the siting process. This is so that geological suitability is not left as an issue for local decision makers, and to prevent money and time from being 'wasted' in areas of unsuitable or 'less suitable' geology.

Proposed amended approach

- 3.6 In order to address these issues, the UK Government proposes to amend the ways in which geological information is provided during the siting process. The purpose would be to provide a greater level of geological understanding much earlier in the siting process. This should help ensure more informed decision making at the local level and provide more robust information to the public.

- 3.7 The proposed amended approach would need to include communication tools which can effectively inform the general public, and to be able to take into account the inevitable uncertainty in the geology at potential facility depths.
- 3.8 A number of potential approaches to providing a greater level of geological understanding earlier in the siting process have been considered. Given specific calls from stakeholders for the use of geological screening at a national level, before inviting volunteers, this approach was considered in some detail.
- 3.9 It is the UK Government's preliminary view that the use of criteria to identify (or 'pre-screen') areas that are considered 'suitable' or 'unsuitable' at the outset should not be adopted. There are a number of reasons for this:

Unsuitability screening

- The application of the previously defined 'unsuitability' screening criteria³⁸ on a national basis is not considered to be feasible based upon discussions with the British Geological Survey (BGS). These criteria were designed to be applied at a local level, based on existing knowledge of available resources — not at a large scale, national level — and therefore their wide application would require the expert interpretation of existing information and mapping on a highly localised basis;
- Although a higher level 'unsuitability' screening than this could be applied, it would risk excluding areas with suitable geology by oversimplifying the process. By applying something very large scale, we could not take account of the local geological systems that will determine suitability at a site.

Suitability screening

- There is no 'best' or 'most suitable' generic type of geology;
- There is a large range of potentially suitable geological settings in the UK (e.g. the Environment Agency have identified 9 potentially suitable generic settings³⁹). Due to this wide range, it is difficult to define simple high level criteria which could be applied effectively at a national level. Different sites will have different potential advantages, and the engineered elements can be tailored to these. It will not be possible to say, in advance of any work being carried out, that one is 'better' than another;
- Although there is a large amount of information available to provide a robust understanding of the broad geology of the UK at a national and regional scale, this information and understanding is not consistent at the more detailed local level, particularly at depth. Screening at the national level carries the risk of not identifying areas which are potentially 'suitable' at the local scale;

³⁸ Sub-surface exclusion criteria for geological disposal: Joint report of the Criteria Proposals Group (CPG) and the Criteria Review Panel (CRP) <http://bit.ly/1ehcmNM>

³⁹ 'Technical issues associated with deep repositories for radioactive waste in different geological environments', Metcalfe and Watson, 2009 <http://bit.ly/1eDBbB6>

- The suitability of specific areas is dependent on more than just their geology; it also includes other factors such as the way water moves through the rocks (hydrogeology) and the chemical characteristics of the water moving through the rocks (hydrogeochemistry). Even if high level criteria could be developed, the information would not be available to apply these in an effective way. It will not be possible to make reliable judgements about these factors without years of detailed study of particular sites, which means that initial screening has limited usefulness when it comes to providing evidence for definitive statements about suitability.

3.10 An important factor that has been taken into account in our proposed amended approach is that, although a lot is known about the general geological structure of the UK, particularly at shallower depths, there is significant uncertainty at the depths at which a GDF would need to be constructed. In particular, the hydrogeological and hydrogeochemical conditions in the 200m to 1,000m depth range, which will have a strong influence on the potential suitability of an area, are not well known.

3.11 Our proposed approach to reducing geological uncertainty earlier in the siting process takes account of these practical challenges. It recognises both the desire for more geological information early in the process, and the difficulty in making definitive statements about suitability on the basis of limited information. Our proposed approach would take two forms:

- The UK Government would publish information on regional geology, in advance of any 'call' for volunteers. This would inform communities about the basic geology in that region, attempting to provide information without making definitive judgements about suitability based on the limited information available (see paragraph 3.15).
- The UK Government would enable a rapid and transparent response to any community interested in learning more about the process. This would include a detailed, independently scrutinised and peer reviewed geological report, made available during the 'Learning phase' of the siting process (see paragraph 2.50 and paragraphs 3.16 – 3.20). The report will be necessarily high level, based on the data available, but it will provide sufficient information for communities to engage in discussion on the geological 'prospects' for hosting a GDF in their area. The report could include new aerial geophysical survey work, if appropriate.

3.12 Such an approach would:

- Provide factual information, helping people understand what is already known about their regional geology. This would in turn facilitate an informed discussion about geological prospects at the outset;
- Enable any community that was interested to access peer reviewed, information on the geology of their area from a trusted source early in the consideration of any area;
- Allow for a balanced and open appraisal of local geoscientific factors, in relation to local socio-economic and environmental factors;

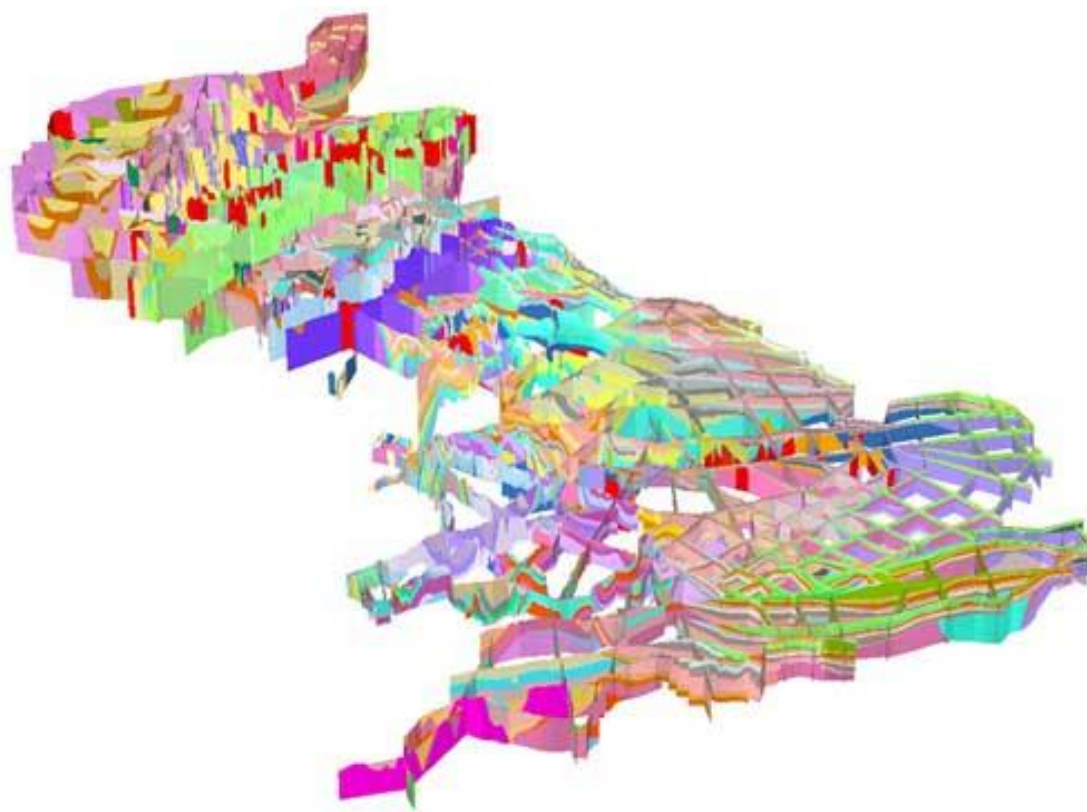
- Allow a community to know early in the siting process whether there was a reasonable chance of identifying a suitable geological volume in their area.

3.13 This approach could proceed in a number of stages, as set out in the following paragraphs.

Pre-launch

3.14 The BGS has developed a high level visualisation of the geology of England, Scotland and Wales comprising a number of interconnected vertical slices or cross-sections shown in Figure 5 and referred to as GB3D⁴⁰. Prior to the launch of a revised siting process, the BGS would further develop this model, to assist the communication and assessment of the geological aspects of any communities wishing to learn more.

Figure 5 - The BGS GB3D — 3D geological model for Great Britain



⁴⁰ BGS National fence diagram <http://bit.ly/13LOZoS>. Although this model presents the BGS's best understanding of the geology at the national level, it is important to note that even at this scale there is considerable uncertainty on the precise geology in many parts of the UK, particularly at depth.

Launch

3.15 At the launch of a revised siting process, BGS would publish on their website brief texts for each of the 13 Regional Guide areas covering England, Wales and Northern Ireland, providing a geological model for each region in plain English. A simple 3D geological visualisation of the geology of England and Wales, meaningful to non-geologists, could also be produced over this timescale, based on the BGS GB3D. This material could be used to inform early discussions with local authorities interested in finding out more.

'Learning' phase

3.16 If a representative authority was interested in learning more about the siting process, then RWMD would commission BGS to carry out an assessment of the known geological information on the area, in order to produce a geological report for the representative authority to consider, on a no-commitment basis (see paragraph 2.50).

3.17 The information generated would be used by RWMD as the basis for making an early judgement on whether there were reasonable prospects for siting a GDF in the area specified. This judgement would need to take account of International Atomic Energy Agency Guidance⁴¹ on siting of geological disposal facilities and also RWMD's own generic Disposal System Safety Case,⁴² which has been reviewed by regulators.

3.18 RWMD's generic Disposal System Safety Case identifies three pathways through which radioactivity could return to the surface from a GDF, which must be addressed in the safety case:

- Human Intrusion – the risk of future generations drilling into the facility. Account would be taken of the criteria set out in Annex B of the White Paper⁴³ for screening out unsuitable areas;
- Gas Migration – the generation and/or migration of gas to the surface;
- Groundwater Migration – the potential for radioactivity release through the groundwater pathway.

3.19 It is expected that the geological assessment carried out by the BGS will provide sufficient information to make an early judgement on whether there are 'reasonable prospects' of any particular geological setting being suitable for a GDF. Extensive further investigations, during the 'Focusing' Phase, would be required to assess this.

⁴¹ 'Geological Disposal Facilities for Radioactive Waste, Specific Safety Guide', 2011 <http://bit.ly/15W5WJY>

⁴² Published as Nuclear Decommissioning Authority 'Geological Disposal: An overview of the generic Disposal System Safety Case', NDA/RWMD/010, 2011 <http://bit.ly/14F3pd1>

⁴³ 'Managing Radioactive Waste Safely – A Framework for Implementing Geological Disposal', June 2008 <http://bit.ly/13LFztm>

3.20 There will inevitably be uncertainty in the information available for the assessments in the 'Learning' Phase, until such investigations have been carried out. To manage this, 'expert judgement' will need to be exercised and the work will be subject to peer review. In addition there will be scope during the 'Learning' Phase for new geophysical survey work to complement existing geological data.

'Focusing' phase

3.21 If the geological report indicated that there were 'reasonable prospects' of finding a suitable geological formation, and both the representative authority and the UK Government decided to move into the 'Focusing' phase, further assessments would be undertaken to identify potential sites against the six high level site selection criteria which have been developed previously⁴⁴:

- Geological setting;
- Potential impact on people;
- Potential impact on the natural environment and landscape;
- Effect on local socio-economic conditions;
- Transport and infrastructure provision;
- Cost, timing and ease of implementation.

3.22 It may be appropriate to undertake surface-based non-intrusive geophysical investigations (e.g. seismic reflection surveys) during this phase to improve understanding of local geological structures.

3.23 Recognising that there will still be considerable uncertainty in many aspects of the subsurface, there would be significant use of independent technical peer review and scrutiny throughout this process.

3.24 Surface-based investigations, including further geophysical surveys and borehole investigations, would be required to enable the geological structure (and the hydrogeological, hydrochemical and geomechanical conditions) at depth to be assessed. It is likely that these investigations would take in the order of 10 years to complete. Although there would still be uncertainty associated with some aspects of the sub-surface until underground access had been undertaken, these surface-based investigations would provide a high level of confidence as to the suitability (or otherwise) of the subsurface. They would therefore provide sufficient information to identify a preferred site for further underground investigation.

⁴⁴ <http://bit.ly/1e20gXI>

Question 4 – Do you agree with this proposed approach to assessing geological suitability as part of the MRWS siting process? If not, what alternative approach would you propose and why?

Planning

The case for change

- 3.25 In the White Paper, the UK Government did not take a final decision on how planning permission for the development and construction of a GDF would be sought.
- 3.26 While stating that it was ‘inclined to look towards’⁴⁵ applying the nationally significant infrastructure planning regime⁴⁶ for the construction of a GDF, this new planning regime was not in place when the White Paper was published. A GDF does not currently fall within the statutory definition (in the Planning Act 2008) of a ‘Nationally Significant Infrastructure Project’.
- 3.27 While indicating that planning consent would be required for the earlier intrusive investigations, such as drilling boreholes, to characterise potential candidate sites, the White Paper did not express a view on which planning regime would apply to these planning decisions.
- 3.28 In practice, the UK Government’s ‘currently minded’ position with regard to how planning applications would be determined created an ongoing degree of uncertainty for communities involved, or considering involvement, in the siting process for a GDF. This did not help efforts to build trust in the siting process.
- 3.29 The West Cumbria MRWS Partnership reported⁴⁷ some concern about the uncertainty over the designation of a GDF as a nationally significant infrastructure project. They reported⁴⁸ that many concerns in this area related to the uncertainty about who would influence the planning process and how a balance between local and national views would be struck. There were also concerns raised⁴⁹ about the relationship between the voluntarist approach to a siting a GDF (as set out in the White Paper) and the separate nationally significant infrastructure planning regime for consenting development.
- 3.30 A number of respondents to the Call for Evidence suggested that the approach to seeking planning permission for a GDF should be clarified. Most of those proposing specific changes suggested that the nationally significant infrastructure planning regime was most suited to consideration of a GDF, given the scale and national significance of the project. It was also suggested that the nationally significant infrastructure planning regime could assist in engagement with local communities.

⁴⁵ ‘Managing Radioactive Waste Safely – A Framework for Implementing Geological Disposal’, June 2008 <http://bit.ly/13LFztm> paragraph 5.30

⁴⁶ <http://bit.ly/17QHAF0>

⁴⁷ ‘The Final Report of the West Cumbria Managing Radioactive Waste Safely Partnership’, August 2008 <http://bit.ly/13LPRcU>, paragraph 10.28

⁴⁸ Ibid. paragraph 10.29

⁴⁹ Ibid. paragraph 30

3.31 Respondents to the Call for Evidence who did not favour the use of the nationally significant infrastructure planning regime felt that planning decisions should be taken at District Council or even at Parish level (as the level of local government closest to the site of a GDF and potentially most affected by its construction and operation) although we note that this power could rest with the County Council in two-tier authority areas under the current system.

Proposed amended approach

Planning for a GDF in England

Nationally Significant Infrastructure Project

- 3.32 The UK Government believes that the approach to planning for a GDF must be specified going forward, and that there are clear advantages to the nationally significant infrastructure planning regime. The UK Government's preliminary view is that the development of a GDF (in England) should be sought through the nationally significant infrastructure planning regime as set out in the Planning Act 2008.
- 3.33 This would mean that the Planning Inspectorate would consider any development consent application for a GDF in England and make a recommendation to the DECC Secretary of State. The DECC Secretary of State would then make the ultimate decision on whether to grant or to refuse planning consent.
- 3.34 The rationale for this approach is that a GDF is clearly an infrastructure development on a major scale, and of national significance - precisely the type of development for which the nationally significant infrastructure planning regime has been established. It sets out a clear decision making process, involving objective examination by the Planning Inspectorate, which recommends to the Secretary of State whether or not to grant development consent. The fact that the final decision is made by the Secretary of State maintains democratic accountability.
- 3.35 The nationally significant infrastructure planning regime places significant requirements on the developer (in this case RWMD) to consult local communities, local authorities, statutory bodies, and other relevant groups before any application for development consent is made. This includes clearly defined arrangements for considering representations from interested parties to establish the facts pertinent to determining the application. There are also clear provisions for the involvement of local authorities (both those in whose area a development is taking place and neighbouring authorities) to ensure local impacts are properly considered and inform appropriately the Planning Inspectorate's recommendation to the Secretary of State.
- 3.36 As described above, some respondents to the Call for Evidence felt that planning decisions in relation to a GDF should be made by local planning authorities (or even Parish Councils). The UK Government's preliminary view is that it would not be appropriate for planning decisions for a nationally significant infrastructure project such as a GDF to be made locally. Any planning application will need to take account of community views where they are relevant – but there is no requirement for community support inherent in the planning process itself. Through application of this voluntarism and partnership siting

process for a GDF, we would go further and require a demonstration of community support before development could proceed.

- 3.37 Subject to the outcome of this consultation, the UK Government will set out how it will bring a GDF within the definition of a 'Nationally Significant Infrastructure Project' in section 14(1) of the Planning Act 2008.

Planning permission for intrusive investigations

- 3.38 The White Paper did not distinguish between planning permission for a GDF itself and planning permission for the intrusive investigations that will precede it. The UK Government believes that the approach to planning permission for intrusive investigations in England must also be clarified.

- 3.39 While subject to the outcome of this consultation, the UK Government's preliminary view is that intrusive investigations would be brought within the definition of a 'Nationally Significant Infrastructure Project' in section 14(1) of the Planning Act 2008.

- 3.40 The rationale for this is that local borehole investigations are an integral part of the process for developing a GDF, which is clearly an infrastructure development of national significance. As outlined above, this route enables applications to be considered by the Planning Inspectorate, and contains clear arrangements for local consultation and the consideration of local representations.

Planning permission for non-intrusive investigations

- 3.41 Many non-intrusive geophysical investigations (which would be carried out to inform earlier engagement with local communities) may not fall within the statutory definition of 'development' and may not therefore require planning consent in order to be carried out. However, in circumstances where the proposed non-intrusive geophysical investigations do constitute 'development', and therefore would require planning consent, there are a number of potential statutory consent mechanisms which could be used to facilitate these specific non-intrusive investigations taking place, and to provide for the timely provision of new geological information for local communities.

National Policy Statement

- 3.42 In support of this approach, but again subject to the outcome of this consultation, the UK Government also proposes that it will publish a National Policy Statement, specifically for a GDF. The National Policy Statement would be subjected to an Appraisal of Sustainability (AoS) in accordance with section 5(3) of the Planning Act 2008, and the AoS would be carried out in such a way that it also satisfies the requirements of the Strategic Environmental Assessment (SEA) Directive⁵⁰. A separate Habitats Regulation Assessment

⁵⁰ 2001/42/EC <http://bit.ly/IQ6hrz>

(HRA) would be produced. This was the same process that was undertaken for the National Policy Statement for Nuclear Power Generation (EN-6)⁵¹.

- 3.43 A National Policy Statement is not required for development to be consented within the nationally significant infrastructure planning regime, but where a relevant National Policy Statement is in place, the Secretary of State must determine any applications in accordance with it, unless certain other criteria (set out in the Planning Act 2008) apply.
- 3.44 With regard to the timing and nature of the National Policy Statement, the UK Government's preliminary view is that a 'generic' (i.e. not site specific) National Policy Statement would be developed shortly after the revised siting process is launched. The National Policy Statement would set out the assessment principles against which applications would be considered, together with background information on geological disposal, and how it is to be implemented in the UK. It would not consider specific potential sites or areas.
- 3.45 Radioactive waste disposal is a devolved matter and any planning decisions for a GDF in Wales would be taken through the planning system in Wales. If circumstances were to arise requiring planning consideration of a GDF in Wales, the Welsh Government would ensure that appropriate planning and environmental assessment mechanisms were put in place, and consulted upon, to enable any decisions to be taken in an open and transparent way.
- 3.46 As the GDF is an infrastructure development on a major scale, and of national significance, all planning issues in Northern Ireland would be considered by the Department of the Environment (DOENI) and decided by the Minister. If circumstances were to arise requiring planning consideration of a GDF in Northern Ireland, the DOENI would ensure that appropriate planning and environmental assessment mechanisms were put in place, and consulted upon, to enable any decisions to be taken in an open and transparent way.

Question 5 – Do you agree with this proposed approach to planning for the geological disposal facility? If not, what alternative approach would you propose and why?

Inventory

The case for change

- 3.47 As set out in the White Paper, the higher activity radioactive waste to be managed in the long-term through geological disposal are those that:
- Cannot be managed under the 'Policy for the Long-term Management of Solid Low Level Radioactive Waste in the United Kingdom' published in March 2007;
 - Are not managed under the Scottish Government's policy for higher activity waste, currently near-surface, near site storage and disposal.

⁵¹ 'Appraisal of Sustainability of the draft Nuclear National Policy Statement: Main report', Nov 2009, paragraph S.3 <http://bit.ly/17WgV8V>

3.48 Higher activity waste includes the following categories of radioactive waste:

- High level waste (HLW);
- Intermediate level waste (ILW); and
- A small fraction of low level waste (LLW) that does not meet the acceptance criteria for disposal at a low level waste repository.

Detailed descriptions of these waste types are provided in the UK Radioactive Waste Inventory⁵². They are wastes that will be managed in the long-term through disposal in a GDF.



HLW Final disposal copper canister (courtesy Posiva)

3.49 In addition to existing waste, the White Paper highlighted some radioactive materials that are not currently classified as waste *“but that may, if it were decided at some point that they had no further use, need to be managed through geological disposal”*⁵³. As stated in the White Paper, these radioactive materials include:

- Spent fuel;
- Plutonium; and
- Uranium.

3.50 Detailed descriptions of these radioactive materials are provided in the UK Radioactive Waste Inventory. The UK Government and the owners of these materials are currently investigating how they should be treated and managed in the long-term. Disposal in a GDF remains one option. In any future scenario, there will almost certainly be some percentage of these materials that cannot be re-used, and will need to be disposed of.

⁵² <http://bit.ly/16ki7EL>

⁵³ ‘Managing Radioactive Waste Safely – A Framework for Implementing Geological Disposal’, June 2008 <http://bit.ly/13LFztm> paragraph 3.5

- 3.51 In order to provide a sense of how much waste and materials might need to be disposed of in a GDF, the White Paper set out a 'Baseline Inventory'. This was expressed as estimated volumes, in cubic metres, and in radioactive content for each of the six categories of waste and materials above. These estimates were based on the then most recent UK Radioactive Waste Inventory (a comprehensive, routinely updated, and publicly available source of information on radioactive waste in the UK)⁵⁴.
- 3.52 The White Paper made it clear that the volumes quoted were, by necessity, only estimates. Much of the waste that will need to be disposed of in a GDF will arise in the future, as a result of operations yet to take place (such as decommissioning of existing facilities). Therefore exact volumes are difficult to predict with absolute certainty at this stage.
- 3.53 The White Paper also included a section on waste from new nuclear reactors. It noted that *"[it was] not possible to provide at [that] time a definitive inventory of radioactive waste that would arise as a result of a new nuclear build programme"*⁵⁵, but noted that Government policy required the owners and operators of new nuclear power stations to set aside funds over the operating life of the power station to cover the full costs of decommissioning and their full share of waste management and disposal costs. The White Paper stated that *"[through] agreed mechanisms for updating the Baseline Inventory, inclusion of new waste will be taken forward in discussion with host communities as the programme proceeds. GDF design activities will consider the necessary features to safely accommodate particular waste types if that proves necessary"*⁵⁶.
- 3.54 Since publication of the White Paper, there have been a number of changes which have impacted on the estimated inventory for geological disposal (the 'Baseline Inventory'). In 2010, the national waste and materials inventory was updated, which led to a reappraisal of the Baseline Inventory⁵⁷ and development of a complementary Upper Inventory based on a number of scenarios designed to describe how the Baseline Inventory could evolve (including ILW and spent fuel from potential new build reactors). In addition, devolved policy for higher activity radioactive waste management in Scotland⁵⁸ meant that some ILW previously identified for geological disposal would no longer be managed in this way.
- 3.55 The White Paper acknowledged the evolving nature of the inventory for disposal. It noted that it was impossible to predict with precision the inventory for disposal and identified the need for agreed mechanisms for updating the Baseline Inventory⁵⁹.
- 3.56 Concerns relating to the uncertainty (or perceived uncertainty) in the Baseline Inventory have also been reflected in responses to the Call for Evidence. Several respondents thought that a potential host community should have much greater certainty regarding the wastes and materials that would be disposed of in a GDF. Other respondents argued that the inventory for disposal should only include existing wastes and not wastes from a new

⁵⁴ <http://bit.ly/16ki7EL>

⁵⁵ 'Managing Radioactive Waste Safely – A Framework for Implementing Geological Disposal', June 2008 <http://bit.ly/13LFztm> paragraph 3.21

⁵⁶ Ibid. paragraph 3.22

⁵⁷ 'The 2010 Estimate of Radioactive Waste for Geological Disposal', August 2011, <http://bit.ly/1e21vq6>

⁵⁸ Scotland's Higher Activity Radioactive Waste Policy 2011 <http://bit.ly/1b56o0k>

⁵⁹ 'Managing Radioactive Waste Safely – A Framework for Implementing Geological Disposal', June 2008, <http://bit.ly/13LFztm> paragraph 3.17

nuclear build programme. Some were concerned that the UK might seek to import wastes from overseas and include these within the Baseline Inventory.

3.57 Other relevant issues that have impacted on the operation of the siting process to date include –

- The status of plutonium was unclear – as it was included in the Baseline Inventory for disposal as set out in the White Paper, but the UK Government later identified that its preferred approach was to reuse this material in the manufacture of mixed-oxide fuel (MOX) for use in reactors⁶⁰;
- Local uncertainty as to whether the Baseline Inventory would include wastes from the UK defence programme, or from overseas.

Proposed amended approach

3.58 In an effort to provide greater certainty for communities engaging in the process and focus discussions, the UK Government intends to clearly define a single Baseline Inventory for the purposes of geological disposal. The UK Government proposes that the focus should be on the waste and material types for disposal, as these are not expected to change over time, and information on the characteristics of the waste types can be made available to potential communities through a planned information programme.

3.59 It is proposed that the revised Baseline Inventory should comprise the following waste and material types:

- ILW arising from existing nuclear licensed sites, and medical, industrial, research and educational uses, in England and Wales;
- That small proportion of LLW not suitable in a low level waste repository;
- HLW from Sellafield reprocessing operations;
- ILW and irradiated fuel (and any LLW not suitable for disposal in a low level waste repository) from the defence programme in England and Wales, and from sites in Scotland not covered by the Scottish Higher Activity Waste Policy;
- Spent Fuel from existing reactors; Sizewell B and AGRs (noting that some AGR SF will be reprocessed) and from legacy sites such as Sellafield and Dounreay;
- Uranium stocks;
- Spent Fuel (oxide) and ILW from a new build programme of a specified maximum size, such as the 16GW(e) for which nuclear operators have developed proposals;

⁶⁰ 'Management of the UK's Plutonium Stocks – a consultation response on the long-term management of UK-owned separated civil plutonium', December 2011 <http://bit.ly/18bMSxX>

- Spent Fuel (MOX) from conversion of the UK's plutonium stocks plus any residual plutonium not suitable for fuel manufacture.

- 3.60 These defined waste types will form the basis of the revised Baseline Inventory of wastes and material for geological disposal. This revised Baseline Inventory includes both wastes and materials that might be defined as wastes in the future. This will be translated into waste volumes, waste package numbers and transport movements on a periodic basis by the NDA and made available as part of the planned information programme. These will form inputs to GDF design and safety case development which will be reviewed by independent regulators, and their findings made publicly available. The detailed volumes reported will change over time due to differing assumptions by the waste owners and site operators but communities can be confident that the underlying waste types and waste origins will conform to the waste types set out above.
- 3.61 Some of these waste types are subject to ongoing research to determine preferred long-term management approaches⁶¹. As such, alternative options for long-term management of some of these may be identified and adopted, leading to a reduction in the inventory for disposal. However, the UK Government believes that it is still preferable to define the revised Baseline Inventory so that it includes all potential waste types so that potential communities get the most complete possible picture of the inventory for disposal at an early stage and can have confidence that it will not expand materially over time.
- 3.62 The safety case for the disposal of spent fuel will need to be made and approved by regulators prior to disposal in a GDF. The UK Government has consulted with RWMD and is satisfied that there are no technical reasons why an appropriately designed GDF should not accommodate spent fuel from existing and from new nuclear power stations. Disposal of spent fuel will need to meet the requirements of the relevant regulatory bodies. The NDA has undertaken disposability assessments of wastes and spent fuel from EPR and AP1000 reactors as part of the regulators' Generic Design Assessment (GDA) process. RWMD concluded:

“On the basis of the GDA Disposability Assessment for the EPR⁶² [AP1000⁶³], RWMD has concluded that, compared with legacy wastes and existing spent fuel, no new issues arise that challenge the fundamental disposability of the wastes and spent fuel expected to arise from operation of such a reactor. This conclusion is supported by the similarity of the wastes to those expected to arise from the existing PWR at Sizewell B. Given a disposal site with suitable characteristics, the waste and spent fuel from the EPR [AP1000] are expected to be disposable”.

Regulators would subject any other proposed new reactor designs, or potential changes to fuel type used, to their licensing and permitting process (including GDA). This would include a disposability assessment for the spent fuel.

⁶¹ For example, uranium stocks could be reused or managed in some other way and not be consigned for geological disposal.

⁶² 'Generic Design Assessment: Summary of Disposability Assessment for Wastes and Spent Fuel arising from Operation of the UK EPR', 2009 <http://bit.ly/18Ugrz6>

⁶³ 'Generic Design Assessment: Summary of Disposability Assessment for Wastes and Spent Fuel arising from Operation of the Westinghouse AP1000', 2009 <http://bit.ly/14Lned5>

3.63 RWMD revisited these assessments in 2011 and confirmed that the conclusions remained valid based on the latest published generic Disposal System Safety Case⁶⁴.

3.64 UK Government general policy is that radioactive waste should not be imported to or exported from the UK except in specifically defined and limited circumstances⁶⁵. Import of radioactive waste into the UK might only be allowable where:

- Spent sealed sources, originally manufactured in the UK, are being returned to the UK for treatment and disposal;
- The waste is from small users such as hospitals in either another EU Member State or a developing country where it would be impractical for them to acquire suitable disposal facilities; or
- There are reusable materials that can be extracted from the wastes, or materials are being treated to make them more manageable. Where the wastes generated as part of these processes would not add materially to the UK's existing wastes, it may be decided that it would be impractical to return the materials to the country of origin. In these circumstances, waste materials could be added to UK stocks and, if an agreement to do so exists, a radiologically equivalent (or substitute) waste material would be returned instead.

Question 6 – Do you agree with this clarification of the inventory for geological disposal – and how this will be communicated with the volunteer host community? If not, what alternative approach would you propose and why?

⁶⁴ 'Management of Wastes from New Nuclear Build: Implications of the Generic Disposal System Safety Case for Assessment of Waste Disposability', 2011 <http://bit.ly/15RaSXo>

⁶⁵ Cm 2919 Review of Radioactive Waste Management Policy; the Transfrontier Shipment of Radioactive Waste and Spent Fuel Regulations 2008 <http://bit.ly/17ZHUym>

Chapter 4 – Communities

- 4.1 The siting process set out in the White Paper is built on the principles of voluntarism and partnership. The UK Government remains of the view that these principles should be at the heart of the site selection process for a GDF.
- 4.2 In an approach based on voluntarism and partnership, the community is key. The siting process must be tailored to be responsive to the interests, the concerns, the desires and the requirements of potential host communities. This is true both in terms of the substance of the siting process, but also in how we engage and communicate with communities.
- 4.3 This Chapter looks at aspects of the siting process where there is an explicit focus on the community – considering **community benefits** and **socio-economic and environmental effects**.

Community Benefits

The case for change

- 4.4 Construction and operation of a GDF will be a multi-billion pound project that will provide skilled employment for hundreds of people over many decades. There are likely to be spin-off industry benefits, infrastructure investments, benefits to local education or academic resources, and positive impacts on local service industries that support the facility and its workforce.
- 4.5 In addition to these direct benefits, the UK Government committed in the White Paper to providing a community benefits package to the community that hosts a GDF, commensurate with developing the social and economic wellbeing of a community that has decided to provide such an essential service to the nation.
- 4.6 Communities involved in the siting process to date have expressed four key concerns with regard to community benefits:
 - The UK Government has not been sufficiently clear as to the amount of community benefits that would be available;
 - The first release of community benefits comes too late in the current process;
 - The mechanism for delivering community benefits is unclear; and
 - Given the very long duration of the project, confidence in the long-term delivery of benefits is low, with promises of payment in many decades' time being neither meaningful nor credible.

- 4.7 Some respondents to the Call for Evidence have expressed the view that a Community Benefits Package could be seen as an attempt to ‘buy off local councillors’. We note that community benefits are now applied in relation to a range of energy sector infrastructure types.
- 4.8 The UK Government recognises the need for greater clarity about the purpose, amount, recipient bodies, delivery mechanism and timing of community benefits.
- 4.9 The UK Government also recognises that in order to be meaningful for communities, a proportion of community benefits should be released before the start of underground operations.

Proposed amended approach

- 4.10 The UK Government will make clear, in launching a revised siting process, that the purpose of community benefits is to recognise, through a meaningful and proportionate payment, that potential host communities are providing a service to the nation by considering hosting a major infrastructure project. It is also a means of ensuring that the local area makes the most of the opportunities presented by a major infrastructure project.
- 4.11 The UK Government will make clear that community benefits are additional to Engagement Funding (the funding that the UK Government provides to meet the costs of any community engaging in the siting process), and additional to any payments required of the developer, as identified by the planning process.
- 4.12 The UK Government would make clear, early in a revised siting process, the potential scale of community benefits.
- 4.13 During the ‘Learning phase’, participating communities and their neighbouring local authorities could begin to scope projects for funding through community benefits, informed by the study on socio-economic prospects for the area.
- 4.14 The UK Government would start paying benefits during the ‘Focusing’ phase.
- 4.15 As part of its investment in the host community, the UK Government would also create (potentially through legislation) a community fund, into which it would begin paying during the ‘Focusing’ phase. This would create a lasting commitment to support the community through future generations. The UK Government would only be able to retrieve these funds if a GDF was not constructed in the community.
- 4.16 The remainder of the available funds would be paid, including into the community fund, following the final decision to construct a GDF and during the early years of underground operations.

Question 7 – Do you endorse the proposed approach on community benefits associated with a GDF? If not, what alternative approach would you propose and why?

Socio-economic and environmental effects

The case for change

- 4.17 The White Paper contained a commitment from the UK Government to fully assess and account for environmental and sustainability issues in the geological disposal programme. It also committed the NDA to prepare and publish for consultation its proposals for sustainability appraisal and environmental assessment.
- 4.18 The NDA did this in 2008 and subsequently published its assessment strategy in July 2009⁶⁶. The strategy proposed the following:
- During Stages 1 to 3 of the site selection process, generic (i.e. not location-specific) assessments to help identify the potential environmental and socio-economic effects of implementing geological disposal. Some of this work has now been completed⁶⁷. Further generic assessment work, focusing on socio-economic effects, health and transport issues is ongoing.
 - During Stage 4, a Strategic Environmental Assessment (SEA) of proposals for implementing geological disposal in each participating community. This would support the identification and assessment of potential candidate sites.
 - Early in Stage 5, an Environmental Impact Assessment (EIA) to support planning applications for intrusive, surface-based investigations at remaining candidate sites.
 - Later in Stage 5 and into Stage 6, an EIA to support planning applications for underground operations at a preferred site.
- 4.19 The SEA and EIAs would comply with the requirements of the European SEA and EIA Directives and their transposing regulations in the UK. However, like the early generic assessment work, the scope of the SEA and EIAs would be widened beyond the statutory requirements, to include consideration of socio-economic, health and wider sustainability issues. A 'plan-level' Habitats Regulations Assessment (HRA), running concurrently with the SEA, and 'project-level' HRAs during Stages 4 and 5 would also be carried out to assess potential effects on internationally important nature conservation sites. A 'plan-level' assessment is a relatively high level assessment carried out on a proposed plan or programme. A 'project-level' assessment is more detailed and is normally carried out on a proposal to implement a project at a particular location.
- 4.20 Although compliance with relevant legislation (e.g. the SEA, EIA and Habitats Directives) is a fundamentally important consideration in planning this assessment work, its main aims are to promote a more sustainable outcome for the geological disposal programme, to help address environmental and socio-economic issues raised by stakeholders, to inform decision making and to build public confidence.

⁶⁶ 'Geological Disposal: A Strategy for Sustainability Appraisal and Environmental Assessment', July 2009 <http://bit.ly/1b56SU7>

⁶⁷ 'Geological Disposal: Generic Environmental and Sustainability Report for a Geological Disposal Facility - Main Report', October 2010 <http://bit.ly/18bNe7T>

- 4.21 RWMD's generic assessment work⁶⁸ has proved useful as a source of information during the early stages of the siting process. It was used to provide information to the West Cumbria MRWS Partnership on potential environmental and socio-economic effects^{69 70} and is available to other stakeholders interested in the MRWS programme and its potential environmental and socio-economic implications.
- 4.22 However, a number of specific issues⁷¹ were raised by the West Cumbria MRWS Partnership that were not explicitly addressed by the generic assessment work. These issues were largely focussed at a local community level. They included issues such as effects on inward investment, tourism, property prices, landscape character, local wildlife and so on. Under the current approach in the White Paper, such location-specific issues are not addressed until after a Decision to Participate (i.e. during the Stage 4 SEA and subsequent EIAs).
- 4.23 As with the issue of geological settings, a holding response that these issues would be addressed after a Decision to Participate added to uncertainty about the suitability of the area and exactly what geological disposal would mean for a particular local community.
- 4.24 Unlike with geological settings, most communities are likely to have a reasonably good understanding of the surface constraints and opportunities in their areas that might affect the siting or local acceptability of a GDF, such as designated areas of scientific, heritage or landscape interest, or areas earmarked for economic development. However, such understanding is unlikely to be complete and may also require objective interpretation in the context of delivering geological disposal.
- 4.25 Delaying an assessment until the siting process is well under way also means delaying the development of potential mitigation and enhancement measures to address issues such as potential blight associated with the development of a GDF, and making the most of the socio-economic benefits a disposal facility might bring to a community.
- 4.26 A recent review of assessment practice in nuclear waste management organisations in other countries⁷² highlighted that a balanced approach to safety, environmental and socio-economic issues *early* in the siting process - providing information to address a wide range of stakeholder concerns and aspirations - works well. Such an approach also has clear parallels with the siting process for disposing of used nuclear fuel in Canada, which is making good progress⁷³. Canada's Nuclear Waste Management Organisation has carried out early discussions with a number of interested communities and is now embarking on desk-based 'preliminary assessments of suitability', focusing on potential geological suitability, community well-being and socio-economic benefits.

⁶⁸ 'Geological Disposal: Generic Environmental and Sustainability Report for a Geological Disposal Facility - Main Report', October 2010 <http://bit.ly/18bNe7T>

⁶⁹ 'Summary note on Potential Impacts of Implementing Geological Disposal', October 2009 <http://bit.ly/1aCaVlh>

⁷⁰ 'Partnership Report on the Impacts of a GDF', July 2011 <http://bit.ly/1b578Cy>

⁷¹ Ibid. Appendix A

⁷² 'Review of Environmental Assessment Practice in waste management organisations and UK major infrastructure projects', October 2011 <http://bit.ly/17Zln3E>

⁷³ <http://bit.ly/1eDDIRq>

- 4.27 Responses to the Call for Evidence have also highlighted the need to address environmental and socio-economic issues earlier in the process. Several respondents stressed the importance of issues such as potential effects on house prices, businesses and tourism, and designated areas of scientific, heritage or landscape interest (e.g. National Parks, Sites of Special Scientific Interest etc.). Some felt that designated areas should be automatically excluded from the siting process. In raising these issues, most respondents felt that more information should be provided at an early stage in the siting process, to reduce uncertainty around the potential effects of a GDF.
- 4.28 Several respondents to the Call for Evidence also emphasised a need to clarify when an SEA would be undertaken. Those that expressed a preference suggested that this should be sooner rather than later, although there was no clear consensus on exactly when.

Proposed amended approach

- 4.29 In light of the lessons learned in Cumbria and elsewhere, and taking into account responses to the Call for Evidence, the UK Government's preliminary view is that the strategy for environmental assessment and sustainability appraisal should be changed. In broad terms, this would involve bringing forward certain elements of the strategy, and starting to address local environmental and socio-economic issues earlier in the process. As part of this approach, RWMD is currently planning to undertake further generic assessment work, with focussed studies on socio-economic, health and transport issues.
- 4.30 The commitment made in the White Paper to fully assess and account for sustainability issues would not change. However, the proposed approach to meeting this commitment, as set out in the NDA's 2009 assessment strategy, would.
- 4.31 At launch of the revised site selection process, the UK Government and RWMD would offer to provide further information about potential environmental, socio-economic, health and transport effects associated with implementing geological disposal - based on generic assessment work - to any community interested in finding out more about the process.
- 4.32 As set out in paragraphs 3.32 – 3.37, the UK Government's proposal is that planning permission for a GDF should be sought through the Nationally Significant Infrastructure Project regime, and that it will publish a National Policy Statement, specifically for a GDF and focusing closely on the detail(s) of the siting process (see paragraphs 3.42 – 3.44). The National Policy Statement would be subject to an Appraisal of Sustainability (AoS) in accordance with section 5(3) of the Planning Act 2008. The AoS would be carried out in such a way that it satisfied the requirements of the SEA Directive⁷⁴ and would consider the implications of different approaches to site selection. A separate Habitats Regulation Assessment (HRA) would be produced. The National Policy Statement, associated AoS and a 'plan-level' HRA would be developed shortly after the revised siting process was launched.
- 4.33 If there was mutual interest in learning more in a given area then, during the 'Learning' phase, the UK Government and RWMD would work with interested communities to develop a better understanding of the environmental and socio-economic implications of

⁷⁴ 2011/42/EC <http://bit.ly/IQ6hrz>

implementing geological disposal within their areas. This work would run concurrently with work to develop a better understanding of local geological suitability (see paragraph 3.16).

- 4.34 During the early part of a 'Focusing' phase, information generated on environmental and socio-economic constraints and opportunities would be available to support the identification of potential sites for a GDF. However, once the process starts to focus on a relatively limited number of 'more suitable' sites, then more detailed environmental and socio-economic studies would be needed to support decisions about which of these sites to take forward for surface based intrusive investigations (such as boreholes).
- 4.35 During the 'Focusing' phase (and much like the current approach), formal EIAs (satisfying the requirements of the EIA Directive⁷⁵ - or equivalent legislation then in force) would need to be developed at a site-specific level to support planning applications for boreholes and, subsequently, for underground operations.
- 4.36 Similar to the current approach a 'project-level' HRA would be undertaken alongside EIAs - to assess potential effects on internationally important nature conservation sites and to ensure compliance with the EC Habitats Directive.
- 4.37 Should a Welsh community wish to discuss an interest in hosting a GDF, the Welsh Government will include socio-economic and environmental matters in its consideration of any policy change which may be necessary, and will consult on them as appropriate.

Question 8 – Do you agree with the proposed approach to addressing potential socio-economic and environmental effects that might come from hosting a GDF? If not, what alternative approach would you propose and why?

⁷⁵ 2011/92/EU <http://bit.ly/zz7Nfb>

Chapter 5 – Summary of questions

Questions raised

5.1 The aim of the siting process for a GDF is to implement a safe and practicable solution for higher activity radioactive waste that is deliverable and inspires public confidence. Before embarking on any revisions to the process set out in the White Paper, in pursuit of this aim, the UK Government wants to be satisfied that it has heard, and had the opportunity to consider, all views. Public engagement with this consultation and input on the questions asked is critical to the success of the siting process – your views are important. Specific questions on which Government is seeking views are to be found within the text itself, but they are reproduced here for ease of reference. You may comment on all or only some of the questions raised.

Consultation Questions	
1.	Do you agree that a test of public support should be taken before the representative authority loses the Right of Withdrawal? If so, what do you think would be the most appropriate means of testing public support, and when should it take place? If you do not agree with the need for such a test, please explain why.
2.	Do you agree with the proposed amendments to decision making within the MRWS siting process? If not, how would you modify the proposed phased approach, or, alternatively, what different approach would you propose? Please explain your reasoning.
3.	Do you agree with this approach to revising roles in the siting process set out in the White Paper? If not, what alternative approach would you propose and why?
4.	Do you agree with this proposed approach to assessing geological suitability as part of the MRWS siting process? If not, what alternative approach would you propose and why?
5.	Do you agree with this proposed approach to planning for a GDF? If not, what alternative approach would you propose and why?
6.	Do you agree with this clarification of the inventory for geological disposal – and how this will be communicated with the volunteer host community? If not, what alternative approach would you propose and why?
7.	Do you endorse the proposed approach on community benefits associated with a GDF? If not, what alternative approach would you propose and why?
8.	Do you agree with the proposed approach to addressing potential socio-

	economic and environmental effects that might come from hosting a GDF? If not, what alternative approach would you propose and why?
9.	Do you have any other comments?

How to respond

- 5.2 When responding, please state whether you are responding as an individual or representing the views of an organisation. If you are responding on behalf of an organisation, please make it clear who the organisation represents and, where applicable, how you assembled the views of members.
- 5.3 When responses to this consultation have been analysed, the Government will issue a response. When considering responses to this consultation, the Government will give greater weight to responses that are based on argument and evidence, rather than simple expressions of support or opposition.
- 5.4 This consultation began on **12 September 2013** and will close on **5 December 2013**.

Responding online

Through the Government website https://econsultation.decc.gov.uk/decc-policy/managing-radioactive-waste-safely-siting-process/consult_edit

Responding by post or email

GDF siting process consultation
 Department of Energy and Climate Change
 Room M07
 55 Whitehall
 London
 SW1A 2EY
 Email: radioactivewaste@decc.gov.uk

Responses from individuals, communities and organisations in Wales should be copied to the address below as well as being sent to one of the DECC addresses above:

MRWS consultation
Radioactivity and Pollution Prevention Branch
Welsh Government
Cathays Park
Cardiff
CF10 3NQ
E-mail: RPPmailbox@wales.gsi.gov.uk

Responses from individuals, communities and organisations in Northern Ireland should be copied to the address below as well as being sent to one of the DECC addresses above:

Department of Environment
44 – 58 May Street
Town Parks
Belfast
BT1 4NN
E-mail: WDRT@doeni.gov.uk

Confidentiality and data protection

- 5.5 Responses to this consultation, including names, will be made public and may be used in Parliament as evidence in the Parliamentary scrutiny process, and may be published under the authority of Parliament, unless respondents specifically request confidentiality.
- 5.6 Respondents who wish for their responses to remain confidential should clearly mark the document/s to that effect and explain the reasons for confidentiality. Any confidentiality disclaimer that may be generated by your organisation's IT system will be taken to apply only to information in your response for which confidentiality has specifically been requested.
- 5.7 Respondents should be aware that confidentiality cannot always be guaranteed. For example, responses, including personal information, may be subject to publication or release in accordance with the access to information regimes (primarily the Freedom of Information Act 2000, the Data Protection Act 1998 and the Environmental Information Regulations 2004).

Additional copies

- 5.8 Electronic versions of all of the documents being published as part of this consultation are available on the website <https://www.gov.uk/government/consultations/geological-disposal-facility-siting-process-review>

- 5.9 You may make copies of these documents without seeking permission.
- 5.10 Welsh language copies of the consultation document and the response form will be available at the website at paragraph 5.8.

Consultation conduct

- 5.11 If you have comments or complaints about the way in which this consultation has been conducted, these should be sent to:

Consultation Co-ordinator
Department of Energy and Climate Change
Area 6A
3 Whitehall Place London
SW1A 2AW
Email: Consultation.Coordinator@decc.gsi.gov.uk

- 5.12 This consultation has been carried out in accordance with the Government's Consultation Principles, which can be found here:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/60937/Consultation-Principles.pdf

Glossary

Appraisal of Sustainability

An appraisal of the sustainability of the policy set out in a National Policy Statement, as required by Section 5 (3) of The Planning Act 2008. An AoS normally incorporates an assessment in accordance with the European Strategic Environmental Assessment (SEA) Directive and its transposing regulations in the UK.

Baseline Inventory

An estimate of the higher activity radioactive waste and other materials that could, possibly, come to be regarded as wastes that might need to be managed in the future through geological disposal drawn from the UK Radioactive Waste Inventory.

British Geological Survey (BGS)

BGS is the UK's national centre for earth science information and expertise, providing expert impartial advice on all aspects of geology.

Committee on Radioactive Waste Management (CoRWM)

CoRWM was set up in 2003 to provide independent advice to Government on the long-term management of the UK's solid higher activity radioactive waste. In October 2007, CoRWM was reconstituted with revised Terms of Reference and new membership. The Committee provides independent scrutiny and advice to UK Government and devolved administration Ministers on the long-term radioactive waste management programme, including storage and disposal.

Environment Agency

The environmental regulator for England. The Agency's role is the enforcement of specified laws and regulations aimed at protecting the environment, in the context of sustainable development, predominantly by authorising and controlling radioactive discharges and waste disposal to air, water (surface water, groundwater) and land. The Environment Agency also regulates nuclear sites under the Environmental Permitting Regulations and issues consents for non-radioactive discharges.

Environmental Impact Assessment (EIA)

A legal requirement under EU Directive 2011/92/EU for certain types of project, including various categories of radioactive waste management project. To protect the environment and human health, it requires that a competent authority (the planning authority, the Health and Safety Executive or other regulators concerned) giving consent to the project makes the decision in the knowledge of any likely significant effects on the environment, and that the public are given early and effective opportunities to participate in the decision making procedure.

High Level Waste (HLW)

Radioactive wastes that generate heat as a result of their radioactivity, so this factor has to be taken into account in the design of storage or disposal facilities.

Higher activity radioactive waste

It includes the following categories of radioactive waste: high level waste, intermediate level waste, a small fraction of low level waste with a concentration of specific radionuclides sufficient to prevent its disposal as low level waste.

Intermediate level waste (ILW)

Radioactive wastes exceeding the upper activity boundaries for LLW but which do not need heat to be taken into account in the design of storage or disposal facilities.

Legacy Waste

Radioactive waste which already exists or whose arising is committed in future by the operation of an existing nuclear power plant.

Low Level Waste (LLW)

LLW is defined as waste not exceeding specified levels of radioactivity. Overall, the major components of LLW are building rubble, soil and steel items such as framework, pipework and reinforcement from the dismantling and demolition of nuclear reactors and other nuclear facilities and the clean-up of nuclear sites. At the present time most LLW is from the operation of nuclear facilities, and is mainly paper, plastics and scrap metal items.

Managing Radioactive Waste Safely (MRWS)

A phrase covering the whole process of public consultation, work by CoRWM, and subsequent actions by Government, to identify and implement the option, or combination of options, for the long-term management of the UK's higher activity radioactive waste.

Natural Resources Wales (NRW)

NRW is the environmental regulator for Wales. NRW enforces specified laws and regulations aimed at protecting the environment, in the context of sustainable development, predominantly by authorising and controlling radioactive discharges and waste disposal to air, water (surface water, groundwater) and land. NRW also regulates nuclear licensed sites under the Environmental Permitting Regulations and issues consents for non-radioactive discharges.

Northern Ireland Environment Agency

The environmental regulator for Northern Ireland. The Agency's role is to enforce legislation aimed at protecting the environment. This is primarily achieved by authorising and controlling radioactive discharges and waste disposals to air, water and land.

Nuclear Decommissioning Authority (NDA)

The NDA was established on 1 April 2005, under the Energy Act 2004. It is a non-departmental public body with statutory and financial responsibility for decommissioning and managing the liabilities at specific, designated nuclear sites. These sites are operated under contract by site licensee companies. The NDA has a statutory requirement under the Energy Act 2004, to publish and consult on its Strategy and Annual Plans, which have to be agreed by the Secretary of State and Scottish Ministers. The Radioactive Waste Management Directorate (RWMD) of the NDA is the organisation responsible for planning and delivering a GDF.

Office for Nuclear Regulation (ONR)

An agency within the Health and Safety Executive (HSE) that regulates safety, security and safeguards at nuclear facilities and transport of radioactive materials. ONR will in due course become an autonomous organisation, legally separated from but still supported by HSE.

Radioactive Waste Management Directorate (RWMD)

The NDA has established its Radioactive Waste Management Directorate (RWMD) to design and implement a safe, sustainable, publicly acceptable geological disposal programme. In due course, the RWMD will become a wholly owned subsidiary company of the NDA. Ultimately, it will evolve into the organisation which will hold the nuclear site licence for a GDF. Ownership of

this organisation may then be opened up to competition, in due course, in line with the NDA's current contracting structure for its other sites.

Reprocessing

A physical or chemical separation operation, the purpose of which is to extract uranium or plutonium for re-use from spent nuclear fuel.

Safety cases

A 'safety case' is the written documentation demonstrating that risks associated with a site, a plant, part of a plant or a plant modification are as low as reasonably practicable and that the relevant standards have been met. Safety cases for licensable activities at nuclear sites are required as licence conditions under the Nuclear Installations Act 1965.

Seismic survey

A technique for determining the detailed structure of the rocks underlying a particular area by passing acoustic shock waves into the rock strata and detecting and measuring the reflected signals.

Spent fuel (Spent nuclear fuel)

Used fuel assemblies removed from a nuclear power plant reactor after several years use and stored pending reprocessing to extract reusable materials / or, if declared as radioactive waste, for disposal in a GDF.

Strategic Environmental Assessment (SEA)

In this document, SEA refers to the type of environmental assessment legally required by EC Directive 2001/42/EC in the preparation of certain plans and programmes. The authority responsible for the plan or programme must prepare a report on its likely significant environmental effects, consult the public on the environmental report and the plan or programme proposals, take the findings into account, and provide information on the plan or programme as finally adopted.

UK Radioactive Waste Inventory (UKRWI)

A compilation of data on UK radioactive waste holdings, produced about every three years. The latest version, for a holding date of 1 April 2010, was published in February 2011. It is produced by DECC and the NDA.

The 'White Paper'

The 2008 Managing Radioactive Waste Safely White Paper.

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