DEPARTMENT OF ENERGY & CLIMATE CHANGE

Managing Radioactive Waste Safely: A Framework for the Desk-Based Identification and Assessment of Potential Candidate Sites for Geological Disposal

March 2012

Contents

1. General information

Purpose of this document

1.1 The document sets out a Framework for the desk-based identification and assessment of Potential Candidate Sites for geological disposal of higher activity radioactive waste under the Managing Radioactive Waste Safely (MRWS) programme.

Territorial extent

1.2 The MRWS White Paper was published in 2008 by UK Government and the devolved administrations for Wales and Northern Ireland. This is a Framework for England only and for the purpose of this document the term "Government" refers to the UK Government unless the context indicates otherwise.

Additional copies

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Help with queries

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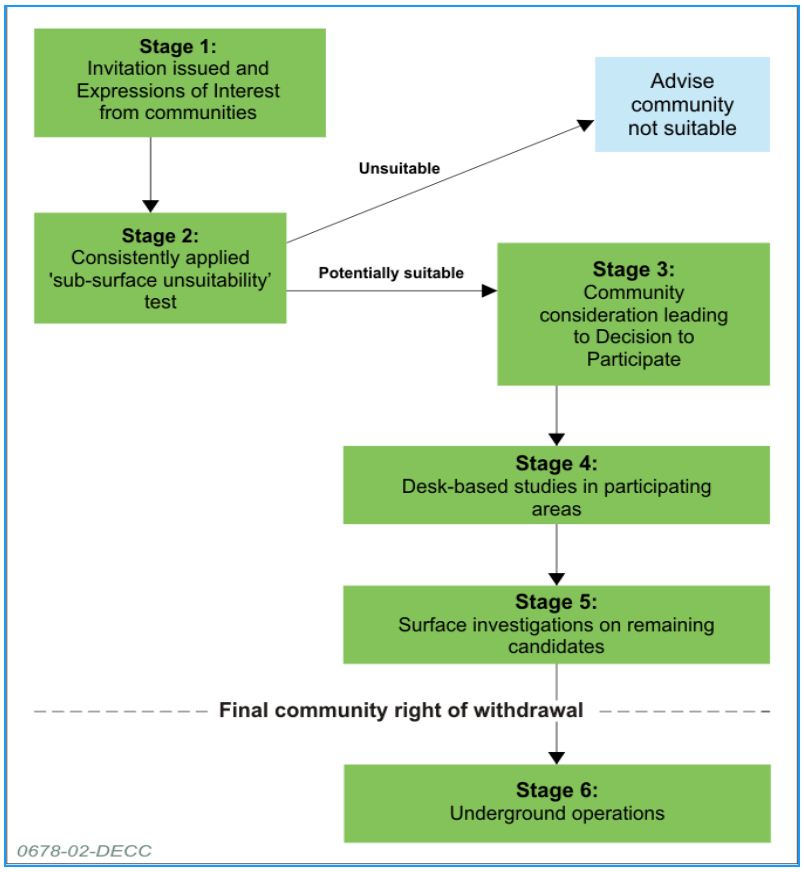
2. Introduction

2.1 Published in June 2008, the White Paper "Managing Radioactive Waste Safely: A Framework for Implementing Geological Disposal"[1] set out Government's staged approach to implementing the geological disposal of higher activity radioactive waste. Geological disposal involves isolating radioactive waste within engineered, multi-barrier facilities, typically between 200m and 1,000m deep, inside a suitable rock formation to ensure no harmful quantities of radioactivity ever reach the surface environment.

2.2 The White Paper described the six stages of the site selection process as shown in Figure 1 below.

Figure 1 Stages in the Site Selection Process



2.3 Once an area has taken the Decision to Participate (Stage 3), the MRWS process moves forward into Stage 4. This document sets out the Framework for Stage 4.

[1] White Paper available at http://mrws.decc.gov.uk/

Stage 4

2.4 Stage 4 of the MRWS process comprises desk-based studies to identify and assess Potential Candidate Sites. A Potential Candidate Site is defined as a combination of a volume of rock for the underground facility (sub-surface area) and an above ground area for the surface facility. The purpose of the desk-based studies is to:

- identify Potential Candidate Sites in the participating areas;
- assess those sites that are identified in order to allow decisions to be made about which might go forward for more detailed investigation in the next stage, Stage 5: Surface Based Investigations.

2.5 This document – the Framework – sets out at a high level:

- the national[2] criteria for site identification and site assessment and a description of the desk-based process for both elements;
- the staged process for deciding whether to proceed to Stage 5.

2.6 It reflects the proposals presented in the public consultation held between June and September 2011, with some changes made in response to comments received, for example to improve clarity. It confirms that sites will be assessed using Multi-Criteria Decision Analysis (MCDA) as a tool to aid decision making and it sets out the next steps to develop this methodology, including the development of scoring scales and weighting for the criteria.

2.7 As Government's implementing body, the Nuclear Decommissioning Authority (NDA) will provide the nuclear safety, geological and engineering input, as well as co-ordinate the site identification and assessment process described in this Framework.

2.8 Following a Decision to Participate, Government expects that a Community Siting Partnership will be set up to enable local partners and the NDA to work together on the siting process.[3] During this process the Community Siting Partnership may wish to appoint experts to obtain supplementary advice on site identification. Wider scrutiny and the review of inputs from organisations such as the independent regulators and the Committee on Radioactive Waste Management (CoRWM) are also likely to be useful. Funding to obtain this independent advice will be made available as part of the engagement package outlined in the White Paper.

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[2] The 'national' criteria are for England only as the Framework is only applicable in England.

[3] The NDA's delivery organisation would be a member of a Community Siting Partnership but would not be directly involved in decisions on community related issues. Local partners include Host Community/ies, Decision Making Body/ies and Wider Local Interests. See glossary for definitions.

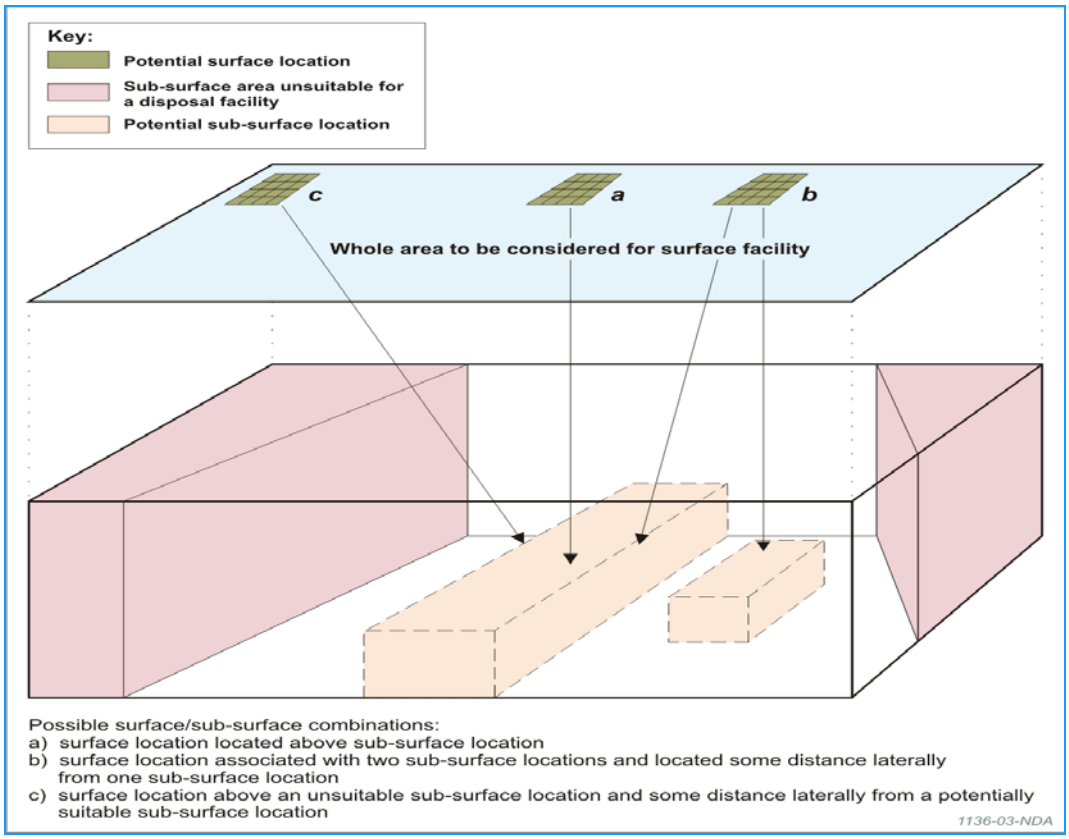
2.9 The identification and assessment process must be consistent with the requirements of relevant environmental legislation, such as that on habitats and other environmental assessments.

2.10 The Framework is being published now to set out the agreed national criteria for site identification and assessment. Government and NDA will work with local stakeholders in volunteer communities to develop local criteria for site identification and to apply the Framework in their area. The NDA are also developing proposals for how the criteria and sub-criteria in the site identification and assessment process could be structured and assessed in practice. These will be used as a basis for further discussions with stakeholders in 2012. Please see Section 6 ("Next Steps") for a summary of the work in development.

Geological settings

2.11 The range of geological settings that could be suitable for hosting a geological disposal facility for higher activity radioactive wastes is diverse. A volume of rock considered potentially suitable for the underground facility may be accessed from a number of different possible surface locations. Similarly one surface location could access several different volumes of host rock. Some of the potential surface and sub-surface combinations are illustrated schematically in Figure 2.

Figure 2 Schematic illustration showing potential surface area and sub-surface rock volume combinations for a geological disposal facility



2.12 It is important to make clear that the rock volumes and surface areas identified as Potential Candidate Sites, and any subsequent Candidate Sites, could be considerably larger than would be required for a geological disposal facility. This is because in some parts of the UK there is limited information about geological conditions far below the surface and there would be uncertainties about the depth, lateral extent and thickness of the rock formation in which the waste would be emplaced (the “host rock”). In these cases the existing information available to desk-based studies may only allow a relatively high level geological assessment and the whole rock volume in which the host rock is thought to be present may be identified as a Potential Candidate Site. Therefore any Candidate Site taken through to Stage 5 for further, more detailed investigation could still extend over a relatively large area. For example non-intrusive geophysical surveys in Stage 5 could cover an area of the order of 20x30 kilometres in support of intrusive borehole investigations focused on an area of, say, 5x10 kilometres.

Key Principles

2.13 In developing this Framework we have been mindful of the following key principles which underpin the MRWS process:

- ***Safety and geological setting:*** safety is paramount and it is the geological setting of a disposal facility which is key to the achievement of long-term safety. No facility will be constructed in an area with unsuitable geology and no facility will be built and operated if the demanding safety case requirements of the independent statutory regulators are not met.

- ***Voluntarism and partnership working:*** Government is committed to implementing a geological disposal facility based on voluntarism and partnership working. Community-led local engagement is key to this. Government will continue to work with all interested communities in an open and transparent way and all decisions will be structured, transparent and based on evidence that is available to all. Furthermore, whilst Government considers it is important to maintain momentum in taking forward the MRWS Programme, it is also important that the process only moves forward at a pace that local communities are comfortable with.

- ***Right of Withdrawal:*** up until the point at which underground construction of the facility is due to begin, a community can withdraw from the MRWS process. However, as outlined in the White Paper, all parties in a Community Siting Partnership would be expected to work together to avoid the need to exercise the Right of Withdrawal at a late stage.

3. Identifying Potential Candidate Sites

3.1 There are two principal scenarios that could exist at the beginning of the site identification process in Stage 4:

- a Decision Making Body/ies has taken a Decision to Participate covering one or more large areas within which Potential Candidate Sites would need to be identified; or

- a Decision Making Body/ies has taken a Decision to Participate with a smaller area/s which could already be equivalent to a Potential Candidate Site/s. In this case, the Potential Candidate Site would proceed to the assessment stage.

3.2 This section sets out a structured, evidence based approach for identifying Potential Candidate Sites from one or more larger areas, if this is required. In order to provide local flexibility, participating communities, supported by Government and NDA, will be able to adapt or develop this approach to incorporate specific local issues, so that the final process is community owned.

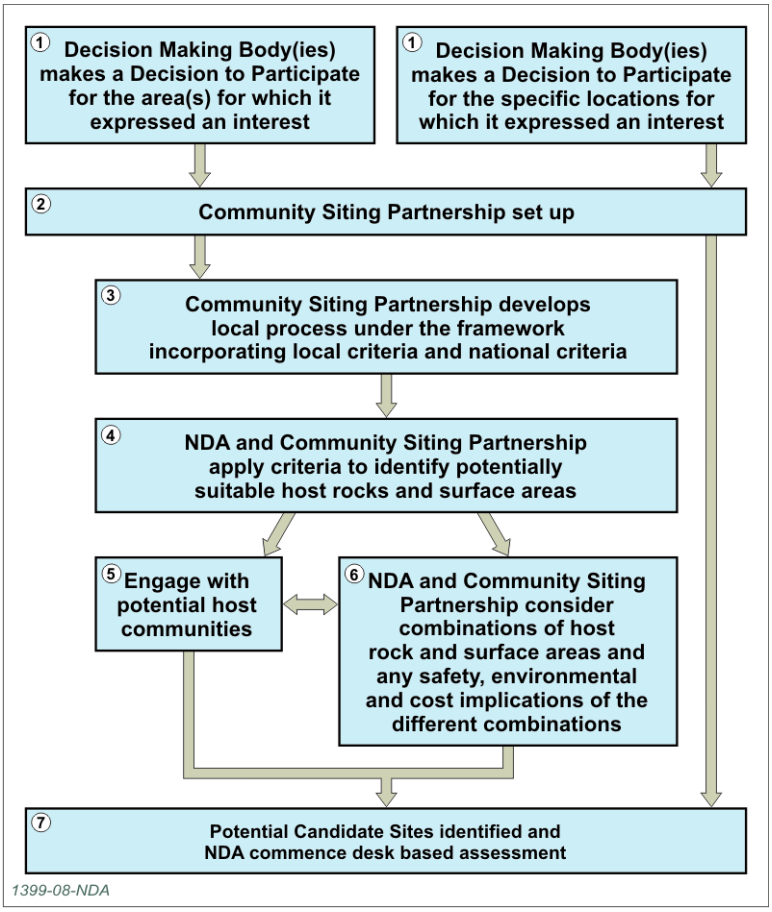
3.3 A Potential Candidate Site will be a combination of a volume of rock for the underground facility and a surface site for the surface facility. Site identification therefore should aim to identify potentially suitable host rocks and potentially suitable surface areas in parallel. Consideration would then be given to combinations of potentially suitable host rocks and surface areas.

3.4 Identification of Potential Candidate Sites will involve consideration of the local features and characteristics which could influence where a facility might be sited. For example, certain conservation areas or protected sites, depending on the nature of their protection, could be considered as either exclusion criteria or as a constraint on the identification of Potential Candidate Sites. It is not envisaged that identification will involve any detailed assessment, for example it will not involve an assessment of the potential impacts of a disposal facility on protected sites or conservation areas, as this type of assessment will be undertaken as part of the desk-based site assessment process outlined later in this Framework.

3.5 Geographic Information Systems (GIS) will be used as a method of capturing and analysing the information that will need to be used as part of site identification and presenting it in relation to a map of the Decision to Participate area. Three dimensional geological models will be used to present existing information about the geology of the sites and any uncertainties associated with the information.

3.6 Figure 3 shows the seven steps in site identification and the subsequent paragraphs describe what would be involved in each of the steps.

Figure 3 Seven steps to the identification of Potential Candidate Sites from Decision to Participate Areas[4]



3.7 **Step 1:** The Decision Making Body/ies makes a Decision to Participate based on areas they have identified for consideration and taking into account any rock volumes that have been excluded earlier in the process by the British Geological Survey (BGS) sub-surface unsuitability test (Stage 2 of the MRWS process). Government accepts the Decision to Participate.

3.8 **Step 2:** After a Decision to Participate has been accepted by Government, it is expected that a Decision Making Body/ies would put in place a Community Siting Partnership to enable local stakeholders to be involved in the site identification and assessment process.

3.9 **Step 3:** The Community Siting Partnership, through its local engagement and liaison with NDA, would be able to advise Decision Making Bodies and influence the application of the Framework for identifying Potential Candidate Sites to fit local requirements. The Framework uses a criteria-based approach to enable a wide range of issues to be considered. In addition to the national criteria described in

[4] Although the steps set out in the figure 3 above are shown in sequence it might be that some of the work within certain steps could be undertaken in parallel . Where this is possible and it is acceptable to a Community Siting Partnership, this would be encouraged. There may also be iterations between some of the steps.

this Framework, Community Siting Partnerships can also suggest specific local criteria. Members of a Community Siting Partnership and Decision Making Bodies would need to discuss and agree any local criteria they would like to use in the site identification process as well as how these criteria will be used. National criteria would be applied consistently in conjunction with local criteria. However, if it was considered useful in either the setting up of partnership arrangements or in developing local criteria, NDA could apply the national criteria earlier so that communities could see how the national criteria applied before having local discussions.

3.10 If the Decision to Participate area is already equivalent to a Potential Candidate Site then site assessments would be carried out on the Potential Candidate Site (see Section 4).

3.11 **Step 4:** Working alongside the Community Siting Partnership the NDA would apply the agreed criteria to identify potentially suitable rock volumes and surface areas. It may be appropriate to adopt a tiered assessment process for the local criteria. For example, a pass/fail screening basis for some locally important criteria could be applied first, followed by a more focussed consideration of the national and remaining local criteria.

3.12 **Step 5:** Once potentially suitable surface areas and host rocks have been identified, potential host communities, or groups of potential host communities, should start to become apparent and it will be important that a Community Siting Partnership begins to specifically engage representatives of these areas. This could be to explain those steps taken so far (steps 1-4) and to discuss how the process will be taken forward. This could result in revisions to the local criteria, their application and/or membership of the Community Siting Partnership.

3.13 **Step 6:** In parallel, consideration would be given to combinations of potentially suitable host rocks and surface areas. With close involvement from the Community Siting Partnership, the NDA would lead this work which would need to consider both the total volume and the range of potentially suitable host rocks accessible from a potential surface area.

High Level Assessment and Review

3.14 The work outlined above, looking at possible underground and surface combinations, would begin to identify Potential Candidate Sites. As they are identified an initial consideration of the safety, security, safeguards, environmental implications and potential costs of implementing a geological disposal facility at specific sites would be undertaken. This would involve NDA conducting a high level review of the geoscientific information available to identify any early implications for the development of a safety case and engineering design. These considerations will take account of international guidance from the International Atomic Energy Agency (IAEA)[5] and any other relevant regulatory guidance.

[5] IAEA, *Siting of Geological Disposal Facilities: A safety Guide*, Safety Series No. 111-G-4 1, 1994.

3.15 A high level estimate of the potential costs of implementing a geological disposal facility would also be developed, taking into consideration the type of host rock and any potential issues associated with the Potential Candidate Site, for example distance from the surface site to the host rock.

3.16 This consideration of safety, security, safeguards, environmental and cost implications would be a very high level review but could help focus the subsequent assessment stage on those Potential Candidate Sites that show the most potential.

3.17 **Step 7:** Following the high level assessment and review, Potential Candidate Sites are identified and taken forward to the assessment stage described in Section 4.

Criteria for identification of Potential Candidate Sites

3.18 Site identification will use a criteria-based approach to enable a wide range of issues to be considered when identifying Potential Candidate Sites. The criteria fall into two categories: i) national criteria; ii) local criteria.

National Criteria

3.19 The inclusion of national criteria to identify Potential Candidate Sites aims to ensure a consistent national approach across England involving the consideration of both surface and sub-surface features and to ensure consistency with the assessment of Potential Candidate Sites outlined later in this Framework. The national criteria were derived from IAEA guidance[6] on siting of facilities and from those criteria suggested by CoRWM[7] to evaluate the suitability of potential sites. Additional criteria were derived from effects which have to be considered under the EU Directives on Strategic Environmental Assessment[8], Environmental Impact Assessment[9] and UK practice on sustainability appraisal.[10]

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[6] IAEA, *Siting of Geological Disposal Facilities: A safety Guide*, Safety Series No. 111-G-4 1, 1994.

[7] CoRWM, "Implementing a Partnership Approach to Radioactive Waste Management: Report to Governments", CoRWM Document 2146, 2007. http://corwm.decc.gov.uk

[8] European Parliament and the Council of the European Union, *"Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the Assessment of the Effects of certain Plans and Programmes on the Environment*", Official Journal of the European Communities, L197, 2001.
Office of the Deputy Prime Minister, Scottish Executive, Welsh Assembly Government and Department of Environment in Northern Ireland, *"A Practical Guide to the Strategic Environmental Assessment Directive",* 2005.

[9] Council of the European Communities, "Council Directive of 27 June 1985 on the Assessment of the Effects of Certain Public and Private Projects on the Environment (85/337/EEC)", as amended, Official Journal of the European Communities, C175, 1985. 28. European Commission, "Report from the Commission to the European Parliament and the Council On the Application and Effectiveness of the EIA Directive (Directive 85/337/EEC as Amended by Directive 97/11/EC)", 2003, Brussels.
European Parliament and the Council of the European Union, "Directive 2003/35/EC of the European Parliament and of the Council of 26 May 2003 Providing for Public Participation in Respect of the Drawing up of Certain Plans and Programmes Relating to the Environment and Amending With Regard to Public Participation and Access to Justice Council Directives 85/337/ EEC and 96/61/EC", Official Journal of the European Communities, L156, 2003.

[10] Office of the Deputy Prime Minister, *Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents,* 2005

3.20 The agreed national criteria are:

- 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.

3.21 Annex A outlines what should be considered under each of the criteria using existing information. Depending on the nature of the areas being considered the criteria could be exclusion criteria, constraints on siting, or provide an indication of a potentially suitable site. The nature of the criteria and how they will be used will need to be part of the local discussions on the application of the site identification process, led by a Community Siting Partnership following a Decision to Participate by the local Decision Making Body/ies.

Local Criteria

3.22 Local communities may have additional considerations which they would like to be taken into account in the identification of Potential Candidate Sites. It would be for the Community Siting Partnership and Decision Making Bodies to identify and agree additional local criteria to be used alongside national criteria as part of site identification.

3.23 A potential use of local criteria would be to incorporate key local planning policies into the site identification process in order that Potential Candidate Sites appropriately reflect local development policies and priorities. In particular, for a surface facility, this might include relevant policies relating to the classification of land and to major development proposals. Local criteria might also potentially be used to reflect any significant feedback from earlier rounds of local engagement in the MRWS process.

3.24 The Government does not wish to unduly constrain community flexibility in either the nature of any local criteria which may be identified or the way in which local criteria are applied. Care will need to be taken to ensure that local criteria are clear and the approach to their identification and application does not undermine the credibility of the site identification process. Any local planning criteria would need to be explicitly derived from planning policies and particular care would need to be taken if local communities were to suggest application of existing site allocation policies to what is a very specific national facility.

4. Assessing Potential Candidate Sites

4.1 Following the identification of Potential Candidate Sites, the objective of the assessments is to understand which are most likely to be suitable for more detailed investigations in Stage 5 of the MRWS site selection process.

4.2 The NDA will assess Potential Candidate Sites using the national criteria referred to in the last Section and use an approach based on Multi Criteria Decision Analysis (MCDA) as described below to compare their attributes. Sub-criteria will be considered under each of the national criteria to evaluate the suitability of Potential Candidate Sites. Desk-based site assessment is at a national level as it needs to be consistently applied to any Potential Candidate Site that follows from a Decision to Participate.

4.3 If a Decision Making Body/ies has taken a Decision to Participate for an area of an equivalent size to a Potential Candidate Site, it will not have gone through the identification process. In this scenario, before the NDA could undertake any assessment, it would conduct a very high level review of the safety, security, safeguards, environmental and cost implications, using available information to identify any early implications for the development of a safety case and engineering design. This would be a similar review to that undertaken as part of Step 6 of the site identification process set out on page 12.

4.4 Existing information will be used to support the assessment process. At this stage, there may be differing levels of surface and sub-surface information available to assess. In particular, this could be the case if a large rock volume has been identified as part of a Potential Candidate Site. Information gathered through Strategic Environmental Assessment[11] and any Habitats Regulations Assessment[12] will also be a key source of information. Although it is anticipated that there will be sufficient geological information available to allow site assessment to be carried out, it might be that some targeted non-intrusive surveys such as geophysical surveys at Stage 4 could be undertaken to provide useful information. If this is the case, the NDA would discuss with the Community Siting Partnership whether, and how, such surveys should be carried out.

4.5 To support the assessment process and aid stakeholder engagement, the NDA will develop high level illustrative facility designs for each Potential Candidate Site

[11] In this document, Strategic Environmental Assessment refers to the type of environmental assessment legally required by EC Directive 2001/42/EC in the preparation of certain plans and programmes. European Parliament and the Council of the European Union, "Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the Assessment of the Effects of certain Plans and Programmes on the Environment", Official Journal of the European Communities, L197, 2001.

[12] A Habitats Regulations Assessment will have to be conducted if the proposed plans could have a potential impact on certain nature conservation areas, known as "European sites" which are designated and protected under the Habitats Directive. European Parliament and Council of the European Union, 'Directive on the conservation of natural habitats and of wild flora and fauna', Official Journal of the European Union, OJ L 206, 22.7.1992, p. 7, May 1992.

which will be based on the available surface and sub-surface information at each of the sites.

National criteria for site assessment

4.6 The same national criteria used to identify Potential Candidate Sites will be used to assess them. As the site identification and assessment process progresses, the Government may further develop or refine the sub-criteria in consultation with stakeholders as appropriate. For some of the criteria, for example geological setting, there may not be any further information available at the assessment stage than there was at the site identification stage. In this case the information used during the site identification process will be reconsidered using the more detailed sub-criteria outlined below.

4.7 During Stage 4, the NDA will be undertaking a number of environmental and sustainability assessments of the proposals for implementing geological disposal. These will include Strategic Environmental Assessment (SEA), a Strategic Transport Assessment[13], a Health Impact Assessment[14], an Equality Impact Assessment[15] and any Habitats Regulations Assessment that may be required. These assessments will provide information that will aid decision-making at the end of Stage 4.

4.8 Some of the criteria relate to the sub-surface area, some to the surface area and other criteria will apply to both. All aspects of the criteria will be considered in the assessment. Care will be taken during the assessment to ensure that there is no double counting, for example in terms of considering the impacts of transport more than once in the assessment.

Geological setting

4.9 The geological setting of a disposal facility is key to the achievement of long-term safety. The sub-criteria are as follows:

- the likely size of the potentially suitable volume of host rock;
- the likely level of technical challenges from construction and engineering conditions and the availability of knowledge and technology by which they could be overcome;
- the level of difficulty to ultimately characterise the Potential Candidate Site;
- a qualitative assessment of the feasibility of developing a robust safety case, based on available geoscientific information (including known geological, hydrogeological and hydrological characteristics, geochemistry and seismicity).

[13] Department for Transport, *Guidance on Transport Assessment* (ISBN 978-0-11-552856-9), March 2007.
[14] Department of health, *Draft guidance on health in strategic environmental assessment – consultation document*, 2007.
[15] Equality and Human Rights Commission, *Equality Impact Assessment Guidance* (ISBN 978-1-84206-240-1), November 2009.

4.10 The final three bullets outlined above take into account the impact of the complexity of the geology on the safety case, engineering design and site characterisation as this is an important factor identified in the IAEA guidance[16].

4.11 The assessment of this criterion will include a further consideration of the potential host rock volumes, looking at their hydraulic and/or geotechnical properties and taking into account known or suspected faults and/or intrusions. In order to characterise the site as accurately as possible a number of factors will be considered through expert elicitation including:

- hydrogeological setting and the complexity of the host rock;
- the wider geosphere, biosphere and the interfaces between them;
- the applicability of geophysical surveying;
- depth of potential host rocks;
- land topography and access.

4.12 Although the level of detail and reliability of geoscientific information available at this stage, prior to dedicated physical investigations, may be limited in some cases, these assessments will be as rigorous as is practical and any associated uncertainty will be fed into the MCDA process.

Potential impact on people

4.13 The sub-criteria are:

- impacts on human health, well-being and safety during the site investigations, construction, operation and closure of the facility;
- impacts on other human activities, social (e.g. recreation facilities, parks) and industrial (e.g. farming, tourism, food production);
- level of nuisance or disturbance created (noise, dust, visual impacts, excluding transport impacts);
- impact on cultural heritage, including existing or proposed World Heritage Sites, Scheduled Monuments, Listed Buildings, Protected Wreck Sites, Protected Military Remains, Registered Parks and Gardens, Registered Battlefields, and Conservation Areas, architectural and archaeological heritage, landscape and the interrelationships between these factors, and land use requirements.

[16] IAEA, *Siting of Geological Disposal Facilities: A safety Guide*, Safety Series No. 111-G-4 1, 1994.

Potential impact on the natural environment and landscape

4.14 The sub-criteria are:

- impacts on flora, fauna, biodiversity, air quality, water, soil, carbon emissions, landscape, visual aspects and climatic factors;
- impacts on national parks, areas of outstanding natural beauty, sites of special scientific interest and in accordance with the Habitats Directive, European designated sites;

Effect on local socio-economic conditions

4.15 The sub-criteria are:

- impacts on provision of employment, economic growth and regeneration opportunities;
- potential impacts of population changes;
- potential impacts on current and future industries and facilities in the area.

Transport and infrastructure provision

4.16 The sub-criteria are:

- extent of transport requirements;
- impacts of transport operations and the required transport infrastructure on people and the environment;
- availability of existing non transport infrastructure (e.g. electricity and water supply).

4.17 The above has overlaps with the criteria associated with the potential impacts on people as well as that on the natural environment and landscape, and care will be taken during the MCDA to ensure that there is no double counting.

Cost, timing and ease of implementation

4.18 The sub-criteria are:

- duration and cost of site characterisation and assessment;
- cost of construction, operation and closure (including consideration of flood risk);
- use of natural resources and material assets;
- challenges from handling of non-radioactive wastes from construction activities (for example, rock spoil, drained groundwater).

Multi Criteria Decision Analysis (MCDA)

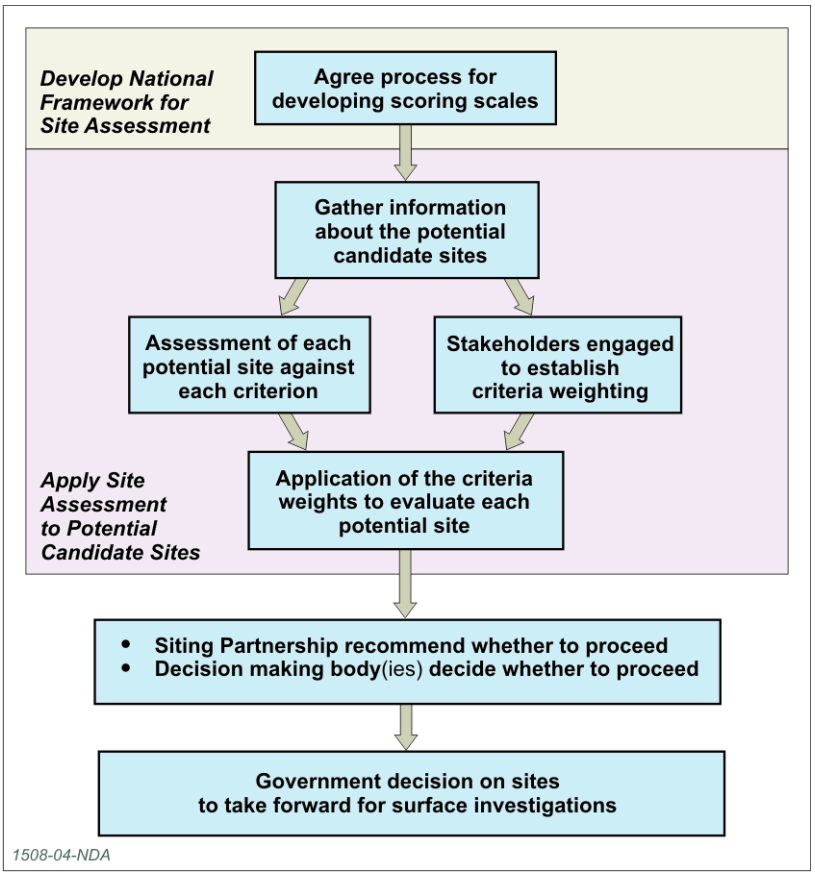
4.19 MCDA is a decision aiding process that uses set criteria and scoring scales to evaluate how well options perform. These are combined with a weighting process for the criteria, based on stakeholders' views of their relative importance, to show how the evaluation of the options changes depending on the relative importance attributed to the criteria. It is an analysis tool that is useful where there are multiple options and several, sometimes conflicting, criteria against which the options need to be evaluated. Graphical displays can be developed showing how options perform against criteria and how they do this in different ways. The MCDA model that is created is a vehicle that allows decision makers to explore the effects of uncertainty in the data and differences of opinion between stakeholders.

4.20 The purpose of MCDA is to aid thinking and decision making, but not to actually take the decision. MCDA is open and transparent and it provides an audit trail. Scores and weights applied to criteria are explicit and are developed according to established techniques. It can also provide a useful means of communicating and considering complex information with stakeholders.

4.21 There are different ways that the criteria and sub-criteria outlined in this Framework could be structured into an MCDA model. An important step in developing the MCDA model will be agreeing the structure. MCDA enables Potential Candidate Sites to be evaluated consistently and transparently against the national criteria. It will enable decision makers to understand how the Potential Candidate Sites might differ from one another and how their overall scores would change if different assumptions or weightings were used. It will also provide a structured way to ensure a wide range of stakeholders are involved in the site assessment process. In particular, it will allow stakeholders' views on the importance of the different criteria to be evaluated and their impact on the range of scores of Potential Candidate Sites to be understood. For example, some stakeholders may think that impacts on people are important and therefore give that criterion more weight, whereas others may put greater emphasis on impacts on the environment. The MCDA model would investigate whether these differences would change the overall scores of the Potential Candidate Sites.

4.22 Figure 4 outlines how the process would be undertaken in practice and the following sections outline what would be involved in each of the steps shown in the diagram.

Figure 4: Overview of the Multi Criteria Decision Analysis Process



Developing scoring scales

4.23 Performance against each criterion must be capable of being given a value, in the sense that it must be possible to assess, at least in a qualitative sense, how well a particular site is expected to perform in relation to the criterion. The qualitative descriptions applied to each criterion will be turned into scoring scales.

4.24 The scoring scales will describe the extent to which a Potential Candidate Site meets a particular criterion and each criterion will require its own scale. The scoring scales need to be objective and will need to be developed with input from experts in each of the areas covered by the criteria. The scoring scales will ensure a consistent approach to the assessments.

4.25 With input from a broad range of national stakeholders, NDA will identify the relevant experts who hold knowledge and expertise about the different criteria and who should be involved in the development of the scoring scales. The scoring scales will be developed through a series of workshops, with individual workshops arranged for each of the high level criteria outlined above. The scoring scales will be developed at an appropriate time following publication of this Framework.

4.26 Scoring scales of between 1 and 9 or between 1 and 100 are often used in MCDA, where 1 indicates the minimum level of acceptability and 9 or 100 the highest. A short description of what leads to a given score is also produced to ensure a

consistent approach is used when assessing individual options and to ensure that the process is transparent to people not directly involved. A scoring scale of 1 to 9 will be used for this process as this is felt to give an appropriate level of precision given the limited amount of information that may be available on each of the criteria at this stage in the MRWS process.

Applying the MCDA process to Potential Candidate Sites

4.27 Once the scoring scales have been agreed Potential Candidate Sites can be evaluated against them. This section sets out what would be involved in the assessment. There are seven stages, described below.

1. Gather information about the Potential Candidate Sites

4.28 Information about each of the Potential Candidate Sites relating to each of the criteria will need to be gathered. The NDA will work with a Community Siting Partnership and any relevant experts in each of the criteria to gather information. This will involve collating existing information – for example on sites of special scientific interest, road and rail networks and existing geoscientific information – as well as potentially gathering new information, for example wildlife or environmental surveys .

4.29 A Decision Making Body/ies or other relevant local bodies are likely to be good sources of much of this information and local input will be important. The NDA will work with a Community Siting Partnership to identify this information and to consider how it could be used.

2. Assessment of Potential Candidate Sites against the criteria

4.30 Potential Candidate Sites will need to be evaluated to see how well they perform against the criteria. The assessment should be as objective as possible and will need to involve a group of experts who have the relevant knowledge and expertise on the different criterion being considered. NDA will discuss with stakeholders, especially the Community Siting Partnership, which experts should be involved. The groups of experts who were involved in developing the scoring scales could be invited to participate in the assessments and a Community Siting Partnership may want to appoint their own experts to be involved in the assessments either as part of the workshops or in an independent review capacity.

4.31 The assessments of Potential Candidate Sites will most likely be undertaken via a series of individual expert workshops each focussed on one or more of the criteria where the relevant experts will assess each Potential Candidate Site against each criterion using the information that had been gathered. NDA would manage the process and work with an independent facilitator to ensure consistency in the workshops.

4.32 Any differences in expert opinion would be recorded in the MCDA model and would be investigated as part of the evaluation of the Potential Candidate Sites to determine the impact on the overall score of the sites.

3. Establish criteria weighting with stakeholder input

4.33 MCDA requires the relative importance of the different criteria to be determined so that it can be fed into the MCDA model. For example, some stakeholders may think that potential impacts on people are more important than potential impacts on the natural environment and would therefore attribute more weight to that criterion.

4.34 NDA will work with the Community Siting Partnership to organise workshops to attempt to engage with a range of stakeholders and better understand their views on the relative importance of the different criteria so that they can be fed into the evaluation. The weighting of the criteria is subjective and different stakeholders may have different views about the relative importance of the different criteria. Such differences in view would be investigated as part of the evaluation of the Potential Candidate Sites to see if it affects their overall score.

4. Application of criteria weighting to evaluate Potential Candidate Sites

4.35 Once a Potential Candidate Site has been assigned a score for each of the criteria and the relative weighting has been applied, that Potential Candidate Site can be given an overall score. This will be done by multiplying a Potential Candidate Site's score for each criterion by the weight for that criterion and then adding the weighted scores together to give an overall score.

5. Sensitivity Studies

4.36 The MCDA process will allow for sensitivity analysis based on the different weighting that can be given to the criteria by stakeholders. These differences will be recorded and fed into the model to investigate the impact that alternative weightings for criteria may have on the overall score for a Potential Candidate Site. The impact of any uncertainties in the assessment of Potential Candidate Sites could also be investigated as part of the sensitivity studies. If the overall score for a Potential Candidate Site varied significantly during the sensitivity analysis it may indicate that more information needs to be gathered to address any uncertainties.

6. Publication of Desk Based Assessments Report

4.37 The results of the site assessment work will be written up into a Desk-based Assessments Report on each Potential Candidate Site. The report will provide a number of important elements to aid decisions on which Potential Candidate Sites to take forward into Stage 5 of the MRWS process. Those elements will include a matrix of overall scores for each Potential Candidate Site showing how differences in the weighting of the criteria affect the evaluation of the Potential Candidate Sites; an outline of the strengths and weaknesses of the Potential Candidate Sites and where there may be uncertainties associated with the assessment process; an overview of the assessment process itself; and a clear indication of more detailed reports associated with each step of the assessment.

4.38 The Desk-based Assessments Report will not itself contain a decision. Rather, it will outline whether the Potential Candidate Sites are suitable for further investigation in Stage 5 of the MRWS process and how they perform against each of the criteria.

7. Review and scrutiny

4.39 The Desk-based Assessments Report will be made available for discussion and review by the independent regulators and the Community Siting Partnership (including any experts that may have been appointed by the Partnership). As well as a review of the outputs, it would be important to ensure that there was scrutiny of the MCDA process itself. CoRWM will provide scrutiny and advice on the ongoing process and they may also comment on the Desk-based Assessment Report if asked to do so by Government.

4.40 In addition, the regulators might review the report and provide comments and advice on regulatory matters such as environmental and nuclear safety or security and safeguards.

4.41 Further work may need to be undertaken if the reviews and scrutiny highlight any issues that need to be addressed. A final Desk-based Assessments Report would be fed into the local decision making process about whether to proceed to MRWS Stage 5 with certain Potential Candidate Sites.

5. Decision making

5.1 MCDA is a tool, an aid to thinking to enable decision makers to understand how Potential Candidate Sites differ and how their overall scores would change if different assumptions or weightings were used. It will not actually take the decision.

5.2 Decision making will need to be undertaken in a structured, evidence-based and transparent way and the Desk-based Assessments Report will be a key input to the local decision making process. A Community Siting Partnership and Decision Making Body/ies are likely to want to consider a range of evidence before recommending and deciding whether to proceed to Stage 5 including, for example the extent of local support or whether future stages in the process provide sufficient opportunity for any outstanding issues and concerns to be addressed.

5.3 The decision making process will be staged, as follows:

- the Community Siting Partnership would make recommendations to local Decision Making Body/ies about which Potential Candidate Sites (if any) should proceed to the next stage of the site selection process;
- the Decision Making Body/ies would then decide which Potential Candidate Sites (if any) should proceed to the next stage of the site selection process (Stage 5);
- the Government would then decide on one or more sites to take forward to Stage 5.

5.4 Government's decision making process will also need to take into account additional information, for example, the findings from environmental assessments of the proposals for implementing geological disposal in Stage 5. These will include Strategic Environmental Assessment, Strategic Transport Assessment, Health Impact Assessment, Equality Impact Assessment and any Habitats Regulations Assessment undertaken.

5.5 The range of geological settings available from those Potential Candidate Sites put forward by a Decision Making Body/ies will also be taken into account. Where Decision Making Bodies are content that multiple Potential Candidate Sites move forward to Stage 5, Government will want to select an appropriate site, or mix of sites, to progress. If considering multiple sites Government may take into account issues such as the appropriate level of diversity between Candidate Sites as well as their individual characteristics.

5.6 Any Potential Candidate Sites which move forward into Stage 5 will then be subject to increasingly detailed assessments, with resources becoming focussed on investigating those that are most likely to be suitable. This would initially include surface-based investigations, for example non-intrusive seismic surveys and then later the drilling of boreholes to various depths to investigate local geology in more detail.

6. Next Steps

6.1 This Framework contains the agreed national criteria for identifying and assessing Potential Candidate Sites following a community's Decision to Participate. It is also a high level description of a national process that the NDA, the local community and other stakeholders will follow in order to identify and assess potential sites. There will however be further work done by the NDA to develop more detail on how the criteria can be assessed.

Site identification

6.2 Once a community takes a Decision to Participate in the site selection process then more detailed discussions will need to take place at a local level to enable communities to develop the site identification process to incorporate their views on local criteria that should be taken into account. The NDA is undertaking work to develop proposals for how Potential Candidate Sites will be evaluated using the national criteria and high level review and what information will need to be considered. These proposals will be used as a basis for discussions with stakeholders. The proposals will outline in more detail how Geographic Information Systems (GIS) and 3D geological modelling could be used as part of the site identification process.

Site assessment

6.3 NDA is also developing more detailed plans for implementing an MCDA process, in consultation with national stakeholders. This will include consideration of how experts can be involved in the MCDA process, which experts should be involved, and how the MCDA model should be structured. It is at that stage that the linkages between, for example, the geological setting and other criteria, such as impact on people or the environment, will be developed to ensure that the MCDA structure drives the appropriate comparison of, and trade-off between, criteria.

6.4 The proposals for the implementation of the MCDA process will also take into account lessons learned from implementing the site identification process.

Annex A – National Criteria for Site Identification

Geological setting

1. The high-level safety objectives of geological disposal are to isolate the waste from the biosphere and to contain the radionuclides associated with the wastes. To this end, the geological setting of a disposal facility provides an important barrier to the movement of radioactivity as well as providing protection for the waste from changes that may take place at the surface. There are many different geological settings that may potentially be suitable for a geological disposal facility. The consideration of the geoscientific information at this stage will involve looking at the areas not excluded by the sub-surface unsuitability test carried out by the BGS, to understand the likely presence, depth and thickness of potential host rocks in the likely 200 to 1000 metre depth range. Different levels of geoscientific information at depth will be available in different areas. As a result of this, the level of detail and the certainty with which a geological setting can be considered at this stage will also vary.

2. At this stage an assessment of the potential for a given rock formation to be a host rock will be based on the generic characteristics of the rock type rather than the specific characteristics of the rock volume under consideration. These generic characteristics include the likely ability of the generic rock type to provide suitable containment through its geomechanical, hydraulic and geochemical properties. Such an assessment will take into account international experience of investigating potential host rocks for siting a geological disposal facility. Therefore it is likely that the host rock's potential will be estimated from the characteristics of the same or similar rock types elsewhere at similar or shallower depths based upon expert geoscientific judgement. The assessment would be complimented by further high level consideration of the existing information[17] that is available about an area with regard to other aspects of the geological setting such as the hydrogeological regime, geological complexity or specific formations with particularly good potential host rock characteristics.

3. In order to facilitate the process, it is anticipated that contour maps of potential host rock volume accessible from the surface will be produced for the areas not excluded by the BGS unsuitability screening. This would be based on the existing BGS UK wide 3D Digital Geoscience Spatial Model (DGSM)[18] calibrated by independent structural analyses for participating areas to understand the conceptual uncertainty in the geology at depth and the sensitivity of the identification process to this uncertainty. The contour maps will be used as the basis for identifying volumes of potentially suitable rock that could be used to host a geological disposal facility in terms of their size and characteristics.

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[17] For example regional memoirs http://www.bgs.ac.uk, scientific papers and appropriate unpublished reports on the regional geology.

[18] The BGS DGSM is currently at 1:1,000,000 scale but there is an ongoing project which is refining this to 1:300,000 scale through their Data and Research for Environmental Applications and Models (DREAM) program.

4. The geological setting, including hydrogeological aspects, underpins a number of the other criteria such as potential impact on people and the environment. Therefore it is recognised that the consideration of this criterion will need to be sufficiently robust and independently reviewed to provide stakeholders with the confidence that there is an appropriate level of geoscientific understanding. In particular, given the limited geoscientific information at depth, a clear presentation of the uncertainty in the geological setting will be required.

Potential impact on people

5. Safety is a fundamental requirement and no facility will be allowed to operate unless it can be demonstrated to the independent regulators that safety and environmental requirements will be met both during operation as well as following closure. This will provide a high level of protection to people. Safety and the protection of people will be considered in increasing detail during the site assessment process as well as at all further stages of the MRWS process. Dose risks to the public will be included in the consideration of human health with the information that is available during Stage 4. For the purposes of site identification, the focus will be on identifying siting issues which may need to be taken into account at later stages. A qualitative assessment of the feasibility of developing a robust safety case will be undertaken during site assessment.

6. Whilst the suitability of an underground facility to provide the level of safety required is considered under the 'Geological Setting' criteria, the 'Potential Impact on People' criteria will consider other aspects relevant to the siting of a surface facility. This could, for example, include a high-level consideration of the proximity to existing population centres, hazardous facilities or operations (for example chemical plants) or to other facilities which may potentially impact on siting (for example, hospitals). If possible at this point, this will also include consideration of national planning policies, such as those on flood risk vulnerability, and work to consider other natural hazards, such as coastal erosion. Consideration of such issues can inform the site selection process, but given the level of design and site specific safety information available at this stage, it might not exclude specific sites, rather it would highlight where there may be potential difficulties in making a safety case.

Potential impact on the natural environment and landscape

7. In terms of potential impact on the natural environment and landscape, information will be available on a wide range of protected areas and features. This will include their geographic boundaries and the reasons for their protection. Important areas would include, for example, Sites of Special Scientific Interest (SSSIs), National Nature Reserves, Marine Nature Reserves, European sites (belonging to the Natura 2000 network[19]), Areas of Outstanding Natural Beauty (AONB) and National Parks. Nationally designated heritage assets should also be considered including World Heritage Sites, Scheduled Monuments, Listed Buildings, Protected Wreck Sites, Protected Military Remains, Registered Parks and Gardens, Registered Battlefields, and Conservation Areas. Areas important in a more local context could include local nature conservation sites, special landscape areas, ancient woodland, conservation areas and so on. Some elements of the historic environment are not designated,

[19] http://ec.europa.eu/environment/nature/natura2000/index_en.htm

however, they are recognised as 'demonstrably of equivalent significance' to scheduled monuments. These should also be considered.[20]

8. Although it would be a strategic level assessment, potential adverse effects on these protected areas or features could be viewed as either exclusionary criteria or as constraints on the siting of a geological disposal facility (or at least the surface facility), depending on their importance and on their sensitivity to its construction and operation.

Effect on local socio-economic conditions

9. Socio-economic issues that might have a bearing on the site identification process include, for example, levels of deprivation and local employment, the capacity of local public and community services, the location of development land and regeneration areas, existing land use, settlement patterns and population growth. Such considerations should take into account local development policies and priorities.

10. Information will be available on most of these issues in a form that could be plotted on a map. This would make it possible to see, for example, where potential socio-economic benefits (such as increased local employment) might be more or less desirable. Similarly, it might be possible to see where potential adverse effects, such as increased pressure on local public services, might be a problem.

11. Under this criterion potential impacts on existing, or future, facilities or industries in the area from implementing a disposal facility would be considered, as this could impact on the socio-economic development of the area (for example, tourism and agriculture). For example, the Office of Nuclear Regulation (ONR) requirements[21] mean that there could be implications for existing or future infrastructure development and there could be restrictions on other future industrial developments close to a geological disposal facility. These might not exclude a site from consideration at this stage, but where issues are identified, these would need to be reviewed when more detailed safety case information became available in the future.

Transport and infrastructure provision

12. The existing transport infrastructure within the area could be evaluated in terms of its capacity and links to other major infrastructure. This would include considering road, rail and sea links. It might be possible to identify any obvious need for additional infrastructure or upgrading of existing infrastructure. The additional use of infrastructure could be estimated based on the NDA understanding of the transport movements needed to implement a geological disposal facility and transport radioactive waste to it.

[20] DCLG, *Planning Policy Statement 5: Planning for the Historic Environment*, 2010.

[21] Health and Safety Executive Nuclear Directorate, Land Use Planning and the Siting of Nuclear Installations in the United Kingdom.
Health and Safety Executive, The Licensing of Nuclear Installations.
Health and Safety Executive, Safety Assessment Principles for Nuclear Facilities, 2006 Edition, Revision 1.

Cost, timing and ease of implementation

13. The area would be considered in terms of characteristics which may affect the feasibility, cost and timing of building the surface and underground facilities associated with the geological disposal facility. If a specific surface site was being considered at this stage, this might for example examine whether it was large enough to accommodate a surface facility or whether a specific surface landscape might make it more complicated to site a surface facility.

14. Geoscientific information would be used to consider the possible size and nature of the underground layouts for the geological disposal facility. For example, whether the facility could be developed on one level or whether there might need to be two levels of vaults. This would give an indication of the size and complexity of the potential underground development and the relative ease of implementation. The scale of the costs of implementing a facility in the particular type of potential host rock could also be estimated.

Annex B - Glossary

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 will provide independent scrutiny and advice to UK Government and devolved administration Ministers on the long-term radioactive waste management programme, including storage and disposal. Further information available at http://corwm.decc.gov.uk/.

Community Siting Partnership (or Partnership)
A partnership of local community interests that will work with the NDA's delivery organisation and with other relevant interested parties to ensure questions and concerns of potential Host Communities and its Wider Local Interests are addressed and resolved as far as reasonably practicable and to advise Decision Making Bodies at each stage of the process. The NDA's delivery organisation would be a member but would not be directly involved in decisions on community related issues. Whilst not a member of a Partnership, Government could participate in the work of the Community Siting Partnership as and when required.

Decision Making Body/ies
The Local Government decision-making authority/ies for the host community.

Decision to Participate
The decision point at which a Decision Making Body/ies makes a formal commitment to participate in the geological disposal facility siting process, but without commitment to host the facility.

Environment Agency
The environmental regulator for England and Wales. 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 85/337/EEC (as amended) for certain types of project, including various categories of radioactive waste management project. It requires information on the environmental impacts of a project proposal to be submitted by the developer and evaluated by the relevant competent authority (the planning authority, HSE or other regulators concerned).

Equality Impact Assessment (EqIA)
An Equality Impact Assessment considers the likely effects of a policy, plan or project on a variety of social groups, mainly focussing on the protected characteristics established under the Equality Act 2010: age, disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex and sexual orientation. It helps to ensure that

proposals will not result in discrimination against any individual or community and where possible will promote equality.

Expression of Interest (EoI)
The decision point at which local communities register their 'without commitment' interest in discussions with Government about potential involvement in the geological disposal facility siting process.

Geological disposal
A long term management option involving the emplacement of radioactive waste in an engineered underground geological disposal facility or repository, where the geology provides a barrier against the escape of radioactivity and there is no intention to retrieve the waste once the facility is closed.

Habitats Regulations Assessment
In this document, Habitats Regulations Assessment refers to the type of assessment legally required by EC Directive 92/43/EEC in the preparation of certain plans and projects. The relevant "competent authority" must assess and report on the predicted effects of the plan or project on "European sites" and associated "European protected species".

Health and Safety Executive (HSE)
A statutory body whose role is the enforcement of work related health and safety law. HSE is the licensing authority for nuclear installations. The HSE exercises this delegated authority through the Office of Nuclear Regulation who are responsible for regulating the nuclear, radiological and industrial safety of UK nuclear installations under the Nuclear Installations Act 1965.

Health Impact Assessment (HIA)
A combination of procedures, methods and tools by which a policy, programme or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population.

High Level Waste (HLW)
Radioactive wastes in which the temperature may rise significantly 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 and a small fraction of low level waste containing specific radionuclides.

Host Community
The community in which any facility will be built. This will be a small geographically defined area and include the population of that area and the owners of the land. For example, it could be a town or village.

Intermediate level waste (ILW)
Radioactive wastes exceeding the upper activity boundaries for low level radioactive waste but which do not need heat to be taken into account in the design of storage or disposal facilities.

International Atomic Energy Agency (IAEA)
The IAEA is the world's centre of cooperation in the nuclear field. It was set up in 1957 as the world's "Atoms for Peace" organisation within the United Nations family. The Agency works with its Member States and multiple partners worldwide to promote safe, secure and peaceful nuclear technologies

Low Level Waste (LLW)
LLW is defined as radioactive waste having a radioactive content not exceeding 4 gigabecquerels per tonne (GBq/t) of alpha or 12 GBq/t of beta/gamma activity.

Managing Radioactive Waste Safely (MRWS)
Government's programme of work for the long term management of the UK's higher activity radioactive waste. It covers the whole process of public consultation, work by CoRWM, and subsequent actions by Government, to identify and now implement geological disposal, coupled with safe and secure interim storage and ongoing research and development.

Nuclear Decommissioning Authority (NDA)
The NDA is the implementing organisation, responsible for planning and delivering geological disposal. The NDA was set up on 1 April 2005, under the Energy Act 2004. It is a non-departmental public body with designated responsibility for managing the liabilities at specific 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 (currently the Secretary of State for Energy and Climate Change) and Scottish Ministers.

Office for Nuclear Regulation (ONR)
The ONR maintains and improves safety standards for work with ionising radiation at licensed nuclear installations. It sets national regulatory standards and helps develop international nuclear safety standards. Through its licensing powers it assesses safety cases and inspects sites for licence compliance. The ONR sets out in conditions attached to a nuclear site licence the general safety requirements to deal with the risks on a nuclear site.

Potential Candidate Site
A Potential Candidate Site is a combination of a surface site for the surface facility and a volume of rock for the underground facility. The land areas and/or rock volumes identified during the process described in this document could be considerably larger than would be required for a geological disposal facility. Any Candidate Site taken through to Stage 5 for further, more detailed investigation could still extend over a relatively large area.

Radioactive waste
Any material contaminated by or incorporating radioactivity above certain thresholds and for which no further use is envisaged, is known as radioactive waste.

Right of Withdrawal (RoW)
This is an important part of the voluntarism approach intended to contribute to the development and maintenance of community confidence. Up until a late stage, when underground operations and construction are due to begin, if a community wished to withdraw then its involvement in the process would stop.

Spent fuel (spent nuclear fuel)
Used fuel assemblies removed from a nuclear power plant reactor after several years use and treated either as radioactive waste or via reprocessing as a source of further fuel.

Stakeholders
In the context of this document, people or organisations, having a particular knowledge of, interest in, or being affected by, radioactive waste, examples being the waste producers and owners, waste regulators, non-Governmental organisations and local communities and authorities.

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 an environmental report on its likely significant effects, consult the public on the report and the plan or programme proposals, take the findings into account, and provide information on the plan or programme as finally adopted. www.legislation.gov.uk/uksi/2004/1633/contents/made

Strategic Transport Assessment (STA)
In this document, Strategic Transport Assessment refers to an assessment of the potential transport effects of a proposed plan or programme. An Strategic Transport Assessment also identifies what measures may be required to deal with adverse transport effects and to improve accessibility and safety, especially for pedestrians, cyclists and public transport users.

Sustainability Appraisal (SA)
A form of assessment used in England, particularly in regional and local planning, covering the social, environmental and economic effects of proposed plans and appraising them in relation to the aims of sustainable development. SAs fully incorporating the requirements of the SEA Directive (2001/42/EC) are mandatory for a range of regional and local planning documents under the Planning and Compulsory Purchase Act 2004.

Voluntarism
An approach in which communities “express an interest” in participating in the process that would ultimately provide the site for a geological disposal facility. Initially a community would be expressing an interest in finding out more about what hosting such a facility would involve. In the latter stages there would be more detailed discussion of plans and potential impacts.

Wider Local Interests
Communities outside the Host Community that have an interest in the development of a disposal facility in the Host Community. Such a community might be the next village, a neighbouring district or a community on the local transport routes to the Host Community.

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