

# **PRELIMINARY COMMENTS ON THE PROPOSED FRAMEWORK FOR SITING A GEOLOGICAL REPOSITORY**

**Briefing Paper G  
July 2007**

## **Introduction**

This Briefing Paper provides preliminary comments on key aspects of the proposed implementation framework for siting a geological repository. It has been prepared to assist NuLeAF member authorities respond to the Government consultation document (CD)<sup>1</sup>. The closing date for comments is 2 November<sup>2</sup>.

The consultation is sponsored by DEFRA, DTI and the Welsh and Northern Irish devolved administrations, but not by the Scottish Parliament. The implications for the long-term management of radioactive wastes currently located at sites in Scotland is not yet clear.

The CD sets out proposals for:

- the technical programme and aspects of design of a geological repository;
- the process and criteria to be used to decide the siting of a repository, including development of a voluntarism/partnership approach and the assessment and evaluation of potential sites.

The Briefing Paper provides an introduction and preliminary comments on each of the questions in the CD. Note that these comments do not represent NuLeAF's formal response to the consultation, which will be finalised following discussion at the NuLeAF Steering group meeting on 18 October.

Overall, there are many aspects of the proposed implementation framework that can be welcomed, and that are consistent with NuLeAF's pre-consultation proposals<sup>3</sup>. There are, however, some significant issues that require careful consideration by Government. These include the way it proposes to issue invitations to participate in the siting process, and the need for a clear commitment to community benefit packages.

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<sup>1</sup> 'Managing Radioactive Waste Safely: A Framework for Implementing Geological Disposal', 25 June 2007. Available at [www.defra.gov.uk/corporate/consult/radwaste-framework/index.htm](http://www.defra.gov.uk/corporate/consult/radwaste-framework/index.htm)

<sup>2</sup> Comments should be sent to Sophie Shepherd, DEFRA, 3/G24 Ashdown House, 123 Victoria Street, London SW1E 6DE.

<sup>3</sup> 'Overview of Input to Government on the Implementation Framework', NuLeAF Briefing Paper 7, May 07

## The Radioactive Waste Inventory

Chapter 2 of the CD outlines the types and quantities of radioactive waste in the 'baseline inventory'. It highlights the need for flexibility and ongoing discussion with host communities about potential changes to the inventory for disposal, for example from re-categorisation of spent fuel, plutonium and uranium, and any new nuclear build:

- 2.8 Given these uncertainties, it is not possible to say at this stage exactly what the 'inventory for disposal' will be, and there is therefore a need for flexibility in the design of the geological disposal facility. It will be necessary to refine the inventory in the years to come however as the design evolves, and in order to engage in discussions with potential host communities (see Chapter 5). Communities will want a clear understanding of what could be disposed of, and where the uncertainties might be, before they agree to the project going ahead.

The chapter also makes reference to the need for agreement on a mechanism or 'change control process' for updating the inventory after final agreement with a community on the preferred site for repository development (para 2.10)

**Question 1:** Do you agree with this approach to compiling and updating the radioactive waste inventory and using it as a basis for discussion with potential host communities? If not, what would you propose?

**Preliminary Comments on Changes to the Inventory:** The suggestions in the CD are welcome. Further confidence in ways of handling substantive increases to the inventory could be generated by explicitly adopting CoRWM's recommendation that any such increase will require an additional step in the negotiation process with host communities to allow them to take a decision to accept or reject any additional waste. The implementation framework would benefit from explicit adoption of the CoRWM recommendation<sup>4</sup>.

## Technical Approach to Developing a Repository

Chapter 3 of the CD describes a notional Repository concept, including illustrations of shafts, tunnels and vaults. It makes reference to whether a repository should be designed to allow a period of extended underground storage of wastes prior to closure. After noting CoRWM's view that early closure is preferable, the CD states that: "The Government ... on balance considers that CoRWM's conclusion was correct".

Nonetheless, the CD states that the repository will be designed and constructed such that extended retrievability is not excluded (para 3.20). Chapter 3 also states that in line with CoRWM's recommendation further research will be carried out to reduce uncertainties, support development of the site-specific safety cases, and to optimise facility design and delivery (para 3.21).

**Question 2:** Do you have any comments on the proposed technical approach for developing a geological disposal facility, as set out in Chapter 3?

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<sup>4</sup> The point would also need to be addressed in any Partnership Agreement.

**Preliminary Comments on Retrievability:** The commitment not to exclude extended retrievability is welcome. NuLeAF believes that the issue of whether to design a repository for an extended period of underground storage prior to closure should be discussed and agreed with potential host communities during the siting process. NuLeAF has produced a Briefing Paper to inform debate about the pros and cons of early versus delayed closure<sup>5</sup>.

**Preliminary Comments about Research:** The commitment to undertake further research in accordance with CoRWM's recommendation is welcome. It will be essential that this is done in an open and transparent way, so that stakeholders can see what research is being undertaken, and understand the way it contributes to the reduction of uncertainties and development of site specific safety cases.

## Public and Stakeholder Engagement

Chapter 3 also outlines the Government's thinking on public and stakeholder engagement during the siting process:

- 3.43 The UK Government's proposal is that the NDA should work in partnership with potential host communities throughout the process of geological disposal facility siting and development. It is principally through this mechanism, discussed in Chapter 5, that the UK Government envisages that NDA will engage with those members of the public and stakeholders who would be most affected by development of a geological disposal facility.
- 3.44 The NDA already engages widely with the public and with its current stakeholders, consulting on the work covered by its Strategy and Annual Plans, using various mechanisms including a National Stakeholder Group and Site Stakeholder Groups at its sites.
- 3.45 During the development of the geological disposal facility, the NDA will also seek to use stakeholder forums established by various interest groups and CoRWM in addition, NDA plans to undertake a range of further activities of public and stakeholder engagement at both a national and local level as required. These are likely to include: holding workshops and seminars on specific aspects of geological disposal in response to demand; posting information on the NDA website<sup>14</sup> and distributing it to interested parties; providing briefings and presentations; and working with the media. These activities will take place both during the consultation period and continue in a more focused manner as the implementation process develops. These events will help raise awareness of the issues amongst stakeholders and enable them to provide input to its proposed arrangements for delivery of a geological disposal facility.

**Question 3:** Do you agree with the approach to public and stakeholder engagement set out here? If not, how do you believe your input could be better managed or your concerns addressed?

**Preliminary Comments on Public and Stakeholder Engagement:** The Government's proposal that the NDA will work in partnership with potential host communities through the siting process is welcome. Government should also expect repository development to feature as a key aspect in the NDA's stakeholder engagement plan, so that there is clarity about the timing of the NDA's different national and local engagement activities on repository development, and the objectives of those activities.

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<sup>5</sup> 'Retrievability and Design of a Geological Repository', NuLeAF Briefing Paper 8, July 07

In addition, it is important that Government itself takes a more programmatic approach to its stakeholder engagement activities up to the point when NDA takes the lead. It is disappointing that the Government was unable to announce at the launch of the current consultation what engagement activities would take place to complement the formal process of commenting on the CD document. The quality of the Government's engagement programme will be an important factor in determining the success or otherwise of the early part of the siting process (see also comments below on the invitation process).

## **System of Regulation**

Chapter 4 provides a description of the regulatory regime applicable to the Site Licence Company (SLC) that will undertake repository development and operation. The suggestion is that a series of "hold points" will apply to the main regulatory steps. In particular: "It is envisaged that development of a geological disposal facility will be subject to staged authorisation by the environmental regulator. This implies a series of important hold-points as the development programme progresses. At each hold-point the developer submits an updated environmental safety case to provide continuing assurance that the selected site will meet regulatory requirements." (para 4.8)

The chapter also notes that "Government is reviewing whether or not the legislative and regulatory provisions available to the environmental regulators are sufficient to enable them to undertake the necessary staged authorisation process of the NDA's geological disposal facility development." (para 4.10)

**Question 4:** Government believes the system of regulation outlined in paragraphs 4.2 to 4.14 is strong and robust in relation to a geological disposal facility. Do you agree? If not, what other regulation do you feel is necessary?

**Preliminary Comment on the System of Regulation:** the proposed staged approach to regulation, with important hold-points as development progresses, is welcome. It will be important to align this approach with right of withdrawal and planning decisions during the siting process. NuLeAF is involved in discussions with NDA and the Environment Agency about how to do this. It should be noted that the EA considers that amendments to the Radioactive Substances Act are required to ensure a legislative underpinning to their early and step-wise involvement in the siting process, particularly regarding regulatory consents at key stages. This would help provide strong and effective environmental regulation through the siting process.

## **Proposed Planning Reforms**

Chapter 4 continues with an overview of planning issues. It explains that more than one planning permission will be needed during the siting programme, including for intrusive surface based investigations (eg boreholes), for underground investigations and for repository construction. It states that a "degree of staging" in the planning permission process for underground investigations and repository construction may be necessary, and that Government is considering how this might be done (para 4.20).

The chapter outlines the reforms proposed in the planning White Paper. It then states that:

4.23 The UK Government believes that the development of a geological disposal facility would be a major development of national significance. It may therefore need to be covered by the new arrangements set out for consultation in the planning White Paper. In this context, the UK Government is also considering the need to produce a National Policy Statement covering disposal of higher activity radioactive waste and the potential role of the Infrastructure Planning Commission. Both will need to fit with a voluntarism and partnership approach with a host community.

**Question 5: Do you think the proposed planning reforms in England outlined in Chapter 4 should apply to the development of a geological disposal facility, and if so how could this be integrated with the voluntarism and partnership approach outlined in Chapter 5?**

**Preliminary Comment on applicability of proposed planning reforms:** the Government statement that proposed planning reforms will need to fit with a voluntarism and partnership approach is welcome. NuLeAF has set out proposals for how the siting process should take into account planning requirements and a right of withdrawal on the part of participating communities<sup>6</sup>. These proposals provide a basis for discussion about how the planning reforms could be integrated with the voluntarism and partnership approach. An important point to note is that if NuLeAF's proposed approach is followed, and a local right of withdrawal has not been exercised, it could be expected that the planning application for repository construction will be supported by the local Siting Partnership and Planning Authority. In such circumstances, it is not clear what purpose would be served by referring the planning application to the Infrastructure Planning Commission for determination.

With regard to a "degree of staging" in the planning process, further clarification is needed about what this might entail.

NuLeAF is pursuing these issues in discussion with Government, the NDA and the regulators.

### **Approach to Defining Community**

Chapter 5 sets out the Government's proposal for defining 'community' for the purposes of voluntarism and partnership. It envisages 'community' to have three dimensions:

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<sup>6</sup> 'Siting, Planning Requirements and Rights of Withdrawal', NuLeAF Briefing Paper 6, April 07

- 5.11 The community in which any facility will be built can be termed the '**Host Community**'. Government proposes that 'host community' be a small geographically defined area, and include the population of that area and the owners of the land (if the latter are not members of the host community). It could be a town or village, but could be a smaller area.
- 5.12 Outside this host community, there are likely to be other communities that have an interest in whether or not a facility should be built in the host community, and there needs to be a mechanism that allows them to become involved in the process. Such a community might be the next village, a community on the main transport routes to the host community, or even the whole democratic unit (e.g. county) within which the host community is situated. Government proposes that such communities be termed '**Wider Local Interests**'.
- 5.13 Depending on the nature of the host community and the wider local interests they may have legal decision-making powers, which are generally vested in democratically elected representatives in councils. There are different local authority structures in different parts of the UK. For example in England local authorities include district councils, county councils, metropolitan district councils and London Boroughs and local authority areas may be single (unitary) or two tier in nature, whilst in Wales and Northern Ireland local authorities are unitary. It will be these branches of local Government which have representative decision-making authority for their community. Government proposes that such communities be termed '**Decision Making Bodies**'.

The CD goes on to state "Government believes that all three groups defined above, to the extent that they do not overlap, will need to liaise closely with one another. Government also believes that in practice both it and the NDA will have to engage with all three 'communities'. Government also believes that it is not desirable to be prescriptive about who could come forward with an initial expression of interest. There is nothing to stop a local landowner or organisation from proposing that a geological disposal facility be built on land owned by them, but an expression of interest could just as easily come from a parish or district council." (para 5.14)

The CD then points out that Government will want to be satisfied that "an expression of interest" is credible. It suggests that credibility might be demonstrated by:

- a local decision-making body having canvassed local opinion on the issue, having provided information to its electorate, and by it being able to establish and demonstrate (possibly with independent verification) a high level of support from a particular host community for starting discussions with Government;
- a host community and decision making body having started to discuss the issue with wider local interests; or, and perhaps most convincingly,
- all community interests (i.e. host community, wider local interests and decision-making bodies) having organised themselves in a partnership (see below) for the purposes of taking part in the siting process.

**Question 6:** Do you agree with this approach to defining 'community' for the purposes of the site selection process? If not, what alternative approach would you propose and why?

**Preliminary comments on approach to defining community:** the Government's preference for an approach based on voluntarism and partnership is welcome. As is its recognition of "the important role that existing local democratic decision-making structures

must play in a successful process as they are elected representatives with a mandate to speak for communities". NuLeAF recognises that the proposed categories of 'community' will all have important roles to play within the siting process. However, there are three key aspects of Government's proposed approach that raise significant concerns:

- The Government's proposal that local landowners or organisations could express an interest in having a repository built on their land, encourages a premature focus on specific sites. Identification of potential sites within a local authority area would be better managed once a Siting Partnership has been established and with explicit regard to local authority policies on the development of land and waste management. Any decision to undertake surface-based investigation of such sites should only be taken with the explicit support of the potential 'host community'.
- If any landowners or local bodies wish to express an interest, they should enter into discussions with their principal local authority/ies with a view to jointly making an approach to Government. The early involvement of the appropriate local authority/ies is necessary if the foundations are to be laid for the partnership approach that Government is seeking. Any attempts to by-pass the involvement of the local authority/ies could jeopardise the development of an effective partnership.
- The CD fails to make reference to the need for a formal local decision about whether to participate in the siting process. Government should recognise that the purpose of an initial expression of interest is to facilitate discussion and agreement about the steps that are needed to reach a formal local decision about participation. These steps include: (a) reaching agreement about the local processes for decision-making; (b) undertaking community engagement and assessment to inform the decision about participation; and (c) the application of 'sub-surface' criteria to rule out local areas that are not suitable for repository development<sup>7</sup>. The Government's omission of provision for a formal local decision about participation militates against an open and transparent process, and means that there is a considerable risk that an initial expression of interest will be misinterpreted as a decision to volunteer.

A failure on the part of Government to seriously address these concerns is likely to increase the risk that no local authorities will be found that will endorse participation in the siting process.

### **Providing Information and Issuing Invitations**

Chapter 5 of the CD goes on to explain that Government proposes to undertake a programme of awareness raising and information dissemination. Working with NDA, NuLeAF and CoRWM, it proposes to prepare an information pack for interested communities.

It also explains that once it has announced its framework for implementation (a White Paper is expected in the first part of 2008), Government will issue a public invitation for communities to express an interest in taking part in the siting process. It proposes that "a potential host community should advise UK Government, or the appropriate devolved administration government, that it has an interest in entering into discussions about the siting process ...". It adds that "In doing so it should indicate the level of support within the host community and indicate any approaches that have been made to, and the level of

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<sup>7</sup> Further detail of the approach proposed by NuLeAF is set out in 'Overview of Input to Government', Briefing Paper 7, May 07, p3-4.

support secured from, the relevant decision-making bodies and wider local interests.” (para 5.22)

**Question 7:** Do you agree with the proposals for providing information to communities and the way Government proposes to issue invitations?

**Preliminary comment on issuing invitations:** the Government’s proposal to work with NuLeAF and others on the preparation of information materials is welcome. However, the way it proposes to issue invitations is problematic because it encourages a premature focus on specific sites and places insufficient emphasis on the role of the relevant decision-making bodies in this key initial step in the siting process. The basis for this view is set out in response to Q6. The Government also proposes that considerable effort be put into gauging the level of community support prior to an initial expression of interest (eg see para 5.15), when that effort needs to be taken to inform a formal local decision about whether to participate<sup>8</sup>. This suggests a lack of clear thinking about the distinction between an expression of interest and a formal decision about participation.

### **Initial Sub-Surface Screening Criteria**

Chapter 5 of the CD also explains that Government wishes to establish at the earliest opportunity whether the geology or sub-surface characteristics in the area of an interested community is unsuitable for developing a repository (para 5.23). To do this it established two expert groups to develop criteria that could be used as part of an initial high-level exercise to exclude unsuitable areas from further consideration. The two groups conclude that “a safe disposal system could be designed in a wide variety of UK geological environments and settings” (para 5.24), and identify two main exclusion factors:

- the risk of accidental intrusion into a geological disposal facility by future generations seeking to extract resources; and
- the need to protect the quality of exploitable groundwater used as a source of water supply.

Government proposes that once communities have made an initial expression of interest, the British Geological Survey (BGS) would apply the criteria to eliminate any areas that are obviously unsuitable. The BGS would make a draft report available for review prior to completion and publication.

**Question 8:** Do you believe that the initial sub-surface screening criteria proposed by the expert panel are correct? Do you believe that the way in which Government proposes to apply these criteria in the process is correct? If not, how could this be done differently?

**Preliminary comments on the initial sub-surface screening process:** The proposed approach is likely to be appropriate as long as it is clearly understood that the objective is to identify excluded areas in order to inform local decision-making about whether to participate

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<sup>8</sup> See the section on ‘programmes of local engagement’ in NuLeAF Briefing Paper 4, February 07, p9.

in the siting process. This objective would ensure that the application of the criteria is limited as far as practicable to the provision of information about areas that should be excluded, rather than part of a premature attempt to identify potential sites for repository development. As argued above, it is preferable for the initial identification of potential sites within an area to be approached systematically once a decision to participate has been taken and a Siting Partnership is up and running.

The proposals to use the BGS to apply the criteria and to publish the findings are welcome. The implementation framework should also specify that the relevant local authority/ies will be the local point of contact for the BGS. This would assist coordination in local authority areas if a situation arises where there is more than one interested 'host community', and would be appropriate where a local authority wishes to know which local areas within its boundaries are not suitable for repository development.

### **Assessment of Potential Sites**

Chapter 5 of the CD goes on to outline three subsequent stages in site selection:

- desk-based studies of sites not screened-out by sub-surface criteria
- surface-based investigations of remaining candidates to identify a preferred site
- underground investigations and construction

After each of the first two stages Government proposes that the host community would consider the NDA's assessments and "make recommendations to its local decision making bodies about whether to proceed to the next stage". The decision-making bodies (local authorities) would then decide whether they wish to proceed to the next stage (paras 5.28 and 5.30).

The CD explains that because underground investigation and construction are specific to one site and involve very significant expenditure, Government proposes that the local 'right of withdrawal' would end prior to that stage (para 5.31).

The CD then refers to a set of criteria for use in assessing sites:

- level of community support
- geological setting
- potential impact on people
- potential impact on the nature environment and landscape
- effect on local socio-economic conditions
- transport and infrastructure provision and
- cost, timing and ease of implementation

Government acknowledges that not all criteria may be relevant at every stage and that they may have a different weight in different assessments. Following this consultation, Government "will decide on the criteria to be used and their relative weighting, and will publish a methodology for their use" (para 5.38).

**Question 9:** Has Government identified the relevant assessment criteria? If not, what other criteria should be used? Do you have any comments on how the criteria should be applied at different stages?

**Preliminary comments on the assessment criteria:** the proposed criteria provide a check-list of the major issues that will need to be assessed. As such, they should be seen as providing a basis for further discussion within a Siting Partnership. It is expected that this discussion will develop and refine the criteria as appropriate to the stage of assessment and local circumstances. The Government should provide guidance, rather than be prescriptive in specifying criteria, their weighting and assessment methodology. It is important for local confidence and trust in the siting process, that the development of the criteria, weightings and methodology, and their application, can be undertaken in partnership between the relevant national and local players.

**Preliminary comments on right of withdrawal:** the Government's proposal that local decision-makers could exercise a right of withdrawal after desk-based and surface investigation stages is welcome. This right is an integral part of a siting process based on willingness to participate. As argued above, these decision-makers should also have opportunity to make a decision about participation at the start of the siting process, following community engagement. Further discussion is needed about whether there is a case for a more limited form of right of withdrawal between underground investigations and repository construction, based on specialist and regulatory assessment of the environmental safety case.

## **Community Partnerships**

The CD highlights that the siting process will require considerable engagement by communities. While it does not intend to be prescriptive about how this engagement is undertaken, Government "does favour a partnership approach". It states that a partnership "could provide a forum for the host community and the implementer to exchange information and views and for the partnership to advise the decision-making bodies and the NDA .." (para 5.40). The CD then sets out the possible role and membership of a partnership, and its relationship to national bodies. It states that "in some cases decision-making bodies might take the lead in establishing partnerships with the host community and wider interests" (para 5.44).

**Question 10:** Do you have any comments on whether and how a partnership arrangement could be used to support a voluntarism approach?

**Preliminary comments on Community Partnerships:** the Government's proposals for community partnerships are welcome, and are largely consistent with NuLeAF's pre-consultation input<sup>9</sup>. The Government should give encouragement to the setting up of local partnerships in participating areas, and prepare guidance to ensure that the partnerships

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<sup>9</sup> 'Proposals for Siting Partnerships', NuLeAF Briefing Paper B, January 07. See also NuLeAF Briefing Paper D, 'Siting, Planning Requirements and Rights of Withdrawal', April 07, for reference to a draft model Partnership Agreement.

provide effective vehicles for local involvement in the siting process. It is important that the timetable for the siting process allows sufficient time for local discussion and negotiation to enable a shared local vision to be developed about the mission, role and organisation of a local partnership. A partnership must have sufficient time to get up to speed and function effectively in the siting process.

## Engagement Packages

Chapter 5 of the CD explains that "Government acknowledges the point made by CoRWM and NuLeAF that communities may incur costs from taking part in the site selection process and may expect Government to contribute to these costs" (para 5.46). It notes that such packages have been used in other countries to fund local partnerships, and that funds are underpinned by formal agreements (paragraph 49), covering:

- Partnership costs – core staff and administration, overheads, out of pocket expenses of participants, access to independent advice;
- Local authority costs – additional officers, attending meetings, access to independent advice;
- Wider community engagement – information provision, engagement events.

Government indicates that "prospective host communities and local decision-making bodies are best placed to judge what work is likely to be needed, including the setting up and running of partnerships, and what this might cost. It does not therefore propose at this point to predetermine the level of funding needed" (para 5.51).

**Question 11:** Do you agree that the work of communities and/or partnerships should be funded by Government through an engagement package? If so, what activities do you think it would be reasonable to expect Government to fund?

**Preliminary comment on engagement packages:** the Government's proposals are welcome. It will be important that the work of partnerships and participating local authorities receives adequate funding from Government. These proposals are largely consistent with NuLeAF's pre-consultation input<sup>10</sup>. Government should also provide a commitment to meet the costs of the key steps leading to a decision to participate in the siting process (including community engagement to inform that decision). These early costs can be identified and agreed in discussions between Government and local authorities that have expressed an interest in participation.

## Community Benefits Packages

Chapter 5 also covers 'Community Benefits Packages'. It notes that direct and indirect benefits would accrue to a community from hosting the multi-billion pound repository project. It refers to NuLeAF's proposals that a benefits package should contribute to the sustainable development of the affected area and the well-being of local communities and

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<sup>10</sup> 'Funding Participation and Enhancing Community Well-Being', NuLeAF Briefing Paper 5, March 07.

their descendants, and to illustrative examples of the elements included in benefits packages in other countries.

The CD then states that: "Government does not believe it sensible to determine as part of this consultation how existing or specific mechanisms could be used, or to define the level or nature of benefits. Instead it believes that any benefits packages should be developed between communities, the NDA and Government as discussions progress, taking into account affordability and value for money considerations."

**Question 12:** How best can Government and the NDA ensure that the development of a geological disposal facility delivers lasting benefits to the host community? Should this involve the use of benefits packages and if so how might this best be achieved, taking into account the need to make the best use of public funds?

**Preliminary comment on benefits packages:** in order to provide sufficient incentive for participation in the siting process, Government should provide a clear commitment that a benefits package in addition to the direct and indirect benefits from repository development will be provided. It should make clear its commitment to honour a benefits package negotiated and agreed by the relevant parties within the siting process.

A geological repository will be a highly controversial development. The scale of the benefits package will have to enable local judgements to be made that the overall benefits outweigh the actual and perceived detriments. A lack of certainty that a substantive package will be available could increase the risk that no local authorities will be found that will endorse participation in the siting process.