



## CoRWM's Response to the GDF Siting Process Consultation

December 2013

### CoRWM

1. The [Committee on Radioactive Waste Management \(CoRWM\)](#) is a non-departmental advisory committee to Government. CoRWM provides independent scrutiny and advice on the long-term management of higher activity radioactive wastes to the UK Government and the Governments of the Devolved Administrations in Scotland, Wales and Northern Ireland. As a non-departmental public body, CoRWM reports directly to Ministers and its responsibilities are set out in its [terms of reference](#). In [CoRWM's work programme \(CoRWM doc. 3100\)](#) for 2013-14, 75% of resource was allocated to scrutinizing and providing advice on the GDF siting process.

### How CoRWM formulated this response

2. The Committee has followed the MRWS process closely from its inception, and scrutinised DECC and the NDA's plans and programmes throughout. CoRWM has provided feedback to DECC on this process when requested and has commented on its development. Since the decision not to continue with the MRWS process in Cumbria was made in January 2013, CoRWM has reflected on the process at length at its plenary meetings. The Committee has published its deliberations in the form of [plenary meeting minutes \(CoRWM docs. 3135 and 3139\)](#) and in [CoRWM's ninth annual report \(2012-13\) \(CoRWM doc. 3107\)](#). Members of the Committee also met with those involved in the process including the DECC Minister, Officials from DECC and the Welsh Government, the NDA's Radioactive Waste Management Directorate (RWMD), Councillors and officers from Cumbria County Council, Copeland and Allerdale Borough Councils and the Nuclear Legacy Advisory Forum (NuLeAF) to gather evidence, exchange views and understand the background to their concerns and decisions.

3. CoRWM provided informal advice to DECC in the form of [comments on the GDF Siting Review \(CoRWM doc. 3133\)](#) prior to the publication of the Consultation Document and this advice was published in August 2013. CoRWM was also asked to provide comments on the Consultation Document prior to its publication.

4. CoRWM also carried out its own analysis of the “Call for Evidence” responses to understand better the views of others in formulating its response to the Consultation.

5. To formulate the response to this Consultation, CoRWM started initial discussions in the plenary meeting held on 16 and 17 September 2013 ([minutes, CoRWM doc. 3135](#)), sub-groups of Members were established to consider the individual questions and their initial analyses were further considered in meetings on 10 and 31 October 2013, and in the meeting on [8 November 2013 \(CoRWM doc. 3139\)](#) which was open to the public. A final meeting to agree the CoRWM submission was held on the 28 November.

## General Response

6. CoRWM has some concerns about the approach outlined in the Consultation. CoRWM believes that, in the light of the lessons learned from the decisions in West Cumbria and Shepway in Kent, any revised process should be as simple as possible, with the minimum number of decision points. CoRWM believes that any new process should be seen more as a continuum of engagement rather than as a series of distinct stages.

7. CoRWM believes that, whilst the Government's preferred option is to have a single repository for all higher activity radioactive waste, the option of having more than one Geological Disposal Facility (GDF) should not be ruled out. There are many reasons why a single repository may not be the optimum solution, such as: availability of suitable geology or rock volume in a single location; incompatibility of radioactive waste types; or the attraction of a waste-specific GDF to accommodate legacy waste and avoid unnecessary additional storage facilities.

8. CoRWM believes that whilst the radioactive waste disposal facility is referred to as a "Geological Disposal Facility", geology should not be seen in isolation and the suitability of a site or sites for radioactive waste disposal must be determined by the robustness of the facility "Safety Case". **CoRWM would stress that this Safety Case is required to demonstrate to independent nuclear safety, nuclear security and environmental regulators that the GDF is safe, the radioactive material is secure and that the environment is adequately protected.** The concept and role of the Safety Case should be clearly defined in any future White Paper.

9. CoRWM also believes that, in addition to the focus being put on the Safety Case, the Government should put in place a clear and robust regulatory framework to control the design, construction, commissioning, operation, decommissioning and closure of the above-ground and underground facilities. Demonstrating that this framework is in place will be essential to give the public confidence that no radioactive waste will be placed in a GDF unless it has independent regulatory approval and that there is a Safety Case that can clearly show that the facility will be safe, the radioactive waste is secure and the environment is adequately protected.

### ***Sharing Knowledge and Building Trust During Site Selection and Beyond***

10. CoRWM believes that the relationship between the implementing organisation, the potential host community and the Representative Authority is of fundamental importance to the delivery of a GDF. The development and implementation of a mechanism to ensure effective engagement of the potential host community and the Representative Authority in the siting process will be essential. This mechanism will enable the implementing organisation to share information on

the progress being made in the various site selection activities that are needed to develop the Safety Case and deliver the project. It will also enable community concerns to be discussed and responded to. The successful operation of this mechanism will be essential for trust to be built and established between all parties. It will also enable the potential host community and its Representative Authority to gain an understanding of the progressive development of the Safety Case and eventually, along with the implementing organisation, to take ownership of the Safety Case.

11. CoRWM has concerns about the proposals in the Consultation Document and believes that further consideration should be given to the concepts of a “Steering Group” and a “Consultative Partnership”. CoRWM’s concerns relate to the intended role, function and membership of these bodies as set out in the Consultation Document. The impression is that it is these bodies will be in control of (steer) the siting process (see paragraph 2.5.3). This will not be the case as it will be the implementing body that will have the responsibility to manage (and hence steer) the project as shown clearly in paragraph 2.73 of the Consultation Document.

12. Rather than creating such bodies as a “Steering Group” or “Consultative Partnership”, CoRWM believes that the use of something similar to a “Local Liaison Committee”(LLC), that is familiar to communities living in the vicinity of existing nuclear installations, could deliver the need for public engagement, consultation and information exchange i.e. incorporating the role of a “Consultative Partnership”, without giving the impression that it will be the community and not the implementing organisation that will manage the project.

13. CoRWM believes that any new White Paper should make clear that it is the implementing organisation that not only has the responsibility to manage a GDF siting process but also has the responsibility to ensure effective engagement with the potential host community and its Representative Authority. Given this, CoRWM believes that an LLC or something similar should be set up by the implementing organisation at the outset of its engagement with a potential host community. The membership and Chair of the LLC should be determined by the implementing organisation and the potential host community. CoRWM does not believe that Government should be a member of the LLC.

## Detailed Response

### Question 1

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

14. **CoRWM strongly supports the principle that a test of public support should be taken before a Representative Authority loses its Right of Withdrawal (RoW) and the decision is taken by the potential host community for a GDF.** Emphasis should be given in any future White Paper to the fact that the RoW persists up to the point where the implementing organisation is in a position to submit a Development Consent Order (DCO) application, apply for a nuclear site licence under the Nuclear Installations Act, and apply for appropriate environmental permissions for the licensed site. CoRWM believes that this will give reassurance to both the Representative Authority and a potential host community or communities, of the strong commitment of Government to this important principle. After submission of a DCO application and associated applications for a nuclear site licence and environmental permits, there would be no further RoW. After this point the control of the design, construction, commissioning, operation, decommissioning and closure of the site would fall to the independent nuclear regulators who act on behalf of society to ensure safety, security and the protection of the environment.

15. CoRWM's view of the lessons learned from the MRWS process in Cumbria, supported by its review of the submissions to the "Call for Evidence", is that there is strong support for the idea that RoW should be given legal status, to engender greater confidence that, if the local community wished to withdraw from the process, it could. At this point the siting project in their area would stop and the implementing organisation would cease its operations and withdraw.

16. CoRWM believes that the implementing organisation should not be able to make a DCO application for a GDF unless the local community has demonstrated its support for the application. This requirement should be clearly set out in the National Policy Statement (NPS) thereby providing the legal basis for the RoW, which has been requested by many interested parties. Equivalent arrangements should be put in place for applications in Wales or Northern Ireland.

17. CoRWM believes that measuring public support will be challenging in terms of what method or methods would be most effective in gaining the confidence of potential host communities and Representative Authorities. Whatever method or methods are chosen a number of issues arise.

- First there is the issue of the spatial coverage of measurement. Clearly it must cover any potential host community and the Representative Authority that will

have the final say as to whether to take a RoW decision or volunteer to host a GDF. CoRWM believes that consideration should be given to how a wider geographical coverage, represented by Local Authorities, Organisations, NGOs and individuals either in neighbouring areas or in localities through which waste would have to be transported, should be consulted and the extent to which they have a right to influence the decision defined.

- A second issue is the question of weighting. When seeking support, should some form of weighting system be used? With weighting, those in a potential host community would have more influence on the final decision than those who may live many miles away on the boundary of the Representative Authority or in an urban area which would only marginally be impacted by a GDF.

18. After careful consideration CoRWM believes that it would neither be desirable nor practical to adopt a system of weighting. Furthermore CoRWM considers that the “wider community”, including for example, residents of areas through which waste material would pass, should have, through an extensive consultation process, an opportunity to express their views to the Representative Authority. The Representative Authority should consider them along with the views of a potential host community, prior to making a decision as to whether or not to exercise a RoW or to agree to host a GDF. A truly consultative process would be one where the implementing organisation, DECC, the Representative Authority and the potential host community unanimously agree the most desirable method of testing community support.

19. Various methods are available to test community support. CoRWM considers that whilst it would be possible to include in any future White Paper the method that must be utilised, further research would be desirable to explore which methods would be most appropriate and which would be most respected by all interested parties. CoRWM also consider that account should be taken of the utility and outcome of methods used to test levels of support in communities in other countries, such as Sweden.

20. In light of certain negative reactions to the use of an Opinion Poll in Cumbria, CoRWM considers that a method that enables everyone on the electoral register in the potential host community to have the opportunity to have their view counted, would be the most appropriate method to test community support. This view is subject to the proviso that test of community support would need to consider a) area of coverage and b) legitimacy of result measured in terms of percentage turnout i.e. there should be a minimum turnout for any result to be valid.

21. CoRWM recommends that the above suggestion, or other method that may be adopted, should be organised and conducted by an independent body.

22. CoRWM also recommends that the test of community support, and the point at which the RoW should cease, should be included in any process diagram that may be included in the White Paper.

23. CoRWM note that in Para 2.20 it is stated that “the community, through its representative authority....retains a RoW” whilst in Para 2.22 it is stated that “ the potential host community should retain a RoW”. Any future White Paper on a new siting process should use consistent terminology.

## **Question 2**

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

### ***The Overall Process***

24. **CoRWM does not fully agree with the proposed process as set out in Figure 4 of the Consultation Document.** The phased approach to decision making is understandable. However, in CoRWM’s opinion, the siting process is best approached as a continuum of engagement, proceeding at a pace with which all participants feel comfortable so as to build trust, confidence and knowledge among all stakeholders along the way. In this light, the Committee is concerned that the diagram (Figure 4) used in the Consultation Document could be misunderstood or misrepresented. In particular, the vertical arrows in the diagram could be taken to represent hard decision points. The CoRWM believes that it is essential to avoid the possibility of this interpretation by any party and CoRWM’s strong preference would therefore be to modify the diagram to remove this risk. A revised diagram should illustrate a sequence of activities similar to that defined by DECC but remove anything before the demonstration of community support which could be construed as a hard decision point.

25. Figure 1 below is CoRWM’s suggested alternative approach. As can be seen in Figure 1, CoRWM recommends the elimination of distinct “Learning” and “Focusing” Phases as shown in Figure 4 in the Consultation Document. CoRWM believes that Figure 4 could incorrectly give the impression that there is a major community decision to be made between the “Learning” and “Focusing” Phases. In practice, CoRWM believes that there will be a continuous process of gathering information and improving knowledge to identify potential sites for the surface and subsurface facilities using both desk-top studies, geophysical surveys and boreholes – until the DCO, licence and environmental applications.

26. CoRWM also recommends the removal of specific timelines from the process diagram so as not to give the impression that there are specific deadlines to acquire the necessary information. To develop the trust and support of the local community and that of the wider public, CoRWM believes that all must recognise that there are no fixed timescales and the time that is necessary to gather the necessary information will depend upon the local circumstances.

### ***Approach to Engagement***

27. CoRWM believes that engagement with communities at all phases of a GDF project is key to successful delivery. Government has a responsibility to set out the national policy for the safe and secure management of radioactive waste and promote the wider understanding of the need for geological disposal. CoRWM supports the proposal for Government to engage with local communities to explain the process. CoRWM believes that the implementing organisation should engage with communities and their representatives to explain the project and to seek their engagement in it to find a suitable site for a GDF in their area.

28. CoRWM supports the proposal for a series of regional meetings with Local Authorities and other interested parties, held after publication of the White Paper, which would provide a forum for DECC and the implementing organisation to explain the process. If these meetings were conducted as part of ongoing, wider interactions between DECC and others, there would be less risk of these preliminary information exchanges assuming an unjustified significance. Such a strategy would be consistent with a very soft approach to initial engagement.

29. In the version of Figure 4 included in the Consultation Document, the preliminary stage is now expected to take 12+ months whereas there were earlier suggestions that this stage would be around 6 months in duration. The longer duration of 12+ months creates a risk that communities that may be keen to engage early will be deterred. Does the Government have plans for managing this risk? Alternatively, if the intention is to begin dialogue before the end of this stage, that intention should be made clear in any future White Paper.

30. CoRWM believes that there should be no barriers to engagement. Engagement should proceed at a pace with which the communities feel comfortable. As explained earlier, anything that represents, or can come to represent, a “hard” decision point should be avoided. In the continuous approach proposed by CoRWM, the implementing organisation would not be required to seek specific permission to proceed from a local community or its representatives during the information gathering part of the process. CoRWM proposes that there is only one “hard” decision point and this decision is taken by the potential host community and its Representative Authority when the implementing organisation believes it has sufficient information to make a Safety Case to proceed with its identified site (s). At



this point the Representative Authority will be asked if it wishes to proceed with the project and host the GDF. As outlined in Question 1 CoRWM supports the requirement for public support for a decision to proceed and hence volunteer to host the GDF.

31. Early on in any engagement with a local community, as mentioned in paragraph 12, it would be helpful to set up a body similar to a Local Liaison Committee for a Nuclear Licensed Site to provide a means of communication and building trust. The mechanism for establishing and, the remit of, such a body would need to be defined.

32. In the event that first contact is not with a Local Authority (but, for example, with a landowner), CoRWM recommends that the Local Authority should be brought into discussions as soon as possible.

33. When the initial discussions between a local community and the implementing organisation have progressed to the state where the community has sufficient confidence in the project to continue the engagement and enable the necessary information to be gathered, it will be for the community to decide whether to engage or not, decide to request additional information or not, and decide, or not, whether to participate in the Local Liaison Committee for the project.

### ***Right of Withdrawal***

34. At any time during the information gathering part of the process, CoRWM recognises that the Representative Authority has the right to terminate the engagement and inform the implementing organisation that it wishes to stop the project in its area i.e. exercise the Right of Withdrawal. In the view of CoRWM, if the programme is successful in building trust and a sound Safety Case can be developed for a chosen site, there should be no need for “hard” decisions to be taken by the local community prior to the Demonstration of Community Support.

35. CoRWM believes that in the Demonstration of Community Support, a community decision not to proceed should be binding on the Representative Authority, whereas a community decision to proceed should not be binding on the Representative Authority.

### ***Gathering and Presenting Information***

36. CoRWM believes that in any communication with potentially interested communities or other stakeholders, geological information must always be presented in the context of the Safety Case for the GDF (see response to Question 4).

37. Geological data, as opposed to expert interpretations, will almost certainly be sparse at the start of the siting process and will only gradually be accumulated as the siting process proceeds so that, in the early stages, it will certainly be insufficient to support the development of a full, detailed Safety Case. CoRWM believes that these limitations need to be made very clear, and any future White Paper should explain how, as the process develops, understanding of the geological setting and its contribution to the Safety Case will improve and the associated uncertainties are likely to diminish.

### ***Governance of the Process***

38. CoRWM believes that DECC and the Devolved Administrations' roles in the process needs to be carefully considered. For example in England, it will ultimately be the DECC Secretary of State who will responsible for taking the DCO application to Parliament. In this case there is a potential for conflict of interest. The nuclear and environmental regulators will make their own decisions regarding licensing and environmental permitting.

39. As stated above, CoRWM supports the Representative Authority's RoW at any point in the siting process until there has been a formal Demonstration of Community Support and the community has agreed to volunteer to host the GDF. This decision will be required before the implementing organisation can apply for a DCO, apply for a nuclear site licence or appropriate environmental permits. It will be for the implementing organisation to decide when it has collected sufficient information to produce the initial phase of the facility Safety Case (a Pre-Construction Safety Report or equivalent), the DCO application and the necessary environmental permit application. The timing of this decision is solely a matter for the implementing organisation. Once the DCO has been granted and the regulators grant the nuclear site licence and necessary environmental permits, increasingly large sums of public money will be spent and a continuing RoW would represent a significant programme risk and has the potential to undermine the UK's nuclear safety regulatory process. CoRWM recommends that the RoW should cease when the DCO application is submitted. The safety and security of the public and the protection of the environment beyond this point will assured through planning controls, and the regulatory controls provided by the nuclear site licensing and environmental permit regimes.

### **Question 3**

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

40. **CoRWM is in broad agreement with the proposed approach** in revising roles in the siting process and welcomes the stated objectives of providing greater clarity on responsibilities and improving the visibility of key organisations earlier in the siting process.

### ***UK Government***

41. CoRWM considers that the primary roles of Government are to set and own the policy, to ensure that a robust and clear regulatory framework is in place and that an implementing organisation is in place to deliver a GDF. CoRWM suggests that the possible need for new legislation should be included in any new White Paper. CoRWM believes that consideration should be given to a specific GDF Act of Parliament to encompass all these matters. CoRWM believes that legislation provides certainty, which is an important requirement for increasing public confidence in the process.

### ***NDA / RWMD***

42. CoRWM agrees that there is a need for a clearly identified duty holder for the delivery of a GDF and hence supports the creation of a stand-alone implementing organisation that will become the nuclear site licensee. However, CoRWM does not consider that the implementing organisation should automatically remain as a subsidiary of, or be linked with the NDA. It is important to build trust with the public and CoRWM believes it would be desirable to separate clearly the implementing organisation from the waste producers. Other options regarding the organisational structure, role and responsibilities and accountability to Government should be considered. These options could include models such as the Olympic Delivery Authority, the Channel Tunnel, Crossrail and other public bodies.

43. CoRWM recommends that the implementing organisation is the prime advocate of the GDF at both a national and local level. If this body were to be independent of the NDA, it could readily encompass this advocacy role and leave the NDA free to concentrate on its decommissioning and waste management responsibilities.

44. CoRWM recommends that the responsibility for the disbursement of the Community Benefits Package should be firmly within the remit of the implementing organisation. CoRWM considers that any new or revised White Paper should be explicit in this matter.

### ***Local Government***

45. CoRWM is supportive of the concept of local decision-making and believes that designated decision makers should be locally based. CoRWM therefore believes

that the proposal for the decision maker to be at the District Council level is understandable. However any new White Paper should include all the alternatives list the pros and cons of each option and provide a detailed explanation of why decision-making at the District level is the preferred option. Recognition of the roles of the County Council and Parish Councils should be given. In particular, the fairly vague terms, such as 'prominent role' should be made more explicit.

### ***Regulators***

46. CoRWM supports the proposal that both the ONR and the environmental regulators should play a greater role in the siting process by engaging with communities throughout the siting process but fully acknowledges that this role has to be undertaken in a way that does not undermine the independence of the regulators. Engagement with the public would be centred on explaining the regulatory framework that will control the design, construction, commissioning, operation, decommissioning and closure of the GDF. The Regulators should also highlight their role in the siting process and beyond. CoRWM believes that the Regulators informing the public of their role will increase public confidence in the safety, security and environmental standards that they would apply to make sure that any future facility meets the required high standards for environmental protection, safety, security, waste management and radioactive waste transportation. In this respect, CoRWM feels that all public engagement activities must be carefully planned and should highlight the independence and separation of powers and responsibilities within all the governmental bodies involved.

### ***External Stakeholder Engagement***

47. CoRWM affirms that external stakeholder engagement is of critical importance in the principle of voluntarism. Indeed, the whole process of information gathering and knowledge development will require extensive consultation with as wide and diverse a range of stakeholders and members of the public as possible if it is to succeed.

48. CoRWM is therefore concerned that the section of the Consultation Document on External Stakeholder Engagement mainly focuses on the potential role of non-governmental organisations (NGOs) in the proposed new process. CoRWM considers that, in this section, far more emphasis should be given to:

- i) the importance of engagement in the process;
- ii) how DECC and the implementing organisation would plan to engage with a diverse range of stakeholders and the public;
- iii) possible mechanisms for carrying out effective engagement throughout

- the process; and
- iv) how DECC and the implementing organisation will take account of the views of stakeholders and the public.

49. CoRWM supports the UK Government's proposal to engage more effectively with NGOs and other groups (paragraph 2.82) and would advise that this should be done through an extensive dialogue at both the national and local level.

50. CoRWM notes in paragraph 2.69 of the Consultation Document, that "There was no defined role for NGOs" in the MRWS White Paper. Indeed when attempts were made by the West Cumbria Managing Radioactive Waste Safely Partnership to include certain NGOs in the process, the invitation was rejected on the grounds that most National and Local NGOs were strongly opposed to a GDF and that they could mount more effective opposition by not being a member of the Partnership. However in light of past experience, and from the views of NGOs expressed in the "Call for Evidence", it is considered that the only way to explore potential engagement options is through an extensive dialogue with both National and Local NGOs to establish the degree to which they would be prepared to engage in the process. The DECC-NGO forum's Terms of Reference could be extended to accommodate engagement with NGOs.

51. Whilst it may be possible to consider a constructive dialogue with certain National NGOs, it may be far more difficult to engage with Local NGOs in potential host communities given that past experience indicates that their main aim is to oppose geological disposal.

52. CoRWM does not agree that the current GDIB, or a re-structured GDIB, would provide a suitable vehicle for engagement and consultation with NGOs and other external stakeholders. Other models of this type need to be examined. In particular, CoRWM notes the success of the Swedish model, which consists of both a national and a locally based consultative body. These bodies also receive their own funding with comprehensive budgetary rules, giving them each a degree of freedom of action.

### ***Independent Review Body***

53. With respect to the independent verification of technical statements, CoRWM proposes that its own Terms of Reference be updated to allow it to provide advice to appropriate external bodies on request. The advice given would be to provide independent verification of technical competency, and not verification of technical conclusions. If questions arose that CoRWM felt were beyond its capability, for

example on highly technical topics, the Committee would refer these to person/bodies that it considered to be competent.

54. Whilst CoRWM agrees in principle with the options of the 'pool' of peer reviewers or another independent body, it is felt that the introduction of either of these could be viewed as another degree of complication and/or another layer of bureaucracy. In addition, the availability of persons with the required degree of specialised knowledge, and who would be perceived as independent, in this area is limited.

#### Question 4

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

55. **CoRWM does not agree with the proposed approach** and has concerns about its effectiveness in the context of delivering a publically acceptable safe and secure geological disposal facility or facilities. CoRWM's reasoning and concerns are given below.

56. CoRWM is very concerned about the level of information on geology that is proposed to be provided at the early stage "Learning Phase". As noted in its response to question 2, CoRWM does not agree that the proposed phases are helpful or necessary. At the early part of the process there will only be limited information on the nature of the geology at depth and the purpose of the work of the implementing organisation is to gather the information over time to build on this limited knowledge to a point where uncertainties are sufficiently low to enable the initial phase of the Site Specific Safety Case that is required for licensing to be produced.

57. CoRWM believes that geological information cannot be viewed in isolation from the GDF Safety Case, as it is the Safety Case that will demonstrate the suitability of a site for the disposal of radioactive waste and not the "geology" on its own. The nature, content and level of geological information presented during the siting process is very important but geology is only one of many factors that contribute to the development of a successful Safety Case.

58. CoRWM believes, in line with its response to Question 2, that the approach should be recast with the concept of the Safety Case at its heart, and any discussions or reports relating to geology (and all subsurface 'aspects' including gas and radionuclide pathways) should be in relation to the contribution it makes in this context. The idea of 'geological suitability' has to be replaced with "prospects of

developing a successful Safety Case” that integrates geological, hydrogeological, hydrogeochemical and performance information.

59. CoRWM therefore believes it is necessary, at the earliest stage to explain the concept of the Safety Case, to both the public and stakeholders. In particular it is essential to communicate the geology in its broadest sense and other factors (GDF design, Engineered Barrier Systems etc), that contribute to the Safety Case.

60. CoRWM advocates that, at all times in the siting process, communications and discussions relating to sub-surface geology should highlight and explain how the geological information relates to and will contribute to the Safety Case.

61. It is important to explain that within the Safety Case, the function of the geological barrier can vary substantially. For example, in the Swedish disposal company SKB’s Safety Case, which underpins the current licence application for a spent fuel repository at Forsmark, the role of the granitic geology is not to act as a barrier to migration; in fact a highly conservative assumption is taken and radionuclides entering groundwater at repository depth are assumed to have zero travel time to the surface. At Forsmark, the role of the geological barrier is to maintain geochemical and geomechanical stability at depth; this preserves the engineered bentonite barrier, which protects the fuel canister against corrosion. By contrast, in clay rocks at Bure, the French disposal company Andra is developing a Safety Case in which the host geology forms the principal barrier to radionuclide migration. At Bure, travel times to the surface are sufficiently long that an engineered barrier is not required and it is proposed to dispose of spent fuel canisters directly within the clay host rock. These are just two examples out of many Safety Cases being developed worldwide in which the geological barrier fulfills different safety functions.

62. CoRWM accepts that within the context of the Safety Case there could be a need to provide geological information in a timely manner. However, great care must be given at all times when presenting geological information. During the engagement period with a local community and its Representative Authority, any regional geology reports that are produced by the implementing organisation should make it clear that geological maps are models based on limited data derived from observations of rocks at the ground surface and boreholes. As a consequence, maps are subject to considerable uncertainty and this uncertainty increases substantially with depth, where the observation data becomes far sparser.

63. CoRWM has concerns about the value of the proposed BGS GB3D model and believes strongly that it should not be used. Geological models and especially

those at large regional scales have several serious problems affecting their use in this public process including but not limited to:

- i) the very high level of uncertainty in the models;
- ii) the inability to display this uncertainty; indeed, the 3D visualization implies complete but wholly unjustified certainty (i.e. seeing is believing); and
- iii) the risk that refinements of the model as more data become available may undermine public confidence by being seen as correction of earlier mistakes.

64. CoRWM believes that if any early information is to be provided on the 13 regions of the UK such information is presented in the form of “Regional Geological Prospect Reports”. These reports should be kept simple, clear, and linked explicitly to generic Safety Case considerations. This would mean showing, via maps, the areal / depth distribution of prospective rock types linked to the appropriate Generic Safety Case. CoRWM believes that there are only 3 rock categories of relevance here:

- i) evaporites (e.g. salt),
- ii) lower strength sedimentary rocks (e.g. mudrocks); and
- iii) higher strength rocks (e.g. crystalline basement, granites).

Hence, maps should only show the areal/depth locations of units thought to contain these geological prospects. The level of uncertainty in these maps should be clearly explained.

65. Prior to presenting the maps, the three principal types of GDF concepts, based upon the current generic Safety Cases, should be introduced. For each concept the key safety factors should be explained together with a description of the likely safety function of the geological barrier. The advantage of this approach is that geology is not then considered in terms of ‘suitability’ on its own, and is clearly seen in the context of the overall GDF Safety Case.

66. Once a community has entered into discussions, CoRWM believes that the implementing organisation should gather sub-surface information progressively to enable prospective sites to be identified. Doing this requires, as noted in the Consultation Document, some exercise of judgement and hence, a strategy for identifying possible sites in advance of borehole data becoming available should be produced. The material given on this judgement in the Consultation Document (3.19, 3.20, 3.21) is vague and unconvincing. The implementing organisation will need to produce a clear and robust process and show:

- I) how assessment is to be made;
- II) the criteria that will apply;
- III) who makes the judgement and in the light of what input; and
- IV) how the independent review will be carried out.

The assessment and review thereof have to be described in some detail so potential communities and the Regulators have assurance that best practice will be followed,



and that the assessment process is being thought about now rather than being introduced on an ad hoc basis.

67. Once prospective sites are identified, detailed surface-based site investigation including boreholes (which will require an environmental permit and DCO permission) and geophysical exploration will commence. The exploration will take place over a period of many years and the data produced from this work will enable the development of a Site-Specific Safety Case. As site investigation progresses, the initial Generic Safety Case will gradually evolve towards the Site-Specific Safety Case (see Figure 1 below). CoRWM believes that the implementing organisation should make it clear to the local community and its Representative Authority that it will take time and careful planning to gather the information that will be necessary to enable the development of a successful Site-Specific Safety Case.

68. The implementing organisation should also make it clear that the development of a successful Site Specific Safety Case will need to be undertaken in stages. The first stage will be that needed to demonstrate that there is a reasonable prospect that the identified underground site will be suitable. Typically this initial phase of the Safety Case is referred to as the Pre-Construction Safety Report (PCSR). The PCSR will form the basis of the information needed for the implementing organisation's applications for the DCO, the nuclear site licence and the environmental permit (see Figure 1 below).

69. If the Local Community and its Representative Authority agree to proceed with the development the implementing organisation will, as described above, apply for a DCO, the nuclear site licence and the environmental permit for the underground site. If DCO permission is obtained and the nuclear site licence and environmental permit are granted, it is likely that the Regulators will initially only permission a limited amount of underground construction work. During this initial underground construction period, new geological and hydrogeological information will continue to arise and this will be used to further develop the Site Specific Safety Case. It is also likely that the nuclear site licensing and associated environmental permitting process will contain several "hold points" on underground activities. To progress past each of these "hold points" the implementing organisation will be required to update the developing Site Specific Safety Case based upon the addition information gathered. It is therefore likely to take many years before the fully developed Site Specific Safety Case is in place to enable full site operation.

70. CoRWM believes that there is a need for greater clarity on the regulatory process that will be used to control underground construction, commissioning and operations, and on the linkage of this process to the progressive development with the Site Specific Safety Case. . The Consultation Document is vague and, it appears, confused on this. Any future White Paper should address this issue and clearly explain the basis for the progressive development of the Site Specific Safety Case.

Ideally the implementing organisation should produce a schedule of work showing what is to be carried out, why the work is necessary, what it would involve, what if any regulatory approval would be required and how this would be obtained, and how the information gathered would be used to support the development of the Site Specific Safety Case for the GDF.

71. CoRWM believes that, during the information gathering process to identify possible sites, a fundamental principle of the process should be to keep the option open of having more than one site. The reasons for this are that there could be:

- i) the need for different disposal concepts for different waste types (e.g. cemented ILW; vitrified HLW or possibly spent fuel);
- ii) a need for a specific sub-surface setting to host a specific type of waste;
- iii) a limitation on the volume of available rock; and
- iv) a wish to demonstrate the feasibility of geological disposal through incremental stages to build confidence, enhance understanding so that geological disposal of radioactive waste becomes the accepted norm.

#### **Question 5**

***Do you agree with this clarification of the approach to planning for a GDF? If no, what alternative approach would you propose and why?***

72. **CoRWM agrees with the proposal but has a number of comments.** CoRWM is supportive of the proposed approach to include the GDF within the Planning Act 2008 as being a Nationally Significant Infrastructure Project ("NSIP") for a GDF located in England. CoRWM recommends that any future White Paper should provide greater clarity on the planning process in Wales and Northern Ireland.

73. CoRWM believes that greater explanation is required for people not familiar with the NSIP process. This is because the Planning Act 2008 has only been used for a relatively small number of projects and as such local government and the public's understanding of what is involved might be limited in some areas. The respective roles of Parliament, DECC, local government and the wider public therefore should be set out clearly in a new White Paper. Likewise some information on when in the process a NPS might be published, what it is likely to contain and what role it will have in the siting process will give greater clarity. In addition, it will be important to explain the relationship between planning and a voluntary siting process.

74. CoRWM believes that it may be beneficial to produce a "Regulatory Schedule" to show how the key planning and regulatory activities relate to the key project milestones. It is important that any future White Paper clearly shows the voluntary siting process in context and in relation to the ongoing regulatory process once a site has been found. It is also important to emphasise that, if a potential host

community agrees to host a GDF and gives up its RoW, community engagement with the implementing organisation will not stop at that point. Any revised White Paper also needs to explain the role of Parliament and the public before the GDF is designated as a NSIP, the development of the NPS and again when the Planning Inspectorate are considering the DCO application.

75. The NPS will set out the need for a GDF. CoRWM believes that the NPS should also make it clear that the GDF will only be used for radioactive waste for which the UK has responsibility and that it will not be made available for use by countries for the commercial disposal of radioactive waste. The NPS should be sufficiently flexible to allow for the potential for more than one GDF to host the waste inventory if needed.

76. Any DCO application should be made for the maximum potential inventory that could be supported by the Safety Case to avoid the need for incremental applications in the future.

77. CoRWM also recommends further clarity on the following matters:

- the consenting processes for the surveys and boreholes required at different stages of the siting process;
- compulsory purchase powers for land and mineral rights;
- how the siting policy and NPS will deal with boreholes/potential future underground working that may be outside of the volunteered area and what communication/involvement the non-volunteer area will have? For example if it is discovered that a suitable volume of rock is found close to, but not in, the volunteer area?;
- how many NPSs will there be? Will there be a generic GDF NPS? Will there be a future site specific NPS also produced?; and
- that the DCO application will not include the environmental permit application.

78. Once the revised siting process has been finalised and launched, CoRWM recommends that DECC is not actively involved in the implementation of the policy. The implementing organisation should manage both the dialogue with the potential host community or communities, and the site selection process. DECC's role is to arrange for the amendment of the Planning Act 2008 and prepare the NPS and appraisal of sustainability.

79. There needs to be a clear separation of the roles of DECC and the implementing organisation and this should be defined in any future White Paper. DECC are responsible for policy issues and the overall funding of the implementing

organisation; the implementing organisation for driving the project forward through site selection to construction and operation.

## Question 6

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

80. CoRWM agrees that the inventory of a GDF should be clearly defined. However CoRWM notes that the maximum allowable inventory in any individual GDF has to be determined by the Safety Case. It would therefore be prudent to keep open the possibility of multiple GDFs. CoRWM also requests that further clarification is provided regarding the categorisation of wastes including those arising from the new build programme.

81. CoRWM agrees with the Consultation Document that the ability to construct a GDF or otherwise will be determined absolutely by the duty holder's delivery of a Safety Case that meets the stringent UK safety, environmental and security standards. This process could result in the Regulators imposing a limit on the amount and / or type of waste which could be accommodated by the Safety Case.

82. In light of the above, CoRWM believes that Government should leave the option open for more than one repository. CoRWM understands Government's preferred position that a single GDF which serves the whole of the UK might be expected to be considerably less expensive than two or more GDFs. However, if developments in the Safety Case for particular volunteer areas indicated suitability for some, rather than all, of the inventory, then it would fall to Government to decide whether to proceed with a GDF with such inventory limitations.

83. Paragraph 3.58 of the Consultation Document states that *"In an effort to provide greater certainty for communities engaging in the process and focus discussions, the UK Government intends to clearly define a single Baseline Inventory for the purposes of geological disposal. The UK Government proposes that the focus should be on the waste and material types for disposal, as these are not expected to change over time"*.

84. CoRWM believes that the above wording implies greater certainty than in fact exists. For example the form of overpacking to be used for spent fuel (and in the case of AGR fuel, the form of the spent fuel itself) is currently uncertain and must remain so until any Site Specific Safety Case is finalised. Any new policy would need to acknowledge transparently the currently unknown details of the inventory.

85. CoRWM believes that the categorisation of wastes should be simple and logical. As written, paragraph 3.59 of the Consultation Document is less than clear on at least some waste categories. In particular, reprocessing ILW would be much better included with “*HLW from Sellafield reprocessing operations*”, rather than with “*ILW arising from existing nuclear licensed sites*” where it presumably sits at present.

86. CoRWM recommends that the size of the inventory from the new build programme is further clarified as an example size based on a number of assumptions, and thought should be given to providing a maximum inventory. In the Consultation Document paragraph 3.59 states that: “*Spent Fuel (oxide) and ILW from a new build programme of a specified maximum size, such as the 16GW(e) for which nuclear operators have developed proposals*”. CoRWM recognises that there are currently many unknowns surrounding the new build programme and therefore the spent fuel and ILW that it will create. Whilst CoRWM understands why the Government has given the example of new build wastes arising only from developed proposals where information on the waste types is known, 16GWe is only the ‘first tranche’ figure and substantially below the 75GWe upper limit being examined in DECC. There is a need for clarity that any data given for, for example, 16GWe, are an example rather than either an expectation or a limit. Government should therefore consider defining the maximum repository size. This issue reinforces the requirement to leave the option open for more than one repository.

87. Lastly, the illustration shown after paragraph 3.48 in the Consultation Document which has a caption “*HLW Final disposal copper canister (courtesy Posiva)*” is clearly a Spent Fuel container and not an HLW container. As the Consultation Document has made it very clear that these are two separate waste types, appropriate illustrations should have been used.

## **Question 7**

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

88. CoRWM recommends that clarity is given to specify the scale of community benefits. Any new policy should specify when funding will start and when it will be provided at different points throughout the process. CoRWM advises that some community benefits should be made available before the RoW is withdrawn, with the sums increasing significantly thereafter. CoRWM believes that this greater clarity would give confidence that benefits are guaranteed over a timescale longer than the current three-year government funding cycles.

89. CoRWM proposes that community benefits should be proportionate to the progress made during siting, construction and operation.

90. CoRWM believes that the implementing organisation and not the Government should pay the community benefits to the local community. CoRWM believes that if the implementing organisation pays the community benefits this will avoid any perceived conflict of interest arising from the Government paying the benefits and determining the DCO application.

91. CoRWM recommends that community benefits are agreed as part of the implementing organisation's budget.

92. CoRWM recommends that the Government is specific in defining which communities will receive benefits. The Consultation Document includes a number of different descriptions of the recipients. For example in paragraph 4.15 the narrative implies that "*the host community*" will receive the Community Benefits and on page 15, the local community is defined as - "*the community in which any facility will be built.*" However in paragraph 4.14 the narrative states that "*participating communities and their neighboring local authorities could begin to scope projects for funding through community benefits.*"

93. CoRWM believes that local government should have a significant influence on the way that community benefits are spent within its jurisdiction.

94. CoRWM suggests that the Government sets out a framework for the allocation of benefits and in doing so, examines existing models, for example The Shetland Charitable Trust. Any trust should have standalone funds and a board of trustees who are not linked to those receiving the funds.

95. CoRWM believes that this approach will enhance community confidence that the money will be forthcoming even with a change in Government.

## Question 8

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

96. CoRWM welcomes the principle of linking Strategic Environmental Assessment (SEA) and Sustainability Appraisal to a consideration of environmental and socio-economic factors and bringing them forward in the proposed process. CoRWM also welcomes the proposed approach of initially conducting generic assessments which will be followed by SEA(s) as a tool to assist in the identification of potential sites and then detailed EIAs of specific sites.

97. Research has indicated that there is a range of views as to the utility of generic assessments. These assessments can indicate in principle the potential positive and negative impacts of a proposed development and how negative impacts

may be mitigated. However as they are by definition "general" in their findings they need to be treated with some degree of caution given that spatial variations between localities may not always be identified.

98. Throughout the Consultation Document, emphasis appears to be placed on the Government and the implementing organisation "providing" information. Whilst provision of information is clearly important, the information requested by the potential host community is equally so. CoRWM stresses that in good SEA, SA and EIA practice the community must be in a position to state those issues which they consider important even though they may be considered marginal or irrelevant by those conducting the assessment. Given the sensitivity of the process of attempting to identify a willing host community great care should be taken in "Scoping" the key issues. Whilst Scoping is a formal requirement in Strategic and Environmental Assessment and encourages topics of greatest concern to the community to be identified and evaluated, the principle of Scoping could also be applied to the type of information that should be provided to give confidence to a potential host community.

99. CoRWM notes that a wide range of topics will be covered in the provision of information and the conducting of assessments at different scales and times during the proposed revised process. CoRWM welcomes this approach but, given perceived safety and risk factors associated with a GDF, considers that a Health Impact Assessment (HIA) should be conducted to give confidence that all potential health impacts have been evaluated.

100. CoRWM strongly endorses the approach set out in the Consultation Document to link sustainability and environmental studies together as far as possible given the potential for overlap between assessments. EU and UK Government advice on environmental assessment stresses that when "parallel" assessments are being conducted every effort should be made to link the studies together when obtaining data, conducting the assessments and undertaking public participation. As well as reducing the "red tape", this will also avoid public consultation 'overkill'.

## **Question 9**

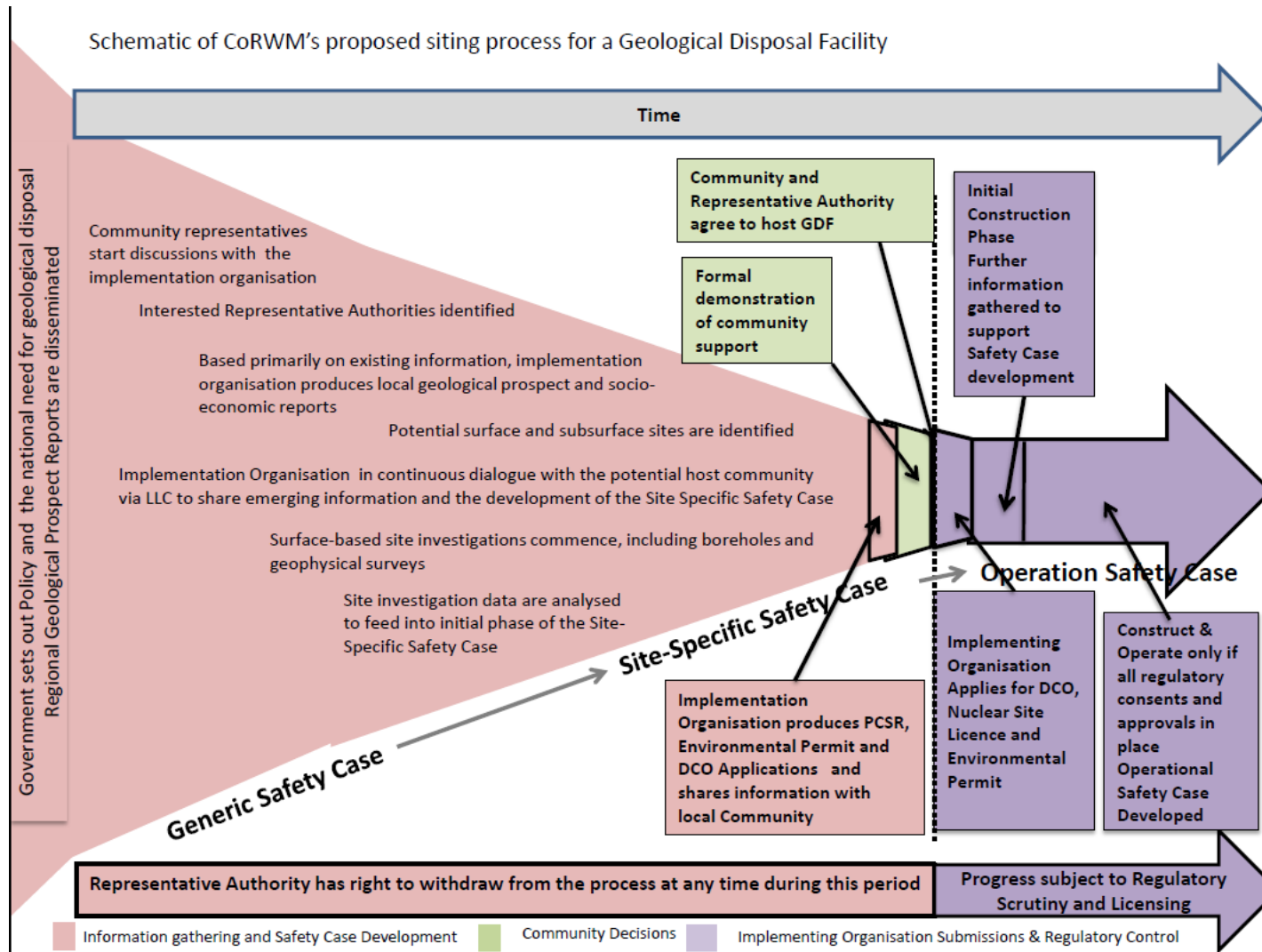
### ***Do you have any other comments?***

101. CoRWM notes that the Consultation Document focuses mainly on the underground facility but any new White paper should include more information on the siting, design and operation of the above ground facility for any GDF.

102. CoRWM believes that any new White Paper includes an up-to-date Glossary which defines any new terms.

END





**Figure 1: CoRWM's Proposed Siting Process Diagram**