

HOUSE OF LORDS

Science and Technology Committee

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Radioactive Waste Management: a further update

Report with Evidence

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SUMMARY

In 1999, we recommended that UK radioactive waste should be disposed of in a deep geological repository. In 2003 the Government appointed the Committee on Radioactive Waste Management (CoRWM) to consult on and review options for the long-term disposal of radioactive waste. After CoRWM reported in 2006, the Government accepted that disposal in a deep geological repository, along with a robust interim storage strategy, was the way forward for the long-term management of radioactive waste. The Nuclear Decommissioning Authority (NDA) was charged with responsibility for implementing that strategy. In late 2007, CoRWM was re-constituted to act as an independent body to advise and scrutinise the work of the NDA. A white paper in 2008, *Managing Radioactive Waste Safely: a Framework for Implementing Geological Disposal*, set out the Government's strategy ("the MRWS programme"). In this report, we focus on how CoRWM has performed since its re-appointment in 2007 and consider whether its remit has proved appropriate.

The existence of an independent and effective scrutiny body plays an important role in maintaining public trust and confidence in the Government's strategy for radioactive waste disposal. CoRWM must be able to show, therefore, that it is proactively scrutinising Government policy and the NDA's progress in implementing the MRWS programme. In this report, we make a series of recommendations designed to strengthen CoRWM, enabling it to better hold the Government to account on their progress in developing a geological disposal facility. Without on-going external pressure, it is possible that the MRWS programme may not be implemented as rapidly as is needed.

Since 2007, CoRWM has produced three reports, covering the main strands of the MRWS programme: geological disposal, interim storage, and research and development. In their response to the first two reports (the third response is still awaited), the Government have responded positively to many of CoRWM's recommendations. We welcome the Government's positive approach, although we note that it is too early as yet to tell whether effective action will be taken to ensure that the Government's words are translated into action.

It is essential that the MRWS programme should make good progress and, whilst we acknowledge that we are at an early stage in the MRWS programme, we are concerned that neither the Government nor CoRWM, in their evidence, gave the impression of having any sense of urgency. This is disappointing. We believe that CoRWM could play a more active role in driving forward the MRWS programme through scrutinising, and if necessary reporting on, the Government's progress. To help them carry out this role, we recommend that the Government should publish clear policy milestones for all aspects of the MRWS programme and include an assessment of their progress against these milestones in an annual report. We also recommend that the annual report should set out the progress the Government has made in meeting the recommendations made by CoRWM in their reports.

CoRWM's remit is to advise as well as to scrutinise. We are concerned therefore that CoRWM is not asked by the Government to comment formally on draft policy documents, either before or after they have been released for public consultation. We believe that CoRWM should provide advice to Government on any draft (as well as established) policies that have implications for the management of radioactive waste. We recommend that the Government should ensure that CoRWM is in a position to respond to Government consultations on policies affecting the MRWS programme with formal reports based on the comprehensive consultation and evidence gathering processes CoRWM usually employs.

To ensure that CoRWM is seen to be independent, we recommend that its work programme should not be subject to the agreement of sponsoring ministers.

Finally, while we think that CoRWM's current membership includes an appropriate range of scientific expertise to enable effective scrutiny of the current stage of the MRWS programme, we recommend that it should contain more members with experience of business and practical on-site operations and engineering.

Radioactive Waste Management: a further update

CHAPTER 1: INTRODUCTION

Background

1. This is the fifth report that the House of Lords Science and Technology Committee has published on the subject of radioactive waste management.¹ Our first report, *Management of Nuclear Waste*, was published in 1999 after a public inquiry in 1997 refused to grant Nirex planning permission to develop a rock characterisation facility near Sellafield, then seen to be a necessary step toward the development of a long-term disposal facility for radioactive waste. In that report we considered various methods for managing nuclear waste and concluded that disposal in a deep geological repository was the most feasible and desirable method of dealing with radioactive waste. We recommended that the Government create a new statutory body to develop an overarching and comprehensive implementation strategy.
2. We published our second report, *Managing Radioactive Waste: the Government's consultation*, in 2001 and expressed our disappointment at the “slow progress” to date. We noted that the Minister seemed to feel “little sense of urgency” about the need for progress.² In 2003, the Government appointed the Committee on Radioactive Waste Management (CoRWM) to consult on and review the options for the long-term disposal of radioactive waste. Our 2004 report, *Radioactive Waste Management*, reviewed the role and performance of CoRWM, and criticised it for focusing on public and stakeholder engagement to the exclusion of scientific analysis of the available options. When CoRWM reported in 2006, however, we felt it had produced a “well balanced report”.³ It had three central recommendations:
 - geological disposal presented the best available approach for the long-term management of radioactive waste, while in the meantime a robust programme of interim storage was required until a geological disposal facility became available;
 - the site of any disposal facility should be determined not only by geological criteria, but by a process in which potential host communities would express a willingness to participate in return for community packages which would aim to enhance the well-being of the community; and
 - an independent body be appointed to oversee the implementation process, including a research and development programme, the siting strategy and public and stakeholder engagement.

¹ The Committee's previous reports were: *Management of Nuclear Waste*, 3rd Report, Session 1998–1999 (HL Paper 41), *Managing Radioactive Waste: the Government's consultation*, 1st Report, Session 2001–2002 (HL Paper 36), *Radioactive Waste Management*, 5th Report, Session 2003–2004 (HL Paper 200), and *Radioactive Waste Management: an Update*, 4th Report, Session 2006–2007 (HL Paper 109).

² *Managing Radioactive Waste: the Government's consultation*, 1st Report, Session 2001–2002 (HL Paper 36), introduction.

³ *Radioactive Waste Management: an Update*, 4th Report, Session 2006–2007 (HL Paper 109), p. 8.

3. The Government's response to CoRWM's report was published in October 2006. They accepted that geological disposal, coupled with a robust interim storage strategy, was the way forward for the long-term management of nuclear waste in the UK, and made a commitment to explore an approach based on volunteerism (that is, willingness to participate). However, instead of creating an independent body to oversee the implementation process, the Government charged the Nuclear Decommissioning Authority (NDA) with responsibility for developing and ensuring delivery and implementation of interim storage and geological disposal programmes, and decided to appoint an independent advisory committee to provide advice and scrutiny on the NDA's work. At the end of 2007, a reconstituted CoRWM, with modified terms of reference and a new membership, was appointed to carry out this role.
4. Our 2007 report, *Radioactive Waste Management: an Update*, focused on the institutional arrangements for implementing the next stage of the Government's programme for managing radioactive waste and in particular the role of a revised CoRWM. We concluded that its proposed remit, as laid out in the Government's response to CoRWM's report in 2006, was "highly confusing", and raised questions about its independence. We concluded that it was imperative that it should have the necessary independence and authority to scrutinise the Government's proposals for implementation. Some of these concerns had been met by the time a revised CoRWM was appointed, with CoRWM's revised terms of reference placing a greater emphasis on its scrutiny role.
5. In June 2008, the Government published a white paper, *Managing Radioactive Waste Safely: a Framework for Implementing Geological Disposal* ("MRWS programme"), which set out plans for long-term geological disposal, the safe and secure interim storage of waste, and the research and development needs to support these objectives. The reconstituted CoRWM published three major reports during 2009 scrutinising the progress of the MRWS programme, covering interim storage, geological disposal and research and development. The Government have published a response to the first two of these reports; they will be responding to the third during 2010.

Purpose and scope of the inquiry

6. The purpose of this inquiry was to assess how the reconstituted CoRWM has performed in the past two years, to consider whether its remit has proved appropriate, and to gauge its impact on the implementation of the Government's MRWS programme. We launched our inquiry in January 2010. Given the relatively short period of time available to us prior to the dissolution of Parliament, rather than issuing a general call for evidence, we invited written evidence from selected organisations, representing a range of views both within and without Government. In addition, representatives from CoRWM and the Government gave oral evidence.
7. We would like to thank all of our witnesses for their contribution to this short inquiry. The membership and interests of the sub-committee are set out in Appendix 1 and those who submitted written and oral evidence are listed in Appendix 2. The call for evidence with which we launched our inquiry is reprinted in Appendix 3.

CHAPTER 2: CoRWM AND THE MANAGING RADIOACTIVE WASTE SAFELY PROGRAMME

Independent scrutiny of the MRWS programme

8. CoRWM's terms of reference are to provide "independent scrutiny and advice to UK Government and devolved administrations on the long-term management ... of radioactive waste". Its primary task is to provide "independent scrutiny on the Government and Nuclear Decommissioning Authority's (NDA) proposals, plans and programmes to deliver geological disposal, together with interim storage, as the long-term management option for the UK's higher activity wastes" (p 1).
9. CoRWM has published three reports covering the three main strands of the MRWS programme: *Interim storage of higher activity wastes and the management of spent fuels, plutonium and uranium* (March 2009), *Geological disposal of higher activity radioactive wastes* (July 2009), and *Research and development for interim storage and geological disposal of higher activity radioactive wastes, and management of nuclear materials* (October 2009). As we have stated, the Government have responded to the first two reports; the third response is due to be published in the near future (QQ 79, 80).
10. According to the Department of Energy and Climate Change (DECC), the Government have "accepted many of CoRWM's recommendations" (p 22) and Lord Hunt of Kings Heath, Minister of State at DECC, assured us that they took the views of the Committee "very seriously" (Q 78). The Nuclear Industry Association (NIA), a trade association for the UK civil nuclear industry, endorsed this assertion. It told us: "from what we can see Government clearly takes CoRWM's advice into account in formulating its policies" (p 43).
11. Most witnesses were positive about CoRWM's performance in scrutinising the Government. The NDA felt that "CoRWM has effectively scrutinised the key aspects relating to the implementation of the MRWS programme" (p 24). The NIA shared a similar view (p 42). The Environment Agency told us that CoRWM's reports "have generally been insightful and positive" (p 37). Greenpeace, on the other hand, expressed concerns: "CoRWM's efforts to scrutinise implementation of the Government's MRWS programme are not as effective as they could be" and explained that discussions with CoRWM members had indicated that a "lack of funding" meant CoRWM was not able "to undertake stakeholder work, or independent research, to the extent it would like" (p 39). Professor Robert Pickard, Chairman of CoRWM, disagreed: "I think we would say that our funding is adequate at present for the task we have in hand" (Q 3).
12. Although the Government have accepted many of CoRWM's recommendations in principle, some witnesses felt that it was too early to tell whether they would actually put them into practice. CoRWM said that it would "judge Government by its actions, rather than its words" but that "thus far, neither the Government nor any other organisation mentioned in the response⁴ appears to have taken any major actions to meet our recommendations" (p 3). The Environment Agency also stated that while

⁴ This refers to the Government response to CoRWM's first report, on interim storage.

“Government has accepted many of CoRWM’s recommendations ... this acceptance needs to be translated into demonstrable progress” (p 38). Greenpeace was less than optimistic: “it is quite clear that the Government does not intend to fully respond to, or act on, CoRWM’s advice” (p 41). Overall, Professor Pickard thought that it was “probably too early to tell whether or not” they were “having a significant effect on bringing about beneficial change in the way in which the Government is behaving” (Q 60).

13. **Whilst we welcome the Government’s positive response to many of the recommendations in CoRWM’s reports on geological disposal and interim storage, it is important that effective action is taken to ensure that these recommendations are taken forward. We urge the Government to do so.**
14. The Government has yet to respond to CoRWM’s recent report on research and development which concluded that “the UK’s existing civil facilities for research with highly radioactive materials are inadequate”.⁵ Lord Hunt assured us that the Government considered research and development to be “important” and that they “recognise the need for funding to be made available for research” (Q 118). **We welcome this assurance, and we look forward to such assurance being reflected in the Government’s response to CoRWM’s report on research and development.**
15. We note CoRWM’s statement that it is “continuing to monitor” the Government’s progress towards meeting CoRWM’s recommendations (p 3). Professor Pickard told us: “if we felt that the Government was not responding to our advice ... we would repeat it as appropriate at all the opportunities that were presented in our discourse with the public and with the scientific community and ... stakeholders” (Q 60). **We believe that CoRWM’s monitoring activity should be put on a more formal basis, so that stakeholders and the public can see clearly whether the Government are putting CoRWM’s advice into practice. We therefore recommend that the Government should publish an annual report setting out what action has been taken towards meeting CoRWM’s recommendations, so as to enable CoRWM effectively to monitor the Government’s progress in implementing its recommendations.**

Timescales and timelines

16. The Government’s MRWS programme is a long-term project. Professor Pickard and Mr Mark Higson, Chief Executive of the Office for Nuclear Development, told us that they hoped a geological disposal facility would be operational by 2040 (QQ 40, 113), and that it was expected to take up until the middle of the 22nd century to put the UK’s legacy waste into that facility (Q 63). With such long timescales, there is a risk of complacency. However, both the NIA and Environment Agency stressed the importance of continuing to make good progress in implementing the MRWS programme (pp 38, 42), while CoRWM told us that “it is extremely important that we do not let the process slip” (Q 64). We agree. **We believe it is essential that the MRWS programme continues to progress as rapidly as possible.**

⁵ CoRWM, *Report on National Research and Development for Interim Storage and Geological Disposal of Higher Activity Wastes, and Management of Nuclear Materials*, 2009, p 10.

17. Lord Hunt told us that he believed the MRWS programme was making “good progress” (Q 69), a view echoed by Professor Pickard who told us: “I think things are progressing satisfactorily at the present time” (Q 8). Despite this assurance, **we are concerned that the Government and CoRWM are failing to convey any sense of urgency to move the programme forward with all possible speed.** Professor Pickard, for example, stated that “we should not have high expectations of too rapid progress because of the nature of the work” (Q 8), and Mr Higson told us that, although 2040 was a good planning date, “if the timetable is delayed” there was “no question” that a facility had to be up and running by 2040 (Q 114). The Minister emphasised that the Government was taking a “very, very careful approach” since the MRWS programme was focused on taking “local communities with us” (Q 70).
18. We feel that, far from viewing 2040 as the earliest date by which a disposal facility could be completed, the Government should be considering ways in which the schedule could be brought forward. For example, Mr Bruce McKirdy, Repository Technical Director at the NDA, told us that “during the construction period there may be some opportunity for compressing the programme”, although he stressed that this could not be guaranteed (Q 114). **We urge the Government to consider ways of speeding up the MRWS programme as plans for a geological disposal facility become more defined, and as scientific and technical improvements provide ways of increasing the rate of progress.**
19. The Environment Agency told us that “CoRWM should place an increasing emphasis on ... encouraging Government to make timely progress with the MRWS programme” (p 37). Greenpeace also remarked that part of CoRWM’s role was the “monitoring of progress and examining claims made about progress” (p 40). We agree. **We believe that CoRWM could help drive forward the MRWS programme more rapidly by scrutinising, and if necessary reporting on, the Government’s progress.**
20. We note that Lord Hunt is “setting out milestones for the future”, and that the NDA will “shortly be publishing their *Steps towards Implementation* document which sets out their detailed planning for geological disposal” (Q 96). We welcome this development. **We recommend that the Government publish clear policy milestones for all aspects of the MRWS programme, including for issues such as interim storage and the disposal of waste generated by new nuclear power stations. We recommend further that the Government should assist CoRWM in its scrutiny of the Government’s progress with regard to the MRWS programme by including in the annual report we have recommended in paragraph 15 above a statement of the extent to which these milestones have been achieved.**

Transparency

21. As an independent scrutiny body, CoRWM plays an important role in maintaining public trust and confidence in the MRWS programme. The NIA emphasised the importance it attaches to “maintaining public confidence in the implementation of the MRWS strategy”, and noted that “CoRWM has in the past and should in the future continue to play an important part in achieving this” (p 42). Similarly, the NDA told us that “independent

scrutiny and advice can provide reassurance to the public and stakeholders” (p 24).

22. However, the Environment Agency felt that although CoRWM played an important role, “Government’s oversight of the MRWS programme could also be made more transparent to stakeholders and the public” (p 38). Lord Hunt told us that: “overall my general principle is that the more we are transparent, the more clarity we can give you, the more likely there is to be public confidence” (Q 102); and, he conceded, “in terms of perhaps giving more certainty, in giving people a greater feel about the timetable, there may be something more that we need to be doing” (Q 100).
23. **We believe that an annual report (as set out in our recommendations in paragraphs 15 and 20 above) setting out the Government’s progress towards meeting both CoRWM’s recommendations and the Government’s own policy milestones would improve the transparency of the MRWS programme. We believe also that this would help maintain public trust and confidence in the MRWS programme by strengthening CoRWM’s scrutiny role.**

The scope of CoRWM’s advice to Government

24. CoRWM’s remit confirms that it should provide advice, as well as scrutiny, to the Government, and that it should comment on their “proposals, plans and programmes” (p 1). We were surprised, therefore, that the Government do not take the view that CoRWM should advise on draft policy. The NDA told us that “CoRWM should be clear that its starting point is established Government policy, with its role being scrutiny of the implementation of that policy” (p 25), and Lord Hunt emphasised that CoRWM’s “terms of reference are now very much focused on scrutinising and providing advice on the implementation of the policy rather than making new policy recommendations” (Q 84).
25. The draft National Policy Statements (NPS) for Energy Infrastructure were published in late 2009 and are examples of policies with ramifications for the management of radioactive waste in the UK. The draft NPS for Nuclear Power Generation (“Nuclear NPS”) states that “the Government is satisfied that effective arrangements will exist to manage and dispose of the waste that will be produced from new nuclear power stations”.⁶ This is a significant statement for the Government to make, and yet CoRWM was not asked to comment formally on the draft NPSs, either before or after their publication for public consultation, except “within the limitations of questions about factual accuracy” (QQ 51, 93).
26. Ms Marion Hill, a member of CoRWM, told us that CoRWM itself did not wish to offer its view on the NPSs before they were published for consultation: “we would only comment on factual accuracy ... because we wanted to be free to respond to the consultation in an open way” (Q 51). She explained that if CoRWM was to advise the Government before the draft policy was published, “we would be seen to be in some way colluding with Government and perhaps agreeing in advance with the preliminary conclusion that they reached” (Q 51). Greenpeace indicated there was some

⁶ DECC, *Draft National Policy Statement for Nuclear Power Generation (EN-6)*, November 2009, p 25, para 3.8.20.

merit to this argument: they disagreed with the Government's statement about radioactive waste in the Nuclear NPS, and argued that "if CoRWM gets sucked into this deceit it will not help its credibility" (p 41).

27. Although not requested to do so by the Government, CoRWM decided to respond to the public consultation on the NPSs. Its submission, however, was not prepared through CoRWM's usual process of consultation and evidence gathering (see paragraph 33). Ms Hill told us that CoRWM's response to the draft NPSs would not go "through such a long-winded process", partly because "in a government consultation we feel that everybody should express their own independent view" (Q 53). Professor Pickard noted, however, that if the Government "welcomed advice from us in a formal manner on this subject" then CoRWM would then offer advice based on its "normal rigorous process" (Q 53).
28. CoRWM's remit clearly states that it has a role to play advising Government on policies that impact on the MRWS programme. We welcome, therefore, CoRWM's decision to respond to the Government's consultation on the NPSs, even though it was not requested to do so by Government. However, as we discuss in Chapter 3, we believe much of the value of CoRWM's advice lies in the extensive consultation and evidence gathering that unpins its work. CoRWM should not wait for an invitation before providing advice based on a thorough process involving consultation and evidence-gathering on policy proposals that have implications for the management of radioactive waste.
29. We understand that CoRWM would not wish to be drawn into the policy formation process in such a way as to compromise its position as an independent scrutiny body by commenting on policy before it has been published. Yet if CoRWM's advice is to be used by Government, it should be given before policy has been decided and set in stone. We believe that public consultations are an appropriate time for CoRWM to comment on government policy before it is finalised, while avoiding an impression of collusion by allowing it to submit its advice in an open and transparent manner.
30. **We believe that CoRWM should provide independent advice to Government on any draft (as well as established) policies that have implications for the management of radioactive waste.**
31. **We are concerned that CoRWM was not asked formally by the Government to comment on the draft National Policy Statement for Nuclear Power Generation, despite the significance of the claims it contains about the future management of radioactive waste. Although we welcome CoRWM's decision to respond to the public consultation on the National Policy Statement anyway, we are concerned that it will not in these circumstances be providing advice based on its usual comprehensive consultation and evidence-gathering processes (as described in paragraph 33 below).**
32. **We recommend therefore that, in future, the Government should ensure that CoRWM is able to respond to Government consultations on policies with an impact on the MRWS programme with formal reports based on its usual rigorous approach.**

CHAPTER 3: CoRWM'S WORKING PRACTICES

The importance of evidence-based reports

33. CoRWM described to us how its reports scrutinising the MRWS programme were produced following extensive evidence gathering and stakeholder engagement (Q 31). Lord Hunt, recognising the quality of CoRWM's reports, told us that CoRWM had to ensure its reports continued to be evidence-based if it was to "retain the respect that it has built up over the past few years" (Q 67); similarly, DECC said that the Committee needed "to analyse and assess views and bring forward advice that is clearly evidence-based if its words are to carry weight" (p 20). The NDA also noted the importance of ensuring that CoRWM's work continues to be based on comprehensive evidence gathering and stakeholder engagement (p 24). **We commend CoRWM's rigorous approach to evidence gathering and stakeholder engagement in its published reports to date.**
34. Whereas CoRWM's formal reports to Government are subject to this rigorous process, the NDA suggested that when CoRWM published draft materials or working papers "there have been instances where its evidence base does not seem to have been tested with relevant stakeholders prior to publication. On occasions, unsupported assertions and a few factual errors have been presented. As well as impacting on the quality of CoRWM's deliberations this can also misinform stakeholders" (p 24). The NIA also noted that CoRWM's "operating method of producing papers—often written only by one member—for debate in plenary sessions sometimes leads to preliminary views being interpreted as formal CoRWM positions" (p 42).
35. Professor Pickard told us: "I am very confident that our final authoritative, formal reports to Government which give recommendations to Government are solidly evidence-based" (Q 28). He conceded, however, that CoRWM expose their "preliminary thinking" and their "preliminary drafts of reports at a very early stage", since its members wanted to "give people every opportunity to see how we are developing our formal advice" (Q 28). He felt that "it is a price that we have to pay for openness and transparency that occasionally we do have to show our preliminary workings" (Q 54). He stressed that draft documents published by CoRWM have "a leading paragraph which explains quite precisely that this is a document in [the] process of development and it should not be taken to present either the views of the Committee or the views of the individual that actually wrote it" (Q 54).
36. **We believe that the same high standard which is applied in developing CoRWM's formal advice to Government should apply to all documents published by CoRWM. While we commend CoRWM's commitment to transparency, extreme caution should be taken to ensure that its working papers are not published until it is satisfied they are accurate and evidence-based.**

Expertise of CoRWM members

37. Two concerns were raised by witnesses about the range of skills possessed by the current membership of CoRWM: first, that it had insufficient geoscience

expertise and, secondly, that it would benefit from additional members with practical knowledge of business, operations and engineering.

38. The Geological Society felt that “as currently constituted, CoRWM does not have the range of geoscientific expertise required effectively to scrutinise” the geoscience that will be carried out as the MRWS programme develops (p 38). In response, Professor Pickard said that “there is adequate representation of the different disciplines” on CoRWM, and that “geological sciences are adequately represented at the moment” (Q 36), a view shared by DECC (p 21) and also by Greenpeace which stated that “CoRWM appears to have sufficient scientific and technical expertise to meet its remit” (p 40). DECC however assured us that the skill set of the Committee “will be kept under review and can be revisited in future” as the MRWS programme proceeds (p 21). CoRWM also has the power to co-opt additional members, and Professor Pickard said that he “would not hesitate” if he “felt it was necessary” (Q 36).
39. The Environment Agency suggested that “the makeup of the Committee is largely from the academic community. Because of this, the Committee might benefit from additional membership that has an in-depth practical knowledge of operations and engineering on nuclear sites” (p 37). On the same theme, the NDA commented that although “the current membership provides for a wide range of scientific and technical expertise ... in some areas that expertise is drawn heavily from members with an academic or research background”. It felt that, on occasion, this led to an “emphasis on acquisition of knowledge driven by curiosity”, rather than being “driven by the needs of the [MRWS] programme” (p 24). Although Professor Pickard told us that CoRWM had sufficient “knowledge of the nuclear industry” (Q 36), we find these arguments have some weight.
40. **We believe that, at present, the membership of CoRWM includes an appropriate range of geoscience expertise to enable it to scrutinise effectively the current stage of the MRWS programme. However, we take the view that CoRWM would benefit from more members with experience of business and practical on-site operations and engineering on the main Committee, and we recommend that the Government and CoRWM arrange for this additional expertise to be recruited at an early stage. More generally, we welcome the Government’s commitment to keep the Committee’s skill set under review as the MRWS programme progresses.**

CoRWM’s work programme

41. Each year, CoRWM agrees a three-year rolling work programme with all its sponsor ministers (p 22). Several witnesses expressed concern over the scope of CoRWM’s past and proposed work programmes. The Environment Agency, for example, told us that “during the past year, the Committee’s work programme may have been rather broad”, and suggested it “focus on matters which are vital to the effective and safe management of the [radioactive] wastes” (p 37). Likewise, the Geological Society felt that CoRWM’s “proposed [work] programme [for 2010–2013] is very broad, lacks a clear focus and runs the risk that the Committee will be too thinly spread”; the Society advised that it should focus on areas where it has “the potential to add real value” (p 38). The NIA also suggested that CoRWM “could be more effective if its work were more focused on specific topics,

relevant to the stage the Government has reached with its MRWS programme” (p 42). Both the NDA and the Environmental Agency noted that CoRWM should be careful that its work did not overlap that of relevant regulatory agencies (pp 37, 25).

42. In response, Professor Pickard explained that CoRWM starts developing its future work programme by considering a wide range of potential issues, but then it goes “through an extremely lengthy iterative process of trying to focus down on which items need to be looked at” (Q 24). He argued that this process was necessary “to be inclusive and to win the confidence of all stakeholders and the general public in particular” so that they see “that we are aware of all the different issues” (Q 25). He stressed, however, that “we are also continuously consulting with our sponsors ... they will feed in very critical information about the timeliness of that advice that they would like to see” (Q 24).
43. There are clearly some misgivings that CoRWM’s work programme may spread its scrutiny and resources too widely. **We recommend that CoRWM ensures its future work programmes are focused on specific issues relevant to the current stage of the MRWS programme.**

Maintaining CoRWM’s independence from Government

44. CoRWM’s scrutiny role is important, both in holding the Government to account and in maintaining public trust and confidence. We have noted (in paragraph 41 above) that CoRWM has to agree its work programme “with all sponsor ministers annually” (p 22). While we agree that CoRWM should work closely with Government when setting its work programme, and that the Government should be able to request advice from CoRWM where appropriate, we do not believe that the Government should be able to determine what topics an independent scrutiny body should examine. It is vital that stakeholders and the wider public can see clearly that CoRWM is independent, and we believe that this is necessary to ensure that high quality members from business and practical backgrounds, as we conclude are needed in paragraph 40, are not discouraged from joining. **We recommend that CoRWM should be free to set its work programme and that it should not be subject to the agreement of sponsoring ministers, although ministers should continue to be able to request advice from CoRWM on specific topics as necessary.**

A watching brief

45. The NIA were concerned that CoRWM might re-scrutinise its own policy decisions, and suggested that “there is a danger in re-opening issues ... For example, we think that opening the issue of borehole disposal again is neither helpful nor productive” (p 43). CoRWM told us they felt it was necessary to encourage Government to keep different technological options open during the MRWS programme. According to Professor Pickard, “we do find that implementers tend initially to be resistant to our encouragement to keep options open ... because they themselves only have a limited resource”. He continued, “the Committee is at pains constantly to encourage implementers not to burn alternative boats in terms of design and engineering solutions until they really have to” (Q 55). CoRWM clarified that its advice to “keep options open” referred to alternatives “within geological disposal, not alternatives to geological disposal” (pp 17–18).

46. **We feel it is appropriate for CoRWM to keep a watching brief on technological alternatives to design and engineering solutions within the context of a geological disposal programme, so that it can advise the Government in the event of the evidence base underlying Government policies changing.**

Social and ethical expertise

47. According to Greenpeace, “social and ethical matters will become an increasing part of the discussion on MRWS processes on legacy waste”; they suggested, therefore, that CoRWM should either recruit or co-opt members with expertise in these fields (p 40). Professor Pickard said that CoRWM would not “embark on a large philosophical study of the broader aspects of societal and ethical issues” but that it might consider such matters where “they are clearly identified to be influencing the success of the implementation process” (Q 46). However, when Lord Hunt was asked whether CoRWM should comment on social and political issues, he replied that “in the end it [CoRWM] plays a very important role in terms of technical advice as to how policy can best be carried out” (Q 109).
48. While ministers have the ultimate responsibility for weighing the broad social issues of government policy, we recognise that there may be circumstances where such matters have a material impact on the implementation of the MRWS programme. In these situations it may be appropriate for CoRWM to comment. However, **we take the view that CoRWM should primarily concentrate on providing evidence-based comment on technical issues.**

CHAPTER 4: LIST OF CONCLUSIONS AND RECOMMENDATIONS

CoRWM and the Managing Radioactive Waste Safely programme

Independent scrutiny of the MRWS programme

49. Whilst we welcome the Government's positive response to many of the recommendations in CoRWM's reports on geological disposal and interim storage, it is important that effective action is taken to ensure that these recommendations are taken forward. We urge the Government to do so (paragraph 13). (Recommendation 1)
50. We welcome the Government's assurance that they regard research and development as important, and that it should be appropriately funded. We look forward to such assurance being reflected in the Government's response to CoRWM's report on research and development (paragraph 14). (Recommendation 2)
51. We believe that CoRWM's monitoring activity should be put on a more formal basis, so that stakeholders and the public can see clearly whether the Government is putting CoRWM's advice into practice. We therefore recommend that the Government should publish an annual report setting out what action has been taken towards meeting CoRWM's recommendations, so as to enable CoRWM effectively to monitor the Government's progress in implementing its recommendations (paragraph 15). (Recommendation 3)

Timescales and timelines

52. We believe it is essential that the MRWS programme continues to progress as rapidly as possible (paragraph 16). (Recommendation 4)
53. We are concerned that the Government and CoRWM are failing to convey any sense of urgency to move the programme forward with all possible speed (paragraph 17). (Recommendation 5)
54. We urge the Government to consider ways of speeding up the MRWS programme as plans for a geological disposal facility become more defined, and as scientific and technical improvements provide ways of increasing the rate of progress (paragraph 18). (Recommendation 6)
55. We believe that CoRWM could help drive forward the MRWS programme more rapidly by scrutinising, and if necessary reporting on, the Government's progress (paragraph 19). (Recommendation 7)
56. We recommend that the Government publish clear policy milestones for all aspects of the MRWS programme, including for issues such as interim storage and the disposal of waste generated by new nuclear power stations. We recommend further that the Government should assist CoRWM in its scrutiny of the Government's progress with regard to the MRWS programme by including in the annual report (see recommendation 3) a statement of the extent to which these milestones have been achieved (paragraph 20). (Recommendation 8)

Transparency

57. We believe that an annual report to CoRWM (as detailed in recommendations 3 and 8) setting out the Government's progress towards meeting both CoRWM's

recommendations and the Government's own policy milestones would improve the transparency of the MRWS programme. We believe also that this would help maintain public trust and confidence in the MRWS programme by strengthening CoRWM's scrutiny role (paragraph 23). (Recommendation 9)

The scope of CoRWM's advice to Government

58. We believe that CoRWM should provide independent advice to Government on any draft (as well as established) policies that have implications for the management of radioactive waste (paragraph 30). (Recommendation 10)
59. We are concerned that CoRWM was not asked formally by the Government to comment on the draft National Policy Statement for Nuclear Power Generation, despite the significance of the claims it contains about the future management of radioactive waste. Although we welcome CoRWM's decision to respond to the public consultation on the National Policy Statement anyway, we are concerned that it will not in these circumstances be providing advice based on its usual comprehensive consultation and evidence-gathering processes (paragraph 31). (Recommendation 11)
60. We recommend therefore that, in future, the Government should ensure that CoRWM is able to respond to Government consultations on policies with an impact on the MRWS programme with formal reports based on its usual rigorous approach (paragraph 32). (Recommendation 12)

CoRWM's working practices

The importance of evidence-based reports

61. We commend CoRWM's rigorous approach to evidence gathering and stakeholder engagement in its published reports to date (paragraph 33). (Recommendation 13)
62. We believe that the same high standard which is applied in developing CoRWM's formal advice to Government should apply to all documents published by CoRWM. While we commend CoRWM's commitment to transparency, extreme caution should be taken to ensure that its working papers are not published until it is satisfied they are accurate and evidence-based (paragraph 36). (Recommendation 14)

Expertise of CoRWM members

63. We believe that, at present, the membership of CoRWM includes an appropriate range of geoscience expertise to enable it to scrutinise effectively the current stage of the MRWS programme. However, we take the view that CoRWM would benefit from more members with experience of business and practical on-site operations and engineering on the main Committee, and we recommend that the Government and CoRWM arrange for this additional expertise to be recruited at an early stage. More generally, we welcome the Government's commitment to keep the Committee's skill set under review as the MRWS programme progresses (paragraph 40). (Recommendation 15)

CoRWM's work programme

64. We recommend that CoRWM ensures its future work programmes are focused on specific issues relevant to the current stage of the MRWS programme (paragraph 43). (Recommendation 16)

65. We recommend that CoRWM should be free to set its work programme and that it should not be subject to the agreement of sponsoring ministers, although ministers should continue to be able to request advice from CoRWM on specific topics as necessary (paragraph 44). (Recommendation 17)
66. We feel it is appropriate for CoRWM to keep a watching brief on technological alternatives to design and engineering solutions within the context of a geological disposal programme, so that it can advise the Government in the event of the evidence base underlying Government policies changing (paragraph 46). (Recommendation 18)

Social and ethical expertise

67. We take the view that CoRWM should primarily concentrate on providing evidence-based comment on technical issues (paragraph 48). (Recommendation 19)

APPENDIX 1: MEMBERS AND DECLARATIONS OF INTERESTS

Members:

Lord Broers (Chairman)
Lord Cunningham of Felling
Lord Jenkin of Roding†
Lord Methuen
Lord O'Neill of Clackmannan
Lord Oxburgh†
Baroness Perry of Southwark
Lord Sutherland of Houndwood
Lord Tombs†

† Co-opted Members

Declared Interests

Lord Broers
None

Lord Cunningham of Felling
Non-executive Director, Keltbray Group Holdings Ltd

Lord Jenkin of Roding
Hon. President, National Skills Academy for Nuclear
President, Energy Industries Council
President, Foundation for Science and Technology
President, Parliamentary and Scientific Committee
Member, Supporters of Nuclear Energy

Lord Methuen
None

Lord O'Neill of Clackmannan
Chair, Nuclear Industry Association

Lord Oxburgh
None

Baroness Perry of Southwark
None

Lord Sutherland of Houndwood
None

Lord Tombs
Patron, Supporters of Nuclear Energy

A full list of Members' interests can be found in the Register of Lords Interests:
<http://www.publications.parliament.uk/pa/ld/ldreg.htm>

APPENDIX 2: LIST OF WITNESSES

The following witnesses gave evidence; those marked with * gave oral evidence:

Committee on Radioactive Waste Management

- * Ms Marion Hill
- * Professor William Lee
- * Professor Robert Pickard

Department of Energy and Climate Change

- * Mr Bruce Cairns
- * Mr Mark Higson
- * Rt Hon Lord Hunt of Kings Heath

Environment Agency

Geological Society of London

Greenpeace

Nuclear Decommissioning Authority

- * Mr Bruce McKirdy
- Nuclear Industry Association

APPENDIX 3: CALL FOR EVIDENCE

Radioactive Waste Management: a further update

The House of Lords Science and Technology Select Committee has appointed a sub-committee, chaired by Lord Broers, to follow up on its previous inquiries into the Government's management of radioactive waste. The Committee intends to focus on the role and performance of the Committee on Radioactive Waste Management (CoRWM), the body responsible for providing independent scrutiny and advice on the implementation of the Government's *Managing Radioactive Waste Safely* (MRWS) programme, and on whether Government is using its advice effectively. The Committee will consider these issues across the whole MRWS programme, including geological disposal, interim storage and research and development.

The Committee invites evidence on the following questions. Submissions are not required to cover all questions:

CoRWM's performance

- Has CoRWM effectively scrutinised the implementation of the Government's MRWS programme?
- Are Government decisions on its MRWS programme evidence-based? What mechanisms are in place to ensure this is the case? How does CoRWM scrutinise this?
- Does CoRWM have sufficient scientific and technical expertise to meet its remit?

CoRWM's remit

- Is CoRWM's remit appropriate? If not, why not? To what extent should CoRWM be responsible for engaging with the public and representing their views within Government?
- Does CoRWM's remit cover emerging areas of activity, such as new build waste and the UK's plutonium stock pile, or longer term issues and horizon scanning? If not, should it?
- Are there any plans to change the composition or role of CoRWM as the Government's MRWS programme continues? Should there be?

CoRWM and Government

- How effective is CoRWM's interaction with different Government departments and agencies? Are lines of responsibility and accountability within Government, and between CoRWM and Government, clear?
- Does the Government respond to and use CoRWM's advice effectively? Has the Government taken on board CoRWM's recommendations in its recent reports on geological disposal and interim storage?

APPENDIX 4: ACRONYMS AND GLOSSARY

Acronyms

CoRWM	Committee on Radioactive Waste Management
DECC	Department for Energy and Climate Change
MRWS	Managing Radioactive Waste Safely
NDA	Nuclear Decommissioning Authority
NIA	Nuclear Industry Association
NPS	National Policy Statement

Glossary

Geological disposal	The isolation of radioactive waste deep inside the earth to ensure that no significant quantities of radioactivity ever reach the surface environment.
Geoscience	Any science that deals with the earth, such as geology or geochemistry.
Higher activity waste	Highly radioactive material.
Interim storage	The storage of radioactive waste prior to implementing a long-term management solution, such as geological disposal.
Legacy waste	Radioactive waste that was created in the past.
Radioactive waste	Waste materials contaminated by, or incorporating radioactivity above certain levels defined in legislation. Most radioactive waste (approximately 95 per cent) is generated by the nuclear power industry.

APPENDIX 5: RECENT REPORTS FROM THE HOUSE OF LORDS SCIENCE AND TECHNOLOGY COMMITTEE

Session 2006–07

- 1st Report Ageing: Scientific Aspects—Second Follow-up
- 2nd Report Water Management: Follow-up
- 3rd Report Annual Report for 2006
- 4th Report Radioactive Waste Management: an Update
- 5th Report Personal Internet Security
- 6th Report Allergy
- 7th Report Science Teaching in Schools: Follow-up
- 8th Report Science and Heritage: an Update

Session 2007–08

- 1st Report Air Travel and Health: an Update
- 2nd Report Radioactive Waste Management Update: Government Response
- 3rd Report Air Travel and Health Update: Government Response
- 4th Report Personal Internet Security: Follow-up
- 5th Report Systematics and Taxonomy: Follow-up
- 6th Report Waste Reduction
- 7th Report Waste Reduction: Government Response

Session 2008–09

- 1st Report Systematics and Taxonomy Follow-up: Government Response
- 2nd Report Genomic Medicine
- 3rd Report Pandemic Influenza: Follow-up

Session 2009–10

- 1st Report Nanotechnologies and Food

Minutes of Evidence

TAKEN BEFORE THE SELECT COMMITTEE ON SCIENCE AND TECHNOLOGY
(SUB-COMMITTEE I)

TUESDAY 9 FEBRUARY 2010

Present	Broers, L (Chairman)	O'Neill of Clackmannan, L
	Cunningham of Felling, L	Oxburgh, L
	Jenkin of Roding, L	Perry of Southwark, B
	Methuen, L	Tombs, L

Memorandum by the Committee on Radioactive Waste Management (CoRWM)

INTRODUCTION

1. This response to the call for evidence is from the Chair of the Committee on Radioactive Waste Management (CoRWM). While it has been discussed with CoRWM Members, it has not been agreed in a plenary meeting.
2. CoRWM was established in 2003 to advise the Government on the method (or methods) to be adopted for the long-term management of the UK's higher activity radioactive wastes (HAW).¹ It reported in 2006 and recommended geological disposal, preceded by robust interim storage and accompanied by an intensified programme of research and development (R&D) (CoRWM, 2006). The UK Government accepted these recommendations and began to implement them (UK Government *et al*, 2006; Defra *et al*, 2007; Defra *et al*, 2008). In 2007 the Scottish Government decided against geological disposal and in favour of a policy of near-surface, near-site storage, while supporting R&D.
3. CoRWM was reconstituted in late 2007 with the role of carrying out scrutiny of the UK programme for the long-term management of HAW and providing independent advice to Government (Defra *et al*, 2007). It reports to the Secretary of State for Energy and Climate Change and to the Environment Ministers in Scotland, Wales and Northern Ireland.

SCOPE OF CoRWM'S WORK

4. CoRWM's Terms of Reference are to:

“provide independent scrutiny and advice to UK Government and devolved administration Ministers on the long-term management, including storage and disposal, of radioactive waste. CoRWM's primary task is to provide independent scrutiny on the Government's and Nuclear Decommissioning Authority (NDA) proposals, plans and programmes to deliver geological disposal, together with robust interim storage, as the long-term management option for the UK's higher activity wastes.”

5. The “primary task” in paragraph 4 corresponds broadly to scrutiny of the Government's Managing Radioactive Waste Safely (MRWS) programme. CoRWM takes it to include the conditioning and packaging of HAW, as well as its interim storage, and the transport of HAW between storage facilities and from these to a geological disposal facility. We take “proposals, plans and programmes” to include R&D and also public and stakeholder engagement (PSE).
6. In addition to its work on the MRWS programme, CoRWM carries out scrutiny and provides advice on the following topics:
 - work by organisations other than NDA (eg British Energy, Ministry of Defence) on the long-term management of the existing and committed^{2, 3} HAW that they own;
 - waste-related aspects of plans for the long-term management of spent fuels, plutonium and uranic materials;

¹ HAW includes both high level waste (HLW) and intermediate level waste (ILW).

² “Committed waste” is waste that will arise in future from the operation or decommissioning of existing nuclear facilities. (As distinct from existing waste, which already exists, and new build waste, which will only arise if new facilities are built.)

³ Sometimes the term “legacy wastes” is used instead of existing and committed wastes.

- plans for the long-term management of spent fuel and ILW from new nuclear power stations (“new build wastes”); and
- the Scottish Government’s development of its policy framework for the long-term management of HAW.

CoRWM’s WORK IN 2008 AND 2009

7. In the two years after its reconstitution in late 2007, CoRWM prepared and submitted three reports to Government. These reports cover:

- conditioning, packaging, storage and transport of HAW, and the management of spent fuels, plutonium and uranic materials (CoRWM, 2009a);
- geological disposal of HAW (CoRWM, 2009b); and
- R&D for interim storage and geological disposal of HAW, and management of spent fuels, plutonium and uranic materials (CoRWM, 2009c).

8. For each report we gathered evidence from and held meetings with NDA and other waste owners, regulators (the Health and Safety Executive, the environment agencies) and other stakeholders such as Local Authorities for existing nuclear sites, communities near those sites, NGOs, Research Councils and Learned Societies. We then produced a first draft of the report and checked its factual accuracy with selected stakeholders, including Government and NDA. We carried out consultation on a second draft of the report via our website (www.corwm.org.uk) and via a stakeholder workshop. We published the results of these consultations on our website, with the reports.

CoRWM’s CURRENT WORK

Geological Disposal

9. One part of our current work on geological disposal consists of scrutinising progress in the voluntarism and partnership approach to the siting of a geological disposal facility (GDF). This includes attending meetings of the West Cumbrian MRWS Partnership as an observer and monitoring Government initiatives in other areas about the invitation to express an interest in holding discussions about hosting a GDF. With respect to Cumbria, we are also scrutinising the British Geological Survey work to screen out unsuitable areas.

10. Our scrutiny of NDA work covers its planning for the implementation of geological disposal, its development of a generic “Disposal System Safety Case” and its formulation of a geological disposal R&D programme. This programme will begin the implementation of the R&D strategy the NDA published last year and on which CoRWM commented at the draft stage (NDA, 2009). We are also scrutinising NDA’s implementation of its PSE framework for geological disposal and its processes for producing a Strategic Environmental Assessment (SEA).

HAW Conditioning, Packaging, Storage and Transport

11. Our focus for 2010 on conditioning, packaging and storage of HAW is the NDA’s development of its HAW “topic strategy”. This will reach a key stage in the summer and will feed into the second NDA overall strategy (“Strategy II”), which will be the subject of a public consultation in the late summer and the autumn. We are currently considering what work to carry out on transport of HAW. At some point we will look at transport logistics and infrastructure requirements but we do not think it is urgent to do this.

Spent Fuels, Plutonium, Uranic Materials

12. The NDA is developing topic strategies for Magnox fuel, oxide fuels, exotic fuels, plutonium and uranic materials. We are following waste-related aspects of its work. In addition, we may also respond to the forthcoming UK Government consultation on the long-term management of plutonium.

New Build Wastes

13. We are preparing a statement of CoRWM’s current position on new build wastes and a response to the Government consultation on the draft National Policy Statement for new nuclear power stations. To ensure that we understand the proposals for managing new build wastes, we have held meetings with the regulators’ Generic Design Assessment (GDA) team and with the companies whose reactor designs are being assessed in the GDA (the “Requesting Parties”, Westinghouse and EDF/AREVA).

Scottish Government Policy

14. We advised the Scottish Government on the preparation of its draft policy framework and accompanying SEA. Now that the consultation on these has begun (Scottish Government, 2010), we are holding meetings with a number of stakeholders to gather information. We will then prepare a formal response to the consultation. After this, we will evaluate the whole of the Scottish Government's policy development process, including its PSE activities and how it has taken into account the views of the public and stakeholders.

CoRWM's ASSESSMENT OF ITS OWN PERFORMANCE

15. CoRWM has devised three criteria by which it will judge its own success. These are that CoRWM:

- is considered to be a trusted and authoritative source of advice;
- carries out its work to a high standard and to time and budget; and
- has demonstrable positive effect on UK programmes for the long-term management of HAW.

16. We judge our success by asking stakeholders and the public for their views on the Committee's performance. We do this by letter, via our website and at our own PSE events. We intend to internally review whether we are meeting our success criteria through discussions at plenary meetings, about twice per year.

GOVERNMENT RESPONSES TO CoRWM's RECOMMENDATIONS

17. Government has responded to two of our 2009 reports (DECC et al, 2009; DECC & DoENI, 2009). A response to the other report is expected shortly.

18. We have discussed the Government responses in our plenary meetings and have decided to judge Government by its actions, rather than its words. We recognise that some of the issues on which we have made recommendations are difficult and that it will take Government time to decide what to do about them.

19. The response to our geological disposal report is recent (November 2009) and it is too soon to reach a judgement on it. The Government response to our report on interim storage was issued in July 2009. Thus far, neither the Government nor any other organisation mentioned in the response appears to have taken any major actions to meet our recommendations. We are continuing to monitor developments.

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28 January 2010

Examination of Witnesses

Witnesses: PROFESSOR ROBERT PICKARD, Chairman, PROFESSOR WILLIAM LEE, Deputy Chairman, and Ms MARION HILL, Member, CoRWM, examined.

Q1 Chairman: I would like to welcome our witnesses this morning and members of the public. This is the Select Committee on Science and Technology's only evidence-taking session for their inquiry into radioactive waste management: a further update. The Committee has looked at this subject on a number of occasions before, so we are just holding this very short inquiry this time so we can get it through before the election, and it is primarily orientated, as you know, towards understanding the role of CoRWM 2 and how you feel it is proceeding. Everybody should be aware that we are being webcast; I see the red light is on. There is an information note outside that I hope members of the public have picked up. There are also declarations of interest for all of us on the Committee. Perhaps we may start by our witnesses identifying themselves for the record so that we have that on the audio record.

Professor Lee: My name is Bill Lee. I am Head of the Materials Department at Imperial College and Deputy Chairman of CoRWM.

Professor Pickard: Robert Pickard, Chairman of the Committee on Radioactive Waste Management.

Ms Hill: I am Marion Hill. I am a member of CoRWM and I lead its task groups on interim storage and on new build wastes.

Q2 Chairman: Thank you very much. If you like, you can make an opening statement or we can go straight into questions. Would you like to make any opening statement?

Professor Pickard: Thank you, my Lord Chairman, no.

Q3 Chairman: Let me start then. Greenpeace felt that CoRWM's scrutiny of the MRWS programme was "not as effective as it could be" mainly due to a "lack of funding". Does CoRWM feel that it has sufficient resources to carry out its scrutiny function?

Professor Pickard: I think we would say that our funding is adequate at present for the task we have in hand. I think it is almost inevitably true of most organisations that with additional funding one can achieve more in many different ways. We could see, for example, that if we had enhanced secretarial support we might be able to achieve certain things that we might not otherwise undertake later on in the process. We could develop our website more, which would be a real advantage because nowadays through the website we can conduct a lot of engagement with the general public and stakeholders, but I would say our funding is adequate at the present time.

Q4 Chairman: What support do you have for the website?

Professor Pickard: We have identified within our existing budget a sum of money that we have been using to develop the website and we hope to launch a new website in April.

Q5 Chairman: And you have contracted that out, have you?

Professor Pickard: Yes.

Ms Hill: It is contracted out and it is done through the Central Office of Information. They have given us help and advice, as have the Department of Energy and Climate Change. It has gone to a contractor but the contractor is working for all of us to revamp the website essentially, completely rebuild it, because the one we have at the moment is really a temporary stopgap. For CoRWM 2 we need something much more professional.

Q6 Chairman: And there is considerable public interaction over the website, is there?

Ms Hill: It is fairly well visited, but one of the main things is to make it more attractive so that it attracts more casual visitors, if you like. We obviously get people using it who know the committee and want to follow what is going on, but one of the challenges is to make it more attractive to others because we probably do not get that many casual visitors at the moment.

Q7 Lord Tombs: Does CoRWM feel that the MRWS programme is progressing at sufficient speed, and in particular with progress made in siting the geological site?

Professor Pickard: Certainly, if we look at the international experience, other countries have found this a very longwinded process.

Q8 Lord Tombs: So do we.

Professor Pickard: So in a sense we should not have high expectations of too rapid progress because of the nature of the work, which is to encourage a voluntary approach and to give local communities time to absorb the information and feel comfortable about the development of the process. Bearing in mind that that is the nature of the game that is afoot, I think things are progressing satisfactorily at the present time. I must say that initially the committee was concerned that, having sent out invitations to communities to volunteer or to express an interest in volunteering to be a host community, there was very little immediate action to follow up the invitation. CoRWM itself then made inquiries of local authorities and found that in at least 17 cases the

9 February 2010 Professor Robert Pickard, Professor William Lee and Ms Marion Hill

individual who received the letter of invitation did not take it forward to initiate a debate within that particular authority, so we were concerned. We made our concerns clear to Government, that it would have been helpful to have more follow-up of the original invitation immediately, but I am pleased to say that when Lord Hunt took over the portfolio with the transfer of the committee's secretariat from DEFRA to DECC, he did make efforts to renew the invitation and follow through just to encourage other regions to show an interest.

Q9 Lord Tombs: This Committee's first report on waste disposal was in 1998, which is 12 years ago, and I think you would probably agree that we have not made much progress since then. What would you take as the effective starting point? There was a lot of wasted time, of course.

Professor Pickard: Of course, the MRWS White Paper in 2008 set the scene for a new beginning by emphasising the voluntarism approach and there is no doubt that there has been positive progress since the issue of that White Paper.

Q10 Lord Tombs: Fairly recent.

Professor Pickard: Yes.

Q11 Lord Oxburgh: Could you give us some indication of the number of expressions of interest that have been received?

Professor Pickard: There is only one, of course, in regional terms, from Cumbria which involves a slightly difficult situation because you have a two-tier authority so you have Cumbria County Council with statutory interests and then you have Copeland and Allerdale district councils effectively, of course, having their own statutory interests. That creates a difficulty because they have to decide amongst themselves who will make a final decision to participate and at the moment the Government has left it to the local people to decide how that decision-making process works for them.

Q12 Lord Cunningham of Felling: Perhaps I should start by declaring an interest, my Lord Chairman, in that I was the Member of Parliament for Copeland for 35 years and, as Lord Tombs has said, we have watched progress, or the lack of it, on these issues for a very long time. Has CoRWM, or anyone else for that matter that you may know of, ever made an environmental impact assessment of the case for moving this waste from Sellafield to somewhere else in the country?

Professor Pickard: I am not aware of a search for a specific place but from time to time there have been investigations of different geologies superficially.

Q13 Lord Cunningham of Felling: Let me set that aside, if I may. The point I am trying to get at is this. Is there not a huge series of environmental implications about taking the waste from where most of it is currently located, namely, in Sellafield, and transporting it across the country to somewhere else? What is the case for doing that?

Professor Pickard: There is no doubt that transportation of radioactive waste does create new risks and, of course, it can be a very expensive procedure as well, so there is a lot to be said for trying to deal with radioactive waste as close as possible to the point of origin; there is no doubt about that. There is no doubt also, though, that the committee feels that it would be helpful if there were at least two regions expressing an interest simply to provide comparative data between the two situations and also offer more variety of choice for technical solutions, particularly different types of geology. Notwithstanding the transport problems and difficulties, I think CoRWM still feels that it would have been helpful if there had been more than one region showing an interest.

Q14 Lord Jenkin of Roding: Of course, the Treasury were always deeply unhappy with the thought that there would only be one volunteer and it would be screwed. Have you studied at all the Swedish experience that was very well written up in the *Financial Times* magazine in September as to how they chose between the two volunteer communities? It seemed to me that that was an absolute object lesson in how it should be done.

Professor Pickard: Yes, the committee has also visited Sweden and Finland to look at the facilities and talk to the local people involved in that process, and I will be going to Sweden myself again in May to talk to the local people about their process. One thing that was noted in a comparison between Sweden and the United Kingdom was that the Swedish communities did seem to have a relatively high level of trust in Government and government activities in a way we do not find as obvious here in the United Kingdom.

Q15 Chairman: Have some dates been set for making decisions in Cumbria?

Professor Pickard: No. From the White Paper onwards the Government has simply allowed sufficient time for deliberation and discussion and opportunities for the local authorities to gain independent expert advice themselves, so it has not set a deadline for the next stage of the process to be activated, I think deliberately because it does not want to put pressure unduly on local communities.

Q16 Chairman: But this could go on and on, could it not? There is not even a date when people think they might have a date.

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Professor Pickard: It is true that there is not a specific date but, in fairness certainly to the partnership that has developed in Cumbria, they are moving on. They have formed a very good democratic system of representation for Copeland, Allerdale and Cumbria. They are sharing the chairmanship of the partnership meeting. They have set up a website. They have distributed many thousands of leaflets and explained the situation to all the local people. They have had lots of focus group meetings on a systematic basis to reach out to the electorate in Cumbria to gather in their information. I think they have made a very good start and they are definitely progressing. They are gathering information. They are providing in a sense educational material to the local community. I think it is, so far, so good, but they are progressing probably as rapidly as they can locally.

Q17 Chairman: And the progress they are making is not being hindered by a lack of any information from Government?

Professor Pickard: I do not think so at the present time. They have approached CoRWM from time to time for information to explain terminology, for example, and they did in fact ask us to give us a presentation on the concept of retrievability, but we declined to give the presentation ourselves because in scrutinising the process we did not want to become part of any policy in developing the process but what we did was direct them to sources of information that would answer their questions. I think Bill probably has something to say in this area.

Professor Lee: On sources of information?

Professor Pickard: Do you think they have enough information?

Professor Lee: Yes. I think all the interaction we have had with the community up there indicates that they are quite happy with the support they are getting both from CoRWM and also from the Government side. I think there has been a distinct improvement in their perception of government support over the last few months.

Q18 Baroness Perry of Southwark: Have they been themselves to visit Sweden and talk to their opposite numbers there? It might be very reassuring to them to see a good example and see how things were done.

Professor Pickard: I do not believe they have been yet.

Q19 Baroness Perry of Southwark: Perhaps you could take the chair of this splendid democratic committee with you when you visit them.

Professor Pickard: I think that is a good point. We did invite Elaine Woodburn, who was chairman at the time of the partnership committee in Cumbria, to give a presentation to CoRWM at a public meeting and that went extremely well. It was interesting that she did raise points that again you can only gather by

talking to people on the ground. For example, she said that people forget how one initiative in an area can impact on another initiative which appears to be quite unrelated. She mentioned, for example, that there had been a downgrading of a major road in the area such that it would not be maintained at the standard that it would be otherwise if it were kept at a higher rating. As a consequence, that seems to have flagged up to the local community that that particular communication track was not considered important in a national sense, and yet it is the very track that would be used to bring materials in and out and to help in the development of the facility. She did feel that sometimes initiatives that were happening in their area did not in a sense dovetail with other activities, because if such an important development were to go ahead in Cumbria, again, they would expect the roads and the infrastructure to be suitably developed to meet the demand.

Q20 Lord Jenkin of Roding: That must be the primary price, as it were, that the local community should properly demand in order to host the facilities, the communications to West Cumbria, which are in fact such a problem, not only for the transport of nuclear materials but simply for the whole upgrading of the area for development.

Professor Pickard: That is right. This should be one of the community benefits of engaging in such a large civil engineering project.

Q21 Lord Jenkin of Roding: I hope that they are focusing on that and not on other more, as it were, peripheral things.

Professor Pickard: Government has been very even-handed in that respect. It has said to the community, "Discuss amongst yourselves what developments you feel would be helpful to this process in the area and would help economic development in the area", so it is up to the local people to carefully consider what benefits would be beneficial to the project and also beneficial to the community.

Q22 Lord Jenkin of Roding: And I mention this because a former senior manager at Sellafield, Laurie Haines, who came from the Department of Transport, his eyes lit up and he said, "That's the answer! That's what we must have!"

Professor Pickard: I hope they will take full advantage of that opportunity.

Lord Cunningham of Felling: It is difficult not to indulge myself in wry smiles, listening to some of this, I must say. The people of West Cumbria know what they want pretty clearly. They want far better road and rail communications. They have known that for decades. They have borne the burden of all of this stoically and very reasonably, in my view far too reasonably, and it is no good us just sitting round here

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saying that they should say what they want. They have said what they want to me and other representatives, to successive Westminster administrations, almost to no avail. That is the reality of that side of the argument. To come back to the question of people visiting Forsmark in Sweden or wherever it might be, the problem with this is that successive leaders of all the political parties over decades have visited facilities in other countries. The problem is they then either retire, they die or they move away and a new leader comes along and he or she then goes and still nothing happens. You can educate people for as long as you like but they move on, they pass away, so this is a continuum of people learning and getting up to speed but no decisions ever come.

Q23 Chairman: I think we have got to move on past this topic. It was behind my question, this very fact: was the Government clear about the benefits it would provide to the region, because if that information is not clearly available and some commitment is made I can see people being very reluctant to proceed?

Professor Pickard: I think the Government has made an effort not to be too specific and not in a sense to lead the argument. What it has done is give encouragement to the local community to debate amongst the local people in order to identify what community benefits would be really appreciated. Clearly, the Government would like to see at the end of the day promotion of the economic development of the area.

Q24 Lord O'Neill of Clackmannan: How do you go about developing your work programme? In the future where do you see yourselves going? What would be your areas of activity, because there is always a danger that you run into territory that belongs to other regulators? How are you addressing these challenges?

Professor Pickard: The most important thing, of course, is liaison and interactive communications. The interpersonal activity at all levels between CoRWM and all cognate organisations is absolutely critical to CoRWM's ability to do its job properly, so we are constantly interacting with the regulators at several different levels. I try to maintain at least three levels. I try to maintain contact with all cognate organisations directly with the chief executive or chairman of the organisation and I encourage members to build relationships with the intermediate and senior management, and then I encourage members to take every opportunity to talk to people who are actively out there inspecting facilities or building facilities at the cutting edge. By encouraging a lot of personal communication and interaction we gather information that allows us to initially put on the table all the different issues that we could be

looking at, and we get an enormous number of issues. We then go through an extremely lengthy iterative process of trying to focus down on which items need to be looked at more immediately and which items can be put on the back burner with a watching brief. When I say "iterative", we are in a sense continuously consulting with cognate organisations but, of course, we are also continuously consulting with our sponsors, both in Westminster and in devolved governments, because at the end of the day they will feed in very critical information about the timeliness of that advice that they would like to see. The work programme has eventually to be agreed with Government, so we begin looking at the work programme about six months before it has to be agreed with Government.

Q25 Lord O'Neill of Clackmannan: We have had criticism of you from the Environment Agency and the Geological Society, and this process in some respects is borne out by what you have said, that your work is far too wide, that you cast the net too widely and perhaps as a consequence of that you are insufficiently disciplined and you perhaps take longer to do things than is necessary.

Professor Pickard: No, it is not a lack of discipline. It is a process of beginning by getting all the issues out on the table so that everyone can see them and there is a degree of induction then in that, having looked at all the issues, certain issues really do shout out in terms of immediacy and other issues do not. To be inclusive and to win the confidence of all stakeholders and the general public in particular, they have to see that we are aware of all the different issues, even though subsequently, at the end of the crystallisation of the work programme, we may give a very low priority to a particular issue that a particular group in society feels very concerned about. It is important that they see that we were aware of it, we deliberated on it and then subsequently we decided that in terms of timeliness and the immediacy of a particular requirement and the limitation, of course, of the resources at the end of the day, we adopted a prioritisation process. To my mind that seems to be the best way forward to carry everyone with us. I think the worst thing that can happen is if we appear to go straight to focus on three or four different issues and there is very little evidence or audit trail to indicate that we have considered the other issues. Initially it may look as if we are looking at too many things but at the end of the day I think people will see that our work programme, when it is agreed with Government, will be much more focused than it looks like at the beginning of the process.

Q26 Lord O'Neill of Clackmannan: The NDA have said that the academic background of many of your members seems to suggest that you are more seeking

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after truth or driven by curiosity rather than by a set of objective priorities or criteria.

Professor Pickard: I will let Bill comment on that.

Professor Lee: I am mildly offended by the comment, being an academic. The academic community is well aware of the need for a safety case and the practical implications of this programme, and we also are aware that to understand fully the implications of storing radioactive waste and then disposing of it over hundreds of thousands of years you do need some fairly clear fundamental understanding of the likely processes that may occur over those timescales and you also have to argue that in your safety case. Yes, we are aware of the need for a fundamental understanding, and, yes, we are also aware of the need for the engineering and pragmatic approach to getting the waste encapsulated, safely stored and disposed of.

Q27 Lord O'Neill of Clackmannan: Maybe I can just tie up this area with one last point about the MRWS programme. To what extent do you see yourselves having to structure your agenda to pass comment and advice on their programme? That seems to be something which has not been mentioned by you in terms of your work programme development.

Professor Pickard: Yes, I think some observers of CoRWM's activity will initially see differences between the way in which CoRWM functions at the moment and the way in which it functioned, for example, four or five years ago, because initially the committee was asked to examine different policy options and then recommend particular policy options to Government for ministerial decision, and in that sense it was proactive about its initial objectives. Once the Government accepted the bulk of the CoRWM recommendations the committee moved into a new phase and was appropriately reconstituted because the new phase is a phase of scrutiny of the implementation of the policy that the Government is following, so here we need to know what NDA is planning and other implementation groups, and we need to know what Government is planning so that then we can fulfil our remit, which is to deliver appropriate advice in a timely way. In that sense we have to be reactive to what is going on. We are proactive where we can be, for example, in talking to all the different groups and sharing drafts of our documents and drafts of their documents with them so there is a mutual exchange of preliminary document development and strategic development going on. At the end of the day I think we are getting the right balance between being proactive where we can be and being driven by other people's agendas where we have to be because we cannot scrutinise a particular strategy finally, of course, until it is produced. We try to obtain timetables from cognate groups that are relevant to our work and then we will

try to synchronise the objectives of our work programme to those timetables, and that is an inevitable aspect of the scrutiny function.

Q28 Lord Jenkin of Roding: The Environment Agency has noted that CoRWM should engage with a wide range of stakeholders but it must ensure that the work is soundly based, and DECC has made that point as well, that the work needs to be evidence-based. There have been some criticisms, as I am sure you are aware. Both the NDA and the Nuclear Industry Association have been critical that at times there were inaccuracies and that you have missed the point. Do you understand those criticisms?

Professor Pickard: I understand them and the committee certainly understands them, but when the point is made as you have made it in a sense it is taken out of context with regard to the process that we follow. Because we are trying to be as open and transparent as possible we expose our preliminary thinking and our preliminary drafts of reports at a very early stage, and we do that at the risk of exposing naïve thinking and gaps in the information base because when we do that it is at a preliminary stage and we are trying to give people every opportunity to see how we are developing our formal advice. By the time we get to our formal advice, of course, we have then filled in the gaps in the information. We have invited the NDA, the Environment Agency and the regulators generally to give us advice, which they do, and give us information, which they do, so that by the time we have then gone into one or two consultation phases with stakeholders as well on the intermediate draft documents, the final document is usually extremely sound. We cite all the evidence in our reports to Government, and I am very confident that our final authoritative, formal reports to Government which give recommendations to Government are solidly evidence-based and the sources of the evidence are always quoted and cited very precisely in the documents. We produced three such documents in 2009 and I have not had a single complaint about accuracy or lack of evidence.

Q29 Lord Jenkin of Roding: I want to come to how you do this in a moment, but one thing that has come to us in evidence is that in what they describe as your draft response to the energy national policy statement you dismissed the NDA's disposability assessment which had a strong and documented evidence base in order to say that there is no evidence as to the disposability of new build waste. Was that draft subsequently amended?

Professor Pickard: I will let Marion answer this because she is leading the task group in this area.

Ms Hill: I am the culprit; I drafted that. The wording will be changed but I think the nuclear industry association has perhaps misread in some sense what

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we have written. The intention was not to dismiss the NDA evidence and say it is not evidence. The intention was to say that it is a very narrow focus that they have taken and they could have put forward much more evidence about the disposability of new build wastes and they did not, and that is what we say. I think they have misread to some extent what we have written, so the words need changing to make our point clearer. We are not dismissing what they have done as not being evidence; that is not the point. We are saying there are other things they could have done and should have done.

Q30 Lord Jenkin of Roding: We are not seeing the NDA. They have put in what I regard as an extremely good paper and I listened to them giving evidence at the other end of the Palace to the Select Committee there, but I note what you say. Coming back to the question of how you consult, I have been given sight of the workshop which Bill Lee chaired in September, I think it was, when they were looking at the R&D for long-term management of radioactive wastes. It is a rum document. The question I want to ask is, bearing in mind what appears to be the comparative middle rank of the people who attended that—and I do not know them all, of course, but there are very few names that come from a senior position—what weight do you give to the outcome of that? As I understand it, it helps you to answer the question, “Are we missing anything?”, but when they come and vote, seven votes for this and four for that and so on, I would find that a pretty rum way of making decisions. Would you like to comment?

Professor Lee: Yes. That is a clear part of our stakeholder engagement and public engagement. There were members of the public and interested stakeholders. They may not have been the top people in the particular industry or regulators, but we got useful feedback. It was also part of our process of letting other people know what we were doing about the R&D report, and the whole process of gathering evidence requires that we do that. That was an opportunity for people to meet us and speak to us. There were other opportunities for consultations that went out for people to give written evidence, and I think our evidence base for our formal reports is entirely sound.

Q31 Lord Jenkin of Roding: Of course, we have had the report but neither you nor we have had the Government response. Having seen what you have recommended in your report, I am not surprised that they are taking a bit of time over it. Could you just explain a little further then how you move from this sort of almost scattergun approach to the thing to where you come down to some fairly clear and specific and, it seemed to me, quite wise recommendations?

Professor Lee: I can do that. The executive summary of the R&D report explains how we work in some detail, paragraph 4. We gathered information from the NDA, site licence companies, other nuclear site licensees, the research councils, learned societies. We spoke to everyone whom we thought it was appropriate to speak to. We also held stakeholder events; that was just one of them. We held technical meetings to gather evidence on storage options and disposal options in Sheffield. We met with the Institute of Physics in London with a crowd of invited relevant stakeholders and discussed in some detail the technical cases. We produced drafts and they were put up for consultation. We received a large number of responses, some of which corrected factual errors; others of which provided us with much useful information. We responded to all of those and all of that information was incorporated into the final report.

Q32 Lord Jenkin of Roding: One should not read too much into the various little polls that you had?

Professor Lee: I am surprised you have read it.

Q33 Lord Jenkin of Roding: I am comforted by that. I think it is worth noting that only in January in the journal *Nuclear Fuel* there was a very interesting article under the heading “Regulators find UK repository group lacks clear path on research needs”. It seemed to me that that was the Environment Agency and others making a point, and it seems to me to follow very closely what you have said: there is no co-ordinating mechanism, and it seems to me that that is hugely important.

Professor Lee: Yes, and in part of that report we say that the regulators should be encouraged to use the powers and facilities that they already have to commission appropriate research themselves. It is one of the contributing agencies.

Q34 Lord Jenkin of Roding: One of the problems, of course, is that you have got this huge, lovely research building run by the NNL at Sellafield and almost nobody uses it because at the moment they are not allowed to, for instance Manchester University; they are only allowed to use it if people come along and pay. Do you have a view on that?

Professor Pickard: We have a definite view that active research facilities where intermediate level and high level waste can be properly studied are relatively limited in availability in the United Kingdom, and where they do exist it is quite difficult for many researchers to gain access to those facilities. Bill might want to say more about that as an active researcher.

Professor Lee: I think you highlight a problem that there is no obvious route for people to get access to do research on radioactive materials in the UK. There is

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some confusion about the process. I have received a few communications in the past few weeks which suggest that there is an improvement. People are becoming aware of other active facilities at other institutions and people are trying to share those, and also there is the opportunity through various European programmes, but it is rather unfortunate that the UK, which has a large nuclear industry, does not really have the active facilities that are needed.

Q35 Lord Jenkin of Roding: And who do you think is responsible for co-ordinating that? Would it have to be Government?

Professor Lee: That is a tricky question. It gets complicated because NNL is owned by some other companies now. I think there needs to be perhaps some direction from Government.

Chairman: It is something that you can bring up in your response to the Government's response when eventually you get that response. I think we have got to move on now. We have got so many questions and we are seriously running out of time.

Q36 Lord Methuen: The Environment Agency noted that CoRWM might benefit from "additional membership that has an in-depth practical knowledge of operations and engineering on nuclear sites". Would you care to comment? The Geological Society also commented on the need for further geoscience expertise going forward.

Professor Pickard: In a committee of 15 members we have three members from the geological sciences and we have three members with a physics and engineering approach. One of them was an active worker in the nuclear industry at Dounreay for many years before retiring and is extremely knowledgeable about the management of nuclear projects on site. I have held appraisals with every member of the committee where I have always asked them a series of formal questions, one of which has been, "Do you identify any skill shortages on the committee during our deliberations and, if so, do you think we should be trying to fill those skill shortages?", and the response I have had from all the members individually in private conversation and in the appraisal interview particularly as well is that they feel that there is adequate representation of the different disciplines. We have the opportunity to co-opt to the committee or its sub-committees any particular expertise that we feel is missing during the debate on any particular issue, and we would not hesitate to do that if we felt it was necessary. And, of course, whenever we have wanted specific information we have found that the existing committee members do have adequate linkage to the different scientific societies and the different cognate bodies to be able to talk to a particular expert in a particular area, so we have not felt the need so far to

co-opt an individual with a particular skill. In answer to your question, I would say that at the moment knowledge of the nuclear industry and the way in which it works is adequately represented and geological sciences are adequately represented at the moment. In fact, in many ways the geologists are chomping at the bit to see the process move on to where they can see some data around about geology, so I would not want to strengthen the geological representation at this moment in time.

Lord Methuen: At the expense of the engineering.

Q37 Lord Cunningham of Felling: The late Harold Wilson once coined a phrase to describe the pressure he came under to set up royal commissions. He said, "Royal commissions take minutes and spend years". We have been at this process now in this country since the mid to late eighties. I cannot recall off the top of my head how much Nirex expended on seeking solutions to finding a long-term repository for nuclear waste but it must have been somewhere around £1 billion. When you look at your criteria for success what place does your financial cost take in all this?

Professor Pickard: That is a difficult question to answer. Our criteria for success I feel we are meeting within the timescale that we have been functioning in. We have been functioning now for two years.

Q38 Lord Cunningham of Felling: Excuse me, yes, CoRWM 2 has been functioning for two years but we have several years of CoRWM 1 before that, did we not, so all in all it is probably nearer 10 years?

Professor Pickard: I think CoRWM 1 did extremely well in reviewing all the different policy options and then putting together advice that had broad support for dealing with legacy waste. Clearly, a complication arises with the arrival on the scene of the deliberations in relation to new build waste and the committee is extremely concerned that any planning and discussion about new build waste should not inadvertently delay our progress towards the safe interim storage and safe disposal of legacy waste which we already have on our doorstep. One of the things that is changing in terms of pressure for progress is that many of the materials that we have were packaged with a view to being stored for a certain length of time. Whether that is 30, 50 or 100 years, clearly a lot of material has been packaged now for 30 or 40 years and there will come a point where, as packages deteriorate, the material will have to be repackaged, and repackaging is a very expensive process. It would seem very sensible economically in terms of use of public monies and public resources not to unnecessarily keep packaging and repackaging if a disposal option can be enacted because it simply takes money away from the fulfilment of the long-term protection of future generations. Therefore, in a

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sense, because of the packaging issues and the cost of packaging, there is a little bit more pressure to try and get some progress at least with legacy waste.

Q39 Lord Cunningham of Felling: You said that CoRWM 1 did a good job but in reality they came to the same conclusion Nirex had come to 10 years earlier, did they not?

Professor Pickard: There is some truth in that, but what I would say about the first three years of CoRWM's existence is that it was a very different process of consultation. It did carry with it sectors of our community that felt alienated during the Nirex activity years, who felt that their voice was not heard, and CoRWM will make every effort to continue to listen to all the different sectors of the communities. That is important.

Q40 Lord Cunningham of Felling: I am not criticising that, but, in consideration of your remit and the expenditure that is involved, can you give us any cockshy prognosis of when you think will be the point, as football managers would say, for getting a result?

Professor Pickard: Ideally, we ought to be in a position by 2040 to be putting wastes into a geological facility for disposal.

Q41 Lord Cunningham of Felling: Excuse me. You say you should have a repository of some kind open and operating in four years' time?

Professor Pickard: It will take 120 years to complete the process of starting to build a geological facility and completing the filling of it with existing legacy waste, so by 2040 we would like to have the operation under way.

Q42 Lord Cunningham of Felling: I am sorry; I must have misheard. You said 2040, did you?

Professor Pickard: Yes.

Q43 Lord Cunningham of Felling: Two-zero-four-zero?

Professor Pickard: Yes.

Q44 Lord Cunningham of Felling: That is incredible.

Professor Pickard: If we could be in a position to start placing wastes in the repository by 2040, then I would consider that to be very good progress, considering all the different interests, communities, policies and also the financial implications. One of the real problems is maintaining political continuity and political will to get this job done. That is terribly important and I understand; I sympathise with the Government not wanting to rush too much and therefore being accused of railroading some particular process through against the wishes of local people, so I understand Government's reluctance to

set targets that are immediate. I think if we could start placing the waste in there, one would anticipate that it would be a continuous process of creating a cavity and placing the waste, backfilling, sealing and then creating another cavity and then placing waste, so we do not have to build an underground cathedral that is then emptied which takes a very long time and then start placing the waste. I would expect some continuous process of fill and build, fill and build. It will be fill, seal and then build another area.

Q45 Lord Cunningham of Felling: Not retrievable?

Professor Pickard: Not retrievable in the initial concept, because if it is designed to be retrievable, CoRWM would not consider that to be disposal; CoRWM would consider that to be storage.

Q46 Baroness Perry of Southwark: Moving on to the committee's remit, do you see your role as providing scrutiny and advice solely on scientific and technical matters, or do you also see your role as commenting on social, political and ethical aspects of the MRWS programme?

Professor Pickard: I think it was John Donne who gave us the statement, "Any man's death diminishes me because I am involved in mankind", so I have no doubt myself that all individual human beings carry a societal responsibility and an ethical responsibility in relation to the actions that they perform, and it will be true to say that every member of CoRWM was selected not just because of their scientific and technical capability and nuclear capability; they were also selected in terms of the evidence that they were able to provide, that they had exercised societal and ethical responsibility in their past endeavours; they were very important criteria in the selection of individuals. Having said that, clearly we have neither the remit nor the resources to embark on a large philosophical study of the broader aspects of societal and ethical issues, but where we come across a situation where societal and ethical issues either impede or enhance the implementation of the Government's policy then I think CoRWM would be attracted to that particular issue and would consider it, but we will not set out initially to develop and apply a large amount of our resource to looking at societal and ethical issues unless they are clearly identified to be influencing the success of the implementation process because our terms of reference are quite specific, that we must scrutinise the implementation of the process. We are not required to form judgments about whether or not the government has got the right energy policy or the wrong energy policy, but where the government's energy policy has ramifications in terms of fulfilling the MRWS process, then, of course, we would take an interest.

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Q47 Baroness Perry of Southwark: I understand your choice of your technical members because you say that you have evidence that they do have a concern for the ethical and social issues, but do you feel that you need additional expertise with this particular thing?

Professor Pickard: Yes, we would not hesitate. If an ethical issue or a societal issue arose in conjunction with the implementation of the Government's policy of developing safe interim storage and safe and secure disposal and we felt that we needed more expert advice from social sciences or from persons who have experience in dealing with very specific ethical issues, I am certain that the committee would not hesitate to bring in that experience.

Q48 Lord Oxburgh: I think my question you have at least partially answered in your previous answer to Baroness Perry, but, as you are aware, Greenpeace draws attention to the fact that CoRWM 1 got involved in public engagement to a significant extent and that you have not, and I think you have already said that this is outside your terms of reference, which I think is a fair answer. On the other hand, if one looks, for example, at the negotiations that are being carried on with the Cumbrian authorities, that is one level of public engagement, if you like. Do you scrutinise and keep an eye on the processes by which that engagement and that interaction with the Cumbrian authorities takes place, and if you thought this was not being done in the right way to whose attention would you draw this?

Professor Pickard: Initially observers of this discussion could draw an inference from your statement that we do not regard PSE as part of our remit, but concern about PSE is very much part of our remit, so our starting point is to scrutinise the public and stakeholder engagement processes of all cognate parties, particularly the NDA and the Government, and if we detect that they are not fulfilling their purpose and they are not giving an adequate representation of the different views that we feel are out there, then we would not hesitate to bring that to the attention of Government and to the attention of the relevant bodies. We do envisage periodically undertaking public and stakeholder engagement workshops just to check that what other process are delivering match up to our own, but we do not have the resources at the moment to conduct the quantity of engagements in a formal way that CoRWM did during its first three years. We have a special task group devoted to looking at the PSE issues and all the members are concerned to know what is happening in terms of public opinion and stakeholder activity. We hope to develop a website where we may put questionnaires on it that go out on a regular basis to opinion formers and members of the public to keep testing the water to see if people

feel that they are being included in the process, and we will use the website as efficiently as we can to improve our public and stakeholder engagement. If we do find difficulty, one thing we have to be very careful about is that we do not generate stakeholder fatigue because if the NDA is organising gatherings and local communities are organising gatherings and Government is organising gatherings we do not want then to add an extra burden onto the process so that people feel that they keep giving their view but it is not having any effect. We do not want to make things worse by having too intensive a programme of engagement, but where we feel there is a critical point that is not being tested or reached then I would expect the committee to identify that and debate and determine what way we could use to test that particular aspect of public opinion, and then when we have tested it as independently as possible we would make that information, of course, immediately available to all interested groups.

Q49 Lord Oxburgh: Can you not do some of this monitoring indirectly by looking at the minutes of the consultations and so on, which would tell you quite a lot?

Professor Pickard: We do and we share draft documents constantly with cognate groups that are involved in PSE, and we send members of the committee along as observers. We have two observers, for example, at the West Cumbrian partnership and we have observers at all the major committees that are discussing these issues, and we gather as much information as we can. We conscientiously feel we understand what is happening in public and stakeholder engagement. For us it is absolutely critical for our own credibility that every sector of society that has an interest in radioactive waste has an opportunity to communicate with us and share its concerns with us; that is absolutely critical to our method of working.

Q50 Lord Oxburgh: Coming back to this question of timescale which underlies quite a lot of what we have been talking about, who actually has the responsibility of moving on or not these consultations and discussions, and who has the responsibility for their success or not?

Professor Pickard: Well, Government will take the key decisions as decision points are reached. The NDA and the implementers clearly have a mandate to press ahead at an appropriate pace to ensure that there is progress, the regulators themselves have got to be sure that preparations are in place so that environmental assessments can be adequately undertaken, and the Environment Agency, for example, produced an excellent document recently to give guidance on what sorts of issues would be involved in the development of a case for a geological

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disposal facility, so I think a lot is happening that is of a preparatory nature, and I am reassured that, at least as far as Cumbria is concerned, the local authorities there and the interested parties there are doing an excellent job in getting things under way.

Chairman: I think we have discussed public engagement as much as we can.

Lord Jenkin of Roding: I think Professor Pickard has answered the question which I was going to ask, which was how much you feel it is your duty to help to develop government policy rather than just, as the NDA said, taking it as read and scrutinising that. I think you have answered that.

Chairman: So let us get on to the specific question for Government.

Q51 Lord Tombs: Were CoRWM consulted by the Government before they published their draft National Policy Statement on energy infrastructure?

Professor Pickard: Yes. While the document was being developed, those aspects which related to radioactive waste management were discussed with a representative group of the Committee because we have a focused task group looking at the implications of new build in terms of radioactive waste management, and I will invite Marion to give a comment on that in a minute because she takes a special leadership role in that area. When we were consulted, of course we were consulted, in a sense, within the limitations of questions about factual accuracy in the document and questions about clarity of expression because one of the things that CoRWM has tried to do throughout its work is it has tried to encourage organisations not to be unnecessarily secretive because public confidence is definitely more likely to grow in proportion to the openness of the debate and the discussion, so clarity of expression was very important to us, and I believe that we were able to help the Government in that respect, but it is not just clarity of expression for the informed, it is clarity of expression for the relatively uninformed so that they get sufficient understanding to be able to make a judgment, but I will ask Marion if she would like to comment on this.

Ms Hill: Yes, we were asked to comment on drafts of the Nuclear National Policy Statement, the summary of evidence on waste and the actual part of the consultation document which deals with waste, but it was an agreement with Government that we did this on the basis that we would only comment on factual accuracy and clarity of expression because we wanted to be free to respond to the consultation in an open way and actually respond to the question and, in particular, the question about the effective arrangements. In a way, those were our groundrules that we chose to do it that way because, otherwise, we would be seen to be in some way colluding with Government and perhaps agreeing in advance with

the preliminary conclusion that they reached, and that we did not want to do, we wanted to be open about that, so it is a rather different process than we had gone through before.

Q52 Lord Jenkin of Roding: I want to share my view based on, shall we say, fairly extensive experience, that a lot of useful work has been done by a lot of committees, but, in a sense, it is shadow-boxing until somebody decides what they want to do. Something which will have a big effect on CoRWM is when somebody decides they want to build a nuclear power station, a safety case is approved and a public inquiry ensues, and at that stage the whole issue of waste, and the public will not differentiate between legacy and future, has to be far firmer than it is at the moment.

Professor Pickard: Yes, I think that is true and CoRWM is developing a position statement on the wastes that are likely to be produced by the new build programme and, as I say, we have this special task group focused on that entire issue that is chaired by Marion. We would like to be in as prepared a position as possible for the future when a specific development is discussed and, particularly, we would like to encourage everyone involved to identify, in a sense, a degree of educational role in their communication activities because there is no doubt that misrepresentation and misunderstanding clearly thrive in an atmosphere of ignorance, and it is important for Government and the NDA to recognise that it does have an educational role as well as, in a sense, a promotional role and not to forget that educational role. There are an awful lot of people who are unable to make decisions in local communities in relation to nuclear waste because they just lack a basic education in the terminology and, provided people make an effort, education is about making an effort, it is not about writing something and just distributing it as a leaflet, but it is about taking someone's hand, sitting down with them and interacting with them and leading them into the light and, unless Government and the NDA treat education seriously as a very professional and specialised activity, then it will not be enough to simply distribute information on a take-it-or-leave-it basis.

Chairman: Lady Perry, you have a question about this.

Q53 Baroness Perry of Southwark: I think really you have, in part, answered it. The statement that you are preparing on the new build waste, is that going through your normal process of stakeholder consultation and scrutiny of the evidence base?

Ms Hill: We are actually doing two things, one is preparing a statement about the position on nuclear waste, and that is a statement of the Committee's views, so no, it has not gone out to stakeholder

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consultation and neither does it have an evidence base in the same way that other things do, so it is very short, a couple-page statement, so no in that case. In our response to the nuclear consultation on new build, again, we see this as slightly different from the way we provide evidence in our major reports, so we have not gone through such a long-winded process. On the evidence base, we are largely scrutinising the Government's evidence base, and we have done that and we have gone out for ourselves and gathered evidence. We have asked people to send us information that they want to send us and NGOs, for example, have done so. We have gone to talk to the reactor vendors and prospective operators about what they are doing and we have talked to the regulators, so we gathered our own information in that sense and increased our evidence base on that. We are not sending that response to a consultation out to stakeholders to consult because in a government consultation we feel that everybody should express their own independent view, and it is for others to respond as they wish and we will respond from our point of view and not try in this instance to reflect the views of others, so it is a different process.

Professor Pickard: Should the matter move forward to a point where the Government welcomed advice from us in a formal manner on this subject, then clearly the position statement and our work to that point would effectively be the base upon which we would then build our normal rigorous process which iteratively consults with various stakeholders and the general public to devise and deliberate on the final advice to Government, so there are many different processes under way.

Q54 Baroness Perry of Southwark: Government will be able to use your position statement and quote it to us as the advice they have had from you, nevertheless, will they not?

Professor Pickard: They will, although we are making a very big effort to draw the distinction between what is formal advice to Government with maximum rigour being applied because it is incredibly resource-intensive to do this and it would not be cost-effective in terms of our functioning as a committee and our use of public money to apply that same level of rigour and time to everything that we do, so, in order, in a sense, to protect ourselves and not to mislead people, wherever we develop a draft document now, we have a leading paragraph which explains quite precisely that this is a document in process of development and it should not be taken to present either the views of the Committee or the views of the individual that actually wrote it because that can all change with subsequent deliberation in the light of new information. We also ask every member who gives a lecture in the course of their daily life on radioactive

waste-related material to put up a first slide which emphasises that what is said in the lecture is their own opinion and not the opinion of the Committee, unless specifically stated, so we are going to, in a sense, great lengths to draw a distinction between, on the one hand, the formal advice to Government, into which we put an enormous amount of resource and effort to ensure that everything is correctly cited and based, and there is an intermediate situation where we have deliberations in public that people can quote. There, we would have a rubric which I read now at the beginning of every public meeting which says, "Unless the Chairman actually identifies a statement in the minutes as a formal CoRWM position, then it cannot be quoted as such and misrepresented by individuals that have their own agenda", and then I make the special point about the drafting of documents and I make the point continuously, that it is a price that we have to pay for openness and transparency that occasionally we do have to show our preliminary workings, but, in the best standards of mathematics, it is helpful to all to know what the workings were and not just what the result was.

Baroness Perry of Southwark: I can hear you now on the *Today* programme saying all that while John Humphrys quotes at you!

Chairman: Well, we do not have the time of the *Today* programme even!

Q55 Lord Cunningham of Felling: I get the impression we have gone to great lengths and very successfully to get the social engineering of all of this well-established and in place, but I do not get the impression that we have gone to the same lengths with the actual civil engineering or the science or the geology or the other things that we need to know and understand equally thoroughly. Can you identify any gaps in our knowledge which could cause serious delay to actually designing and constructing a facility?

Professor Pickard: There are huge uncertainties. We have a mining engineer who is a member of the Committee and he is constantly pointing out the need initially to look at alternatives of an engineering and technical nature and not simply to put all the eggs in one basket and put all the effort into one particular engineering solution because it may turn out that that particular solution may be inappropriate when we actually get down to looking at the rock and the characteristics of the geology. He is constantly pointing out that, if you put too much money into a process of engineering development that turns out not to be successful, it is very, very difficult to work your way backwards to redesign a whole concept, so this particular member of our Committee is constantly raising that debate and issue with us of maintaining a degree of openness to other options. Now, we do find that implementers tend initially to be

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resistant to our encouragement to keep options open. They are not resistant because they just are recalcitrant, but they are resistant because they themselves only have a limited resource and they want to push ahead with their planning, so, in a sense, they pick one or two generic designs and they explore those, but they do not want to go too far in the commitment of resources because they do not want to waste resources. I can understand their dilemma, but the Committee is at pains constantly to encourage implementers not to burn alternative boats in terms of design and engineering solutions until they really have to. Before I hand over to Bill who knows a lot more about this in research and development specifically, as a biologist, I have to note that, when we excavate down to, let us say, a kilometre depth, we will introduce micro-organisms into that environment that were not there before and we know very little about what would be the consequences of that, which is why we have said that there will certainly be a need for investigations at that depth with that sort of introduced biological material to see what consequences it has, and implementers will be very concerned at finding out—

Q56 Lord Cunningham of Felling: Does the history of coal-mining over several hundred years tell us anything about that kind of effect?

Professor Pickard: It is interesting that of course with coal-mining we have accumulated a huge amount of experience and there are lessons that we can learn from that, but this is a very unique situation and I think there will be some very unique problems that we will have to tackle. The irony is that people often debate applied and pure research as if they were two ends of a totally different spectrum, but the reality is that, when you have a problem to solve, you nearly always need a quantity of pure research to set the boundaries of uncertainty and then you can bring in your application.

Q57 Chairman: I do not want to interrupt, but we are running out of time and we are a bit off the subject at this stage. Did you want to make a brief comment, Professor Lee?

Professor Lee: Yes, just on the technical side. This engineering project is on a scale of, if not bigger than, the Channel Tunnel, and I remember as a kid being really excited by that programme. This is a big opportunity for the scientific and engineering community in this country to really get involved and I think the steps that are being taken are pushing that forward. There are some difficulties, such as the issue of whether you can put all the waste in one single repository or you might need more than one, and there are technical issues associated with the sorts of rocks that we find and at this stage we are not sure of those, so there are difficulties, but that is what

engineers and scientists spend their lives doing, solving those sorts of problems, so I do not believe they are show-stoppers.

Q58 Lord Jenkin of Roding: I want to come back to the point that Marion Hill mentioned of the effective arrangements. Are you going to actually put in a recommendation to the Government that that paragraph of the National Policy Statement should be reviewed or amended?

Professor Pickard: We are deliberating that issue at the present time in public meetings, so we do not know the final conclusion, but we are debating it.

Q59 Lord Methuen: You are presenting it?

Professor Pickard: Yes.

Q60 Chairman: Let me go on now to a rather critical question, and we just have two remaining questions that we really want to address. Does CoRWM feel that the Government listens to, and acts on, its advice? Your evidence, Chairman, to us states that one criterion you use to judge your performance is whether CoRWM has a “demonstrable positive effect” on radioactive waste management programmes in the UK, yet your letter also says that thus far the Government does not appear to have taken any major action to meet your recommendations. What is the Committee’s assessment of your success in this field so far, when does it expect government movement on its recommendations, and what action might it take if the Government does not take forward its recommendations?

Professor Pickard: I feel that the Government is listening to CoRWM and I feel that the Government is genuinely interacting with us. When we ask for extra information, they do make every effort to give it to us and they do allow us active interaction at all levels from the Secretary of State through to the Minister of State through to the director of the appropriate department in DECC, right the way through to members of staff within that department, so I do think that they are engaged with us. I think also the Scottish Government and the Welsh Government are engaged with us, and we have had a lot of interaction and we have tried to help the Scottish Government, in particular, with the development of its new policy by explaining terminology and giving advice on expression and terminology, so I think we are being listened to. It is probably too early to tell whether or not we are having a significant effect on bringing about beneficial change in the way in which the Government is behaving, not least because we have not yet had the Government’s formal response to our last report on research and development and skills where we are quite, in a sense, critical of what has happened in the past, the way in which the United

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Kingdom has allowed its skills base in nuclear science to deteriorate and the way in which one research council in particular, in line with that national mood, funded less and less research which, we think, was really critically needed nationally. We are waiting with interest to see what the Government does say about our last report which was submitted in October 2009. The Government has undertaken in the past to try to give us a response within three months, so we are expecting their response to that report imminently. In answer to the second part of your question, if we felt that the Government was not responding to our advice, that does not in any sense change our advice, but we would repeat it as appropriate at all the opportunities that were presented in our discourse with the public and with the scientific community and with the stakeholders and, if we felt it was still maintained and the evidence was still there, then we would continue to deliver that advice. Clearly, we would not embark, and we are not, in a sense, tasked to embark, on a policy of trying to badger government officials in any way whatsoever. Our remit is to deliver advice that is sound, honest, well-consulted, well-considered and evidence-based and in a timely manner to Government and, as long as we can do that, we will feel that we are doing our job adequately.

Q61 Lord O'Neill of Clackmannan: The glacial speed at which this seems to move suggests, and Greenpeace have made this point, that there does seem to be a lack of liaison between government departments, agencies and yourselves. Do you think that is a valid criticism? I should say, they do not seem to put the blame on you, that is Greenpeace, on this occasion, so do you think there is a need for improvement in liaison and, if there is such a need, how were you hoping to carry out the necessary improvement?

Professor Pickard: I think we have good interaction with Government. Politics is defined as the art of government and not the science of government.

Q62 Lord O'Neill of Clackmannan: It is actually the art of the possible, which is more accurate.

Professor Pickard: That would certainly be a parallel definition, and I take that to mean that we cannot unreasonably expect scientific and technological considerations to be the only considerations of an active government, so there are many, many other aspects of the art of government that have to be factored in by politicians in the exercise of their democratic function. We will be content if we can say with our hands on our hearts, "This is the very best advice we can give you in this area. We have considered all the evidence that is available and this is the best advice. After that point, what you choose to do with it in political terms is effectively your job

to which you have been entrusted by the electorate". If we felt that we were not getting adequate liaison, then of course I would speak directly to the Secretary of State about it.

Q63 Lord O'Neill of Clackmannan: You said that 2040 would be the year that you would hope that things would start to happen in terms of the deposit of waste materials. Do you think that is a wee bit optimistic, given what you have been telling us and the speed with which things seem to be moving?

Professor Pickard: There is no doubt that, if we could start to place some high-level waste into a disposal facility in 2040, that would fit into all sorts of other things, such as development programmes for the production of new build waste which will not come on stream immediately because high-level waste will have to be cooled at the surface for a considerable length of time before it can be actually placed in a disposal facility. In terms of dealing with legacy waste, we have got the waste and, if we could start disposing of it safely and effectively in 2040, then we would be in a position to deal with new build waste when it became available for disposal in perhaps 100 years' time after that.

Q64 Lord Jenkin of Roding: Companies are talking about 140 years.

Professor Pickard: Yes, it could be 140/150 years for high-level waste to cool down at the surface before it would be available for disposal. It is extremely important that we do not let the process slip because of all the waste of money that would be involved in the packaging and repackaging of the existing material, which would be ridiculous, and of course with climate change there are, in a sense, threats to surface facilities, so we need to be mindful of unexpected climatic events occurring, we have to be mindful of flooding and things like that, so we need to really move forward in ensuring that our legacy waste, as soon as possible, is very, very safely stored for the interim period and safely and securely disposed of underground. I think the Government's policy is a sound policy and it is based on an awful lot of evidence, and it is interesting to see what is happening in other countries where every effort has been made in other countries to look at different types of solutions and the same sorts of solutions that CoRWM originally put forward are being employed and enacted in other countries around the world.

Chairman: I think I have to cut this off now because we are well out of time. Thank you very much indeed for coming. You have given us very thorough evidence. I might say, observing as Chairman of this Committee, I understand all you are trying to do to keep this moving, but Lord O'Neill referred to glaciers and I sometimes get the feeling that this

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whole project is behaving like a glacier in the northern hemisphere at the moment and it may be gradually retreating up the hill rather than moving down the hill to a solution, but we appreciate your efforts to keep it moving, and thank you very much

for coming and giving evidence to us; it is very valuable. If you think of things we need to know which have not come up in this discussion, please write to us and we will include them in our deliberations.

Supplementary memorandum by the Committee on Radioactive Waste Management (CoRWM)

INTRODUCTION

1. This addendum to the written evidence from the Chair of the Committee on Radioactive Waste Management (CoRWM) is to clarify and amplify a number of matters that arose during the oral evidence session on 9 February 2010.

RETRIEVABILITY

2. CoRWM's view on whether a geological disposal facility (GDF) should be designed so that waste is retrievable is given in its 2009 report to Government on geological disposal (CoRWM, 2009a). It is unchanged from the view expressed in CoRWM's 2006 Recommendations to Government (CoRWM, 2006).

3. CoRWM is of the view that early closure of a GDF is the best course of action. It considers that there are no scientific or technical advantages in providing for extended reversibility or retrievability⁴ and that there could be significant disadvantages in such provision.

4. However, CoRWM recognises the Government position that the option of retrievability be left open for the time being and a decision made when a GDF is being designed for a specific site, in discussion with the local community and regulators (Defra *et al*, 2008). It notes that the Nuclear Decommissioning Authority (NDA) has provided information about retrievability to the West Cumbria MRWS Partnership and will engage further if the area decides to participate in the siting process.

UNDERGROUND INVESTIGATIONS AT THE SITE OF A GDF

5. During the Government's oral evidence it was stated that the estimated date of 2040 for the start of waste emplacement was based on allowing about five years for desk-based studies of prospective sites, about 10 years for surface-based investigations (boreholes, etc) at a smaller number of sites and about 15 years for construction and underground investigations at one chosen site. It was further stated (Q114) that there might be an opportunity to shorten this last time period, allowing waste emplacement to begin before 2040.

6. While CoRWM would not rule out this possibility, it considers that it is important to recognise that the underground investigations must include research and development (R&D), as well as gathering further data about the site (CoRWM, 2009b; NDA, 2009a). It is difficult to estimate how long it will take to carry out this underground R&D and to disseminate and assimilate the results. It may be of the order of 10–15 years but it could be decades (CoRWM, 2009c).

7. In CoRWM's view, it is also essential to bear in mind that underground investigations may show that a site is not suitable, in the sense that it is not possible to make a sufficiently robust site-specific safety case for a GDF to hold a large fraction of the UK's higher activity waste. There is general agreement amongst geologists that, despite developments in surface-based investigation techniques in recent years, it will only be after considerable underground investigation that enough will be known about a site to take a decision to construct a GDF (CoRWM, 2009c). Thus, while it is hoped that underground investigations will confirm the suitability of a site (Defra *et al*, 2008), they could conceivably cause a site to be rejected.

KEEPING GEOLOGICAL DISPOSAL OPTIONS OPEN

8. In its oral evidence CoRWM referred to the need to keep options open and to avoid rejecting alternative designs and engineering solutions at too early a stage (Q55). CoRWM wishes to clarify that its advice on this issue is about options within geological disposal, not alternatives to geological disposal. In its 2009 report on

⁴ CoRWM defines "reversibility" as the ability to remove waste by merely reversing the procedures used to emplace it. It defines "retrievability" as the ability to remove waste before a whole GDF is backfilled and closed. Providing reversibility implies that there is no backfilling of vaults, tunnels or other excavations. In providing for retrievability there may be local backfilling and if so retrieval would entail removing the local backfill before removing the waste.

geological disposal, CoRWM recommended that a wide range of geological disposal concepts be considered, including facilities constructed using various techniques, at depths ranging from about 200m to more than 1km (CoRWM, 2009a).

PROGRESS IN CONDITIONING AND PACKAGING EXISTING WASTES

9. In the oral evidence session questioning about timing, the focus was on how long it might take to establish a GDF. CoRWM is also monitoring progress in conditioning and packaging waste for interim storage and then geological disposal (CoRWM, 2009d).

10. The latest figures from the NDA for the volumes of intermediate level waste (ILW) and high level waste (HLW) expected to arise from the current nuclear power programme, the volumes in stock and the volumes conditioned and packaged are shown in the following table (NDA, 2009b).

	<i>Total volume expected (cubic metres)</i>	<i>Volume now in stock (cubic metres)</i>	<i>Volume conditioned and packaged (cubic metres)</i>	<i>Percentage of total conditioned and packaged</i>
ILW	275,000	79,000	23,500	9%
HLW	1,360	650	650	48%

11. There is thus considerable work to be done to prepare existing and committed wastes for disposal, as well as to develop a GDF (or GDFs if more than one is needed).

WASTES FROM NEW NUCLEAR POWER STATIONS

12. CoRWM's response to the Government consultation on the draft nuclear National Policy Statement has now been submitted to the Department of Energy and Climate Change and published on the CoRWM website (CoRWM, 2010a). At the same time CoRWM has published a statement of its position on new build wastes (CoRWM, 2010b). For ease of reference, CoRWM's answer to the consultation question about whether there will be effective arrangements for the management and disposal of new build wastes is reproduced in Annex A to this addendum.

MONITORING ACTIONS TAKEN IN RESPONSE TO CoRWM'S RECOMMENDATIONS

13. In oral evidence CoRWM indicated that it would continue to repeat its advice in various fora if it felt that Government had not taken adequate action (Q60). There may also be occasions when CoRWM would do more than this.

14. A recent example concerns CoRWM's recommendation that more information be made available to the public about how the security of storage of radioactive wastes, spent fuels and nuclear materials is assured (CoRWM, 2009d). The issue arose again in the autumn of 2009 in connection with the British Energy plan to build a dry store for spent fuel at Sizewell B and with the possibility that spent fuel from new nuclear power stations may have to be stored at the stations for about 160 years before it can be placed in a geological disposal facility. A particular concern for stakeholders is whether new spent fuel stores will be designed to withstand the impact of a large commercial aircraft that has been hijacked by terrorists.

15. CoRWM asked questions of the regulators (the Office for Civil Nuclear Security and the Nuclear Installations Inspectorate) about their requirements for the assessment and mitigation of the risks of aircraft impact on spent fuel stores, including terrorist attacks. The regulators' responses were included in a note of CoRWM's understanding of the subject, which was published on the CoRWM website (CoRWM, 2010c).

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2 March 2010

Annex A

CoRWM RESPONSE TO QUESTION 19 IN THE GOVERNMENT CONSULTATION ON THE DRAFT NATIONAL POLICY STATEMENTS FOR ENERGY INFRASTRUCTURE

QUESTION 19

THE QUESTION

Do you agree with the Government's preliminary conclusion that effective arrangements exist or will exist to manage and dispose of waste that will be produced by new nuclear power stations in the UK?

CoRWM's RESPONSE

1. CoRWM agrees that some arrangements exist that would be effective for the management of higher activity waste (HAW) from new nuclear power stations. For example, the policy and regulatory frameworks for the management of all HAW largely exist and there is technology available for the conditioning, packaging and storage of intermediate level waste (ILW).
2. Whether there will be effective arrangements for all the steps in the management, including the disposal, of new build HAW is a matter of judgement. It is for the Government to make this judgement, based on the information available to it.
3. CoRWM considers that the Government should take into account when making this judgement that, while the current UK process for siting a geological disposal facility (GDF) for HAW is sound, it is at an early stage. Its success depends on finding a combination (or combinations if more than one GDF is needed) of a willing host community and a site that is technically suitable to hold enough HAW. At present, it is uncertain whether the appropriate combination (or combinations) of community and site can be found in this country. This uncertainty applies to existing and committed HAW, as well as to new build HAW, and is likely to persist for many years.
4. In addition, CoRWM considers that the Government should recognise the need for optimisation of the management, including the disposal, of new build HAW. To meet legal and regulatory requirements, it is necessary for prospective operators of new nuclear power stations, with the assistance of the Nuclear Decommissioning Authority (NDA), to identify, assess and compare options for the management of new build spent fuel, including the design and location of stores, the storage period and a range of possible geological disposal concepts.
5. CoRWM also considers that it is essential for the public to have confidence in the management of new build HAW. The need for public confidence is being taken into account in the implementation of geological disposal. To date, insufficient attention has been paid to it in planning for storage of new build spent fuel. This needs to be rectified in future, particularly by prospective operators of new nuclear power stations.
6. CoRWM notes the Government commitment to keep arrangements for managing and disposing of new build HAW under review and to revisit its conclusion about the effectiveness of these arrangements if there is new evidence that provides grounds for doing so.

CoRWM's REASONING

7. The response (CoRWM, 2010a) goes on to give reasons separately for the various stages in the management of spent fuel and ILW.

Memorandum by the Department of Energy and Climate Change

INTRODUCTION

1. The UK Government and the devolved administrations (for Scotland, Wales and Northern Ireland) October 2006 statement in response to the recommendations of the Committee on Radioactive Waste Management (CoRWM) made clear there will be strong independent scrutiny of the proposals, plans and programmes to deliver geological disposal of higher activity radioactive waste. In June 2007 Scottish Ministers announced a policy of near-surface, near-site long-term storage rather than geological disposal although they continue to sponsor CoRWM on storage and related research and development matters.
2. CoRWM was reconstituted with modified terms of reference and expertise to provide independent scrutiny and advice to the UK Government and devolved administration Ministers on long-term radioactive waste management, including storage and disposal. CoRWM's primary task is to provide independent scrutiny of the Government's and the Nuclear Decommissioning Authority's (NDA's) proposals, plans and programmes to deliver geological disposal, together with robust interim storage, as the long-term management option for the UK's higher activity wastes.
3. The response below sets out the position of the UK Government.

CoRWM'S PERFORMANCE

Has CoRWM effectively scrutinised the implementation of the Government's MRWS programme?

4. The Government believes that the reconstituted CoRWM's reports and recommendations have provided a useful opportunity to consider such issues as the strategic co-ordination of aspects of waste management as well as the co-ordination of public and stakeholder engagement and the amount and quality of publicly available information. The reports have also provided Government an opportunity to clarify some of the co-ordination structures already in place and to highlight some of the ongoing and more recent work.
5. The Government supports the consultative manner in which the committee has drafted its reports and its engagement of key organisations, stakeholders and the public. There is a need for the Committee to analyse and assess views and bring forward advice that is clearly evidence-based if its words are to carry weight.

Are Government decisions on its MRWS programme evidence-based? What mechanisms are in place to ensure this is the case? How does CoRWM scrutinise this?

6. Government decisions on Managing Radioactive Waste Safely (MRWS) policy were taken in light of the evidence and recommendations from CoRWM in 2006. This followed from extensive consultation with experts, stakeholders and the public.
7. Following further consultation on how to implement MRWS policy, and publication of the "MRWS White Paper: a Framework for Implementing Geological Disposal" in 2008, Government has set in place clear mechanisms to manage and make decisions on the programme as it moves forward. These mechanisms enable the consideration and discussion of evidence by Government and NDA officials as well as being open to CoRWM observation. The mechanisms are:

Geological Disposal Implementation Board (GDIB)

GDIB is a coordinating group which was set up to manage the Government and NDA arrangements for planning and staged delivery of a geological disposal facility. The Board is a means by which officials from the relevant Government bodies can discuss the programme and prepare and present advice to Ministers.

Those represented on GDIB are the Department of Energy and Climate Change (as Chair), HM Treasury, the Welsh Assembly Government (also representing the Department of Environment Northern Ireland) and the NDA as the Government's delivery body. Other Government Departments, regulatory bodies and other organisations can be invited to contribute to supporting work. The Board is intended to co-ordinate the work of Government and NDA.

Waste Management Steering Group (WMSG)

WMSG is a more wide-ranging group considering the NDA's wider waste management planning and development programmes, taking a joined up approach to radioactive waste management. As appropriate, it also considers issues relating to spent fuel and other nuclear materials. It is involved in the arrangements for oversight of NDA Strategy development and provides assurance to UK, Scottish, Welsh and Northern Ireland Ministers that Government policies on radioactive waste management are being implemented efficiently and effectively.

WMSG also considers any substantive advice from the CoRWM on the delivery of the NDA's long term waste management planning and delivery programmes and may make proposals to Ministers on how the Government should respond to such advice

Those represented at WMSG are DECC (as Chair), the Shareholder Executive at BIS, HM Treasury, the Scottish Executive, the Welsh Assembly Government, the Department of Environment Northern Ireland and the NDA.

8. Reconstituted CoRWM's primary role is to scrutinise the proposals, plans and programmes to deliver geological disposal of higher activity radioactive waste and CoRWM members are invited to observe both GDIB and WMSG meetings for relevant agenda items. In practice, a CoRWM member regularly observes the meetings and receives the agendas, minutes and papers.

9. GDIB and WMSG have different primary roles but also advise and interact with each other. GDIB provides co-ordination of effort to ensure geological disposal becomes a reality whilst WMSG is part of the broader hierarchy of groups to oversee NDA strategy development and delivery of wider Government policy commitments. The role of both groups is kept under review to ensure they remain the most effective means of providing the required oversight.

Does CoRWM have sufficient scientific and technical expertise to meet its remit?

10. The Chair and Members of the Committee are not mandated representatives of organisations or sectoral interests. In developing the new Committee, departmental Chief Scientific Advisors were consulted to ensure CoRWM had the appropriate make up of skills and experience for this stage of the process. The relevant skills identified at the time the Committee was reconstituted are set out in the table below, but it is acknowledged that over time the precise skillset required may vary as the staged implementation process advances, so this list will not be exhaustive:

— nuclear science	— environmental impact assessment
— radioactive waste management	— local government, planning
— radiation protection	— regulatory processes and ethics.
— environmental law	— Geology/geochemistry/hydrogeology
— environment issues	— finance/economics
— social science (including public and stakeholder engagement)	— civil engineering/underground construction technology
— repository performance/safety issues	
— materials science	

11. To be appointed, members had to demonstrate evidence of having sound skills and experience in one or more, or similar, of the relevant skills identified above. The Committee may also co-opt additional expertise to form or support temporary sub-groups to examine specific and defined problems and may also utilise other appropriate means of securing expert input, such as sponsored meetings or seminars. Given this we believe that there is the right mix of expertise available to the Committee at the moment. This will be kept under review and can be revisited in future under the normal public appointments process, scrutinised by the Office of the Commissioner for Public Appointments.

CoRWM'S REMIT

Is CoRWM's remit appropriate? If not, why not? To what extent should CoRWM be responsible for engaging with the public and representing their views within Government?

Does CoRWM's remit cover emerging areas of activity, such as new build waste and the UK's plutonium stock pile, or longer term issues and horizon scanning? If not, should it?

Are there any plans to change the composition or role of CoRWM as the Government's MRWS programme continues? Should there be?

12. Strong independent scrutiny strengthens the programme to deliver geological disposal. We believe CoRWM's remit, set out in its terms of reference, is appropriate. CoRWM's primary role is to be focussed on the long-term management of radioactive waste although sponsoring Ministers may also ask the Committee to provide advice on other radioactive waste management issues as necessary.
13. CoRWM agrees a three year rolling work programme with all sponsor ministers annually. In so far as there could be long-term higher activity waste management implications, the work programme can cover areas of work such as radioactive materials or new nuclear power. For example, their work programme for 2009–10 includes tasks on scrutinising NDA development of strategies for management of spent fuels, plutonium and uranium. Whilst it is not CoRWM's role to scrutinise Government's policy development processes on all nuclear issues they do have an interest in issues with direct impact on waste management.
14. Other bodies, such as government departments and the regulators, may also propose work to sponsoring Ministers for consideration in the Committee's work programme.
15. Lead responsibility for engaging the public and stakeholders at this stage in the MRWS process lies with those bodies directly involved in the volunteer site selection process—local community representatives, Government and the NDA as implementing organisation. Other bodies with distinct roles to play in the process, such as the regulators, also have their own public and stakeholder arrangements.
16. It is important that there is as much opportunity as possible for stakeholders and the public to comment and feed into the process. CoRWM's terms of reference set out that they must continue to inspire public confidence in their work and they already operate in an open and transparent manner, carrying out public and stakeholder engagement relevant to their reports and recommendations. In doing so it is important that the Committee analyse and assess such views in producing clear, evidence-based recommendations to Government.
17. The composition of the Committee is kept under review. MRWS is a long-term programme and it is acknowledged that over time the precise skillset required may need to vary as staged implementation proceeds. If potential changes are identified in the future these will need to be agreed by sponsor Ministers and will be discussed with the Chair.

CoRWM AND GOVERNMENT

How effective is CoRWM's interaction with different Government departments and agencies? Are lines of responsibility and accountability within Government, and between CoRWM and Government, clear?

18. As set out in the MRWS White Paper, Government is responsible for setting policy and is the ultimate decision maker on issues such as site selection. The NDA is responsible for implementing this policy, alongside Government, and in doing so it will develop strategy, plans and programmes to deliver its objectives. CoRWM's primary role is to provide independent scrutiny and advice to Ministers on the implementation of higher activity radioactive waste policy. It is for Government to then decide how to apply CoRWM's advice in further developing the policy implementation process.
19. As well as UK Ministers meeting the Chair at least annually, sponsor officials formally meet the Chair and other appropriate members approximately every two months. As set out in paragraph 8 of this response, CoRWM members regularly attend and observe meetings of the MRWS programme board (GDIB) and the wider Waste Management Steering Group.
20. Furthermore, as and when required by either the Committee or sponsor governments, there are frequent meetings between officials and specific working groups of the Committee to discuss current issues. This includes interaction with other sponsor administrations in respect of areas on which policies differ. In particular, the Committee are currently scrutinising the development of Scottish policy for the management of higher activity waste, which diverges from the MRWS process for implementing geological disposal.
- Does the Government respond to and use CoRWM's advice effectively? Has the Government taken on board CoRWM's recommendations in its recent reports on geological disposal and interim storage?*
21. Government is committed to responding to all CoRWM's substantive advice and has so far responded to their reports on "*Interim Storage of Higher Activity Wastes and Management of Spent Nuclear Fuels, Plutonium and Uranium*" and the "*Geological Disposal of Higher Activity Radioactive Wastes*". Both the reports, and Government's responses have been placed in the libraries of the House. Government is currently considering its response to the Committee's latest report into research and development.
22. Government has received three detailed reports in the last year. In general, Government has accepted many of CoRWM's recommendations. The reports have provided a valuable opportunity, highlighting key issues and providing Government an opportunity to clarify some of the ongoing or proposed work as well as

making clear where further thought and discussion might be needed to address recommendations. In taking forward work directly flowing from CoRWM's recommendations, Government will look to consider any common themes that emerge and CoRWM will be invited to input to and scrutinise key proposals as they develop.

29 January 2010

Memorandum by the Nuclear Decommissioning Authority (NDA)

INTRODUCTION

1. The House of Lords Science and Technology Select Committee has appointed a sub-committee to follow up on its previous enquiries into the Government's management of radioactive waste. The Committee is focusing on the role and performance of the Committee on Radioactive Waste Management (CoRWM), and on whether Government is using its advice effectively. This submission is from the Nuclear Decommissioning Authority (NDA), a non-departmental public body established in 2005 by the Energy Act 2004, in response to a call for evidence.

2. We were established in order to deliver the Government's commitment to deal effectively with the nuclear legacy and are responsible for driving substantial change to improve delivery and cost efficiency in a large and complex industry. Our mission is to:

Deliver safe, sustainable and publicly acceptable solutions to the challenge of nuclear clean up and waste management. This means never compromising on safety or security, taking full account of our social and environmental responsibilities, always seeking value for money with the taxpayer and actively engaging with stakeholders.

3. In June 2008 the UK Government and the devolved administrations for Wales and Northern Ireland (Government) set out a framework to implement the geological disposal policy in the Managing Radioactive Waste Safely (MRWS) White Paper.ⁱ This sets out the framework for the implementation of geological disposal coupled with safe and secure interim storage and ongoing research and development, including a flexible site selection process based on voluntarism and partnership.

4. We are responsible for the storage of wastes on our own sites and in support of the MRWS framework and in response to recommendations of the original CoRWM, we have published a UK wide review of waste storage arrangements for legacy wastes.ⁱⁱ We have interim storage facilities that are and will be safe and effective, and will remain so for as long as is necessary, until a Geological Disposal Facility is available for use.

5. The MRWS White Paper confirmed NDA as responsible for planning and implementing geological disposal in the United Kingdom. Accordingly, we have established a new directorate called the Radioactive Waste Management Directorate to develop into an effective delivery organisation to implement a safe, sustainable and publicly acceptable geological disposal programme. We are successfully transforming this Directorate to become an organisation that will ultimately be able to hold a nuclear site licence and disposal authorisation for a geological disposal facility. Following a detailed review by regulators this Directorate has commenced operation as a prospective site licence company under voluntary regulatory scrutiny.

6. As set out in the terms of reference,ⁱⁱⁱ CoRWM's primary task is to provide independent scrutiny of the Government's and NDA's proposals, plans and programmes to deliver geological disposal, together with robust interim storage of higher activity wastes. Our work is therefore subject to scrutiny by CoRWM. We are also subject to scrutiny by the independent regulators, including the Health and Safety Executive, Environment Agencies and Department for Transport.

CoRWM's PERFORMANCE

Has CoRWM effectively scrutinised the implementation of the Governments MRWS programme?

7. We have engaged with the reconstituted CoRWM since its inception. We believe this engagement has facilitated both the development and fulfilment of CoRWM's work programme. Interactions supporting scrutiny of our activities have ranged from us providing available information, commissioning and providing new reports, holding meetings with Committee members, inviting Committee members to NDA workshops, and commenting on draft material prepared by CoRWM. CoRWM has provided a valuable role through commenting on draft material prepared by us and by responding to our consultations. These interactions have involved a large number of NDA staff, including the Chairman and Chief Executive, and have required significant resource. However, such a commitment of resource is considered necessary to ensure appropriate communication of information.

8. CoRWM has prepared three substantive reports to Government to-date, covering:
- Interim storage of higher activity wastes and the management of spent fuels, plutonium and uranium (March 2009);
 - Geological disposal of higher activity radioactive wastes (July 2009); and
 - National research and development for interim storage and geological disposal of higher activity radioactive wastes, and management of nuclear materials (October 2009).
9. We believe through these main reports and the other activities undertaken to date, CoRWM has effectively scrutinised the key aspects relating to the implementation of the MRWS programme. The main recommendations to Government in these reports are generally made at the appropriate, proposal, plan and programme level, and are valuable contributions to aid the effectiveness of the MRWS programme. For example, a number of recommendations identify opportunities for better coordination of waste management-related activities within the UK and where additional communication material would be of benefit.
10. These reports were produced following extensive evidence gathering and engagement by CoRWM members. The process involved: evidence gathering; testing that evidence base with stakeholders; full Committee discussion and formulation of views and recommendations; consultation on the draft full reports and consideration of responses; and publication of reports representing full Committee views. The value of the Committee comes from it functioning in such a methodical and collegiate manner, allowing the full range of skills and experience to be applied to an issue. In some instances, this meant delays to the intended original publication timetable, but this was essential to ensure the quality of the final output.
11. One example of where interaction with the Committee has been of particular value to us has been on the research and development needs for implementation of geological disposal. CoRWM advice has assisted us in the development of our research and development strategy and we are now engaging with them on the associated research and development programme.
12. Such collegiate working is crucial for there to be confidence in the output of the Committee. It is important that recommendations are seen to be impartial, rather than reflecting members particular interests. The Committee has recognised the possibility of there being disagreements within its membership on particular aspects, and has usefully set out how these will be treated.
13. In producing these main reports, and as part of the wider programme, CoRWM produces and publishes on its website a significant number of documents of differing status. These tend to be produced by subsets of the Committee for plenary discussion. Production of such material is necessary for the working of the Committee, but there have been instances where its evidence base does not seem to have been tested with relevant stakeholders prior to publication. On occasions, unsupported assertions and a few factual errors have been presented. As well as impacting on the quality of CoRWM's deliberations this can also misinform stakeholders.

Are Government decisions on its MRWS programme evidence-based? What mechanisms are in place to ensure this is the case? How does CoRWM scrutinise this?

14. We believe Government decisions on its MRWS programme are evidence-based. Government has put in place a number of mechanisms and forums to support ongoing decision making by enabling evidence to be provided by relevant parties, including recommendations and advice from CoRWM. Such forums include the Geological Disposal Implementation Board and the Waste Management Steering Group.

Does CoRWM have sufficient scientific and technical expertise to meet its remit?

15. CoRWM needs sufficient scientific and technical expertise to understand the information it gathers, recognise the key issues and "ask the right questions". The current membership provides for a wide range of scientific and technical expertise. In some areas that expertise is drawn heavily from members with an academic or research background. We feel that on occasions this has led to an emphasis on acquisition of knowledge driven by curiosity. At times this has been at odds with our position that our research should be driven by the needs of the programme.

CoRWM's REMIT

Is CoRWM's remit appropriate? If not, why not? To what extent should CoRWM be responsible for engaging with the public and representing their views within Government?

16. As recognised by Government, visible independent scrutiny and advice can provide reassurance to the public and stakeholders. Thus, putting in place a suitable committee to provide such independent scrutiny and advice in relation to the implementation of the MRWS programme has a valuable role to play.

17. CoRWM has been set up to meet the needs of the MRWS programme. We take this to focus CoRWM's remit on the scrutiny of, and provision of advice on, the long-term management of higher activity wastes through geological disposal, coupled with safe and secure interim storage. Within its remit, CoRWM's primary task is to provide independent scrutiny on the Government's and NDA's proposals, plans and programmes to deliver geological disposal, together with robust interim storage, as the long-term management option for the UK's higher activity waste. The terms of reference do provide flexibility for sponsoring Ministers to ask CoRWM for advice on other radioactive waste management issues as necessary.

18. With such a wide remit there is potential for overlap with the roles of other organisations, particularly the regulators. For this reason, we believe CoRWM needs to ensure it focuses its efforts at the proposal, plan and programme level. Taking an overview of how all the necessary organisations and components are working together, and whether there are suitable plans and processes to address the relevant issues. Particular care is needed to avoid conflict with the role of the regulatory organisations in making judgements on the adequacy of safety and environmental protection measures. CoRWM should be clear that its starting point is established Government policy, with its role being scrutiny of the implementation of that policy. It should not, we believe, be scrutinising the historical basis for that policy.

19. CoRWM should engage with stakeholders and the public as required to fulfil its function of scrutiny and advice.

Does CoRWM's remit cover emerging areas of activity, such as new build waste and the UK's plutonium stock pile, or longer term issues and horizon scanning? If not, should it?

20. CoRWM's remit is sufficient for it to consider "emerging areas" such as new nuclear build and strategies for the management of nuclear materials. However, any scrutiny and advice should be concerned with how those emerging areas might affect the MRWS programme. This is unless specifically requested by Ministers to consider wider aspects.

Are there any plans to change the composition or role of CoRWM as the Government's MRWS programme continues? Should there be?

21. We are not aware of any plans to change the composition or role of CoRWM.

CoRWM AND GOVERNMENT

How effective is CoRWM's interaction with different Government departments and agencies? Are lines of responsibility and accountability within Government, and between CoRWM and Government, clear?

22. We believe we have effective arrangements for interacting with CoRWM. Opportunities could be taken for more engagement between the whole of the Committee and the NDA to discuss the ongoing scrutiny and advice programme in the round.

23. We believe lines of responsibility and accountability within Government, and between CoRWM and Government are clear. Government sets policy and makes the ultimate decision in the various site selection stages for a geological disposal facility. CoRWM provides advice on, and scrutiny of, implementation of that policy.

Does the Government respond to and use CoRWM's advice effectively? Has the Government taken on board CoRWM's recommendations in its recent reports on geological disposal and interim storage?

24. Government has provided written responses to CoRWM's recommendations on geological disposal and interim storage, and is preparing a response to the recommendations on research and development. Government engages with the NDA regarding CoRWM's advice, including Government's response to it and any actions that are necessary.

REFERENCES

ⁱ Defra, BERR, Welsh Assembly Government, Department of the Environment Northern Ireland, *Managing Radioactive Waste Safely: A Framework for Implementing Geological Disposal*, 2008.

ⁱⁱ NDA, *UK Radioactive Higher Activity Waste Storage Review*, 2009.

ⁱⁱⁱ *Terms of reference for the Committee on Radioactive Waste Management*, CoRWM Document no 2235. 29 January 2010

Examination of Witnesses

Witnesses: RT HON LORD HUNT OF KINGS HEATH, a Member of the House, Minister of State, MR MARK HIGSON, Chief Executive, Office for Nuclear Development, and MR BRUCE CAIRNS, Head, Nuclear Materials and Waste Strategy, Department of Energy and Climate Change; and MR BRUCE MCKIRDY, Repository Technical Director, Nuclear Decommissioning Authority, examined.

Q65 Chairman: Minister, thank you very much for coming to give evidence to us this morning with your colleagues. Perhaps we could start by having you introduce yourselves for the record.

Lord Hunt of Kings Heath: Thank you, my Lord Chairman, and thank you very much for the opportunity of giving evidence this morning. I am Philip Hunt and I am the Minister for Energy and Climate Change in the Department of Energy and Climate Change. On my right is Mr Bruce Cairns, who is an Assistant Director for the Office of Nuclear Development, on my immediate left is Mr Mark Higson, who is the Chief Executive of the Office for Nuclear Development, and on my second left is Mr Bruce McKirdy, who is from the Nuclear Decommissioning Authority.

Q66 Chairman: Would you like to make an opening statement or can we go straight into questions?

Lord Hunt of Kings Heath: I am very happy to go straight into the questions.

Q67 Chairman: Well, let me ask the first question: does the Government feel that CoRWM has carried out its scrutiny role effectively? DECC told us that CoRWM needs to “analyse and assess views and bring forward advice that is clearly evidence-based if its words are to carry weight”. Does the Government feel that this is not the case at present? CoRWM set out three criteria by which it judges its success: how does the Government feel they have performed against these criteria to date?

Lord Hunt of Kings Heath: My Lord Chairman, the Committee undertakes important functions and I would like to state on the record that we value the work of the Committee and of its members. We have welcomed very recently three substantive reports from the Committee. We have responded to the interim storage report and the geological disposal report, and we are considering the recommendations of the R&D report published on 30 October. My Lords, as I have said, I believe that the Committee does carry out valuable work. I think it is important the Committee is clear about its primary remit, which is scrutiny advice to Government on the delivery of stated radioactive waste management policy. I do think the Committee should be careful not to be drawn into wider issues of policy development, unless they are comments on specific radioactive waste management aspects of the topics covered. In response to your direct question, the reference to

CoRWM needing to “analyse and assess views and bring forward advice that is clearly evidence-based if its words are to carry weight” in our written evidence is very much intended to point out a key requirement of the Committee’s work if it is to retain the respect that it has built up over the past few years. My Lords, that is not to say it is not doing that now, merely pointing out the dangers if things were to slip. The Government has a requirement for constructive, evidence-based advice that assists in developing radioactive waste management programmes over the long term and it is important that that advice is in a form that is well-considered and helpful in identifying practical improvements with clear benefits. Can I also say that overall the Committee has performed satisfactorily against its own performance criteria, and I would also say, my Lord Chairman, that I do welcome its commitment to review its performance on a regular basis and I am sure that the Sub-Committee’s inquiry will be very helpful in that regard.

Q68 Chairman: Are you content at the pace at which it is pursuing its activities?

Lord Hunt of Kings Heath: Yes, I think so. Certainly, the Committee, as I have said, has produced three important reports in 2009, the work programme is agreed with sponsoring government ministers and I think we have a very good process of engagement to agree the programmes that will be taken forward, so I do not have a problem in terms of the progress and the speed of the Committee’s own work.

Q69 Lord Cunningham of Felling: Minister, can you give us your overall assessment of the implementation of the Radioactive Waste Management Strategy?

Lord Hunt of Kings Heath: Yes, I believe that we are making good progress. I think one has to recognise, going back to 2001, that there was no firm policy at all for disposing of high-activity radioactive waste. We have had extensive consultation with experts, stakeholders and the public, we had the formal consultation in 2007 and we produced the White Paper in 2008, and that set out the steps that needed to be taken to ensure that our preferred option of a geological disposal facility was in place, and you already heard this morning that the kind of date we have in mind is around 2040, so we have a very clear process that is set out, a very careful, staged process which has at its heart taking local communities with

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us. Since the publication of the White Paper, we have had expressions of interest from three local communities in Cumbria. It is very important that we continue to take communities with us because of the importance of the voluntarism approach, but I do think that we are making progress and that there is no reason to suppose we will not ensure that there is a facility available when we want it to be available.

Q70 Lord Cunningham of Felling: Does the Department have sufficient financial resources to develop the programme?

Lord Hunt of Kings Heath: I do not think it is a question of resources, and I am aware clearly of the discussion that you had earlier this morning about the progress in terms of timetable, but this is not an issue of resources, this is an issue of getting the balance right. Of course we want to make progress as quickly as possible, but it is vital that we take local communities with us, and that is why we are taking this very, very careful approach; it is not an issue of resources.

Q71 Lord Cunningham of Felling: Does the Government think that the people of those communities in west Cumbria who are actually doing a national service to the nation as a whole by accepting, working with and supervising all of this radioactive waste, which is the nation's legacy, not their legacy, the nation's legacy, does the Government recognise that there is a price to pay for that?

Lord Hunt of Kings Heath: Well, if Lord Cunningham is asking me to use this as an opportunity to pay tribute to the people of Cumbria, I am very happy to accept that opportunity.

Q72 Lord Cunningham of Felling: I was thinking in more material terms!

Lord Hunt of Kings Heath: Well, I rather understand that point and of course he will know that, since I got this—

Q73 Lord Cunningham of Felling: I am sure your good wishes are very welcome to my former constituents!

Lord Hunt of Kings Heath: He will know I have made a number of visits to Cumbria in the last few months and I think I am very much aware of the thinking there, and of course he will know that in the White Paper, and indeed in the recent submission we have received from the Committee, the whole issue of community benefits is discussed, and I understand that. I do, however, think that it is probably a little premature to get down to the nitty-gritty of that—

Q74 Lord Cunningham of Felling: Go on!

Lord Hunt of Kings Heath: I must say, whilst I am absolutely delighted that we have had these three expressions of interest, of course I would also be keen to see other expressions of interest as well. I wrote a few months ago to all local authorities in England to just remind them that we do have this process that is going on at the moment and encouraging other expressions of interest too, but I do very much take the point that there are significant issues around community value which we will, I can assure you, be taking forward, and the Committee has of course commented on that in its recent report.

Q75 Lord Tombs: I am sure you would agree, Minister, that the question of new build is important and it seems to be taken as a slightly secondary point, for reasons I can fully understand, because of the path CoRWM is following, but an important thing, when somebody decides that they are going to build a nuclear power station and apply for consent, will be the public reaction to long-term storage of that, so in the development strategy for long-term storage we have to be aware of that need for reassurance and develop the case with that bias or have that taken account of anyway.

Lord Hunt of Kings Heath: Well, I very much agree with that comment and, as you will know, the Government published a White Paper in 2008 which signalled that it was giving the green light to new nuclear development and, alongside that, we have gone through the process of an assessment of policy in relation to waste as far as new nuclear is concerned. We are in the middle of a process of both parliamentary scrutiny, but also public consultation on the National Policy Statements which place the context in which future planning applications will be made, and clearly the issue of the long-term dealing with high-level waste has come to the fore in those discussions, so I am very much aware that, in dealing with the issue of waste, we have to focus both on legacy waste, but also on waste emanating from new nuclear developments.

Q76 Lord Tombs: Could I mention the happy coincidence that the White Paper was just a decade after the publication of this Committee's report on the management of nuclear waste, the conclusions of which remain valid today.

Lord Hunt of Kings Heath: Well, sometimes it takes the Government a little time to respond, but I am glad we made it!

Q77 Lord Oxburgh: Minister, in its response to us only this morning, CoRWM said that, although they had very good relations with individuals in your Department and with you yourself, they were not

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able to detect any immediate influence that they have had on government policy-making. Is that likely to happen in the future, or do you regard it as true?

Lord Hunt of Kings Heath: I think perhaps the Committee has rather underestimated the importance of its work and the account that Government takes of it. Clearly, we do take account of the work of the Committee, and of course one has to go back to say that the original Committee, and we are of course now dealing with a reconstituted Committee—

Q78 Lord Oxburgh: Yes, CoRWM 2.

Lord Hunt of Kings Heath: But of course the original Committee was directly influential in terms of the decision by the Government to move towards geological disposal as a long-term option. Now, we have got the three reports that the Committee published last year and I can assure the Committee that we do take account of the views of the Committee and we take them very seriously. In the end, of course its job is to scrutinise and advise and I think it is very important that it is the Government's role in the end to decide on policy, but we certainly listen very carefully to the Committee and, I think as you have heard, we have an open-door policy as far as members of the Committee are concerned in terms of being able to discuss with both officials and with ministers any issues that they are concerned with.

Q79 Lord Oxburgh: I think the Committee was absolutely clear on its role vis-à-vis the Government in this, but I think they were just looking for a little bit more in the way of response. When is the response expected to their most recent report?

Lord Hunt of Kings Heath: On the R&D response, a first draft is now being carefully circulated around Whitehall. You will understand, particularly with the comment about the research council funding, that this just does not concern my own Department. I cannot give you a definitive date for publication of our response, but certainly a lot of work is being done on it at the moment. Although it is an easy get-out to say that an important report like that deserves a lot of work in terms of responding, that would actually be my answer, that we are giving a great deal of attention to it.

Q80 Lord Oxburgh: So you would expect it within a month or so?

Lord Hunt of Kings Heath: No, I am sorry, my Lord Chairman, I am not going to be caught by that! I understand why it is important that we do respond as quickly as possible, but, as I have said, this is a report which will concern a number of government departments and we have to make sure that we are able to reach agreement across Whitehall and then

ensure that our response is substantive, as the Committee undoubtedly wishes it to be.

Q81 Lord Methuen: How does the Government see CoRWM's role in terms of public engagement? How important does it feel public engagement is to CoRWM's duty to inspire public confidence in the way it works?

Lord Hunt of Kings Heath: I think, as I said earlier in relation to the issue about the timetable that we have in relation to a geological disposal facility, that engagement with the public is very, very important indeed in ensuring public confidence. The terms of reference of the Committee set out that they must continue to inspire public confidence in their work, and of course the Committee does operate in an open and transparent manner, holding plenary meetings open to the public and carrying out public and stakeholder engagement relevant to their report and recommendations. The lead responsibility for public engagement at this stage in the geological disposal process though lies with those bodies directly involved in the volunteer side process, in other words, local community representatives, the Government and the NDA, and obviously other bodies, such as regulators, have their own distinctive public and stakeholder arrangements, but I would just conclude by saying that of course this is very explicit in their terms of reference, that they have to be concerned about public engagement, and we would obviously continue to encourage them to be so concerned.

Q82 Chairman: I might like to ask a question about public engagement. We learned earlier this morning that members of CoRWM had gone to Sweden to talk to them about the public engagement, and we learned that the Swedes start from a position of more trust in government activities than they have encountered in this country. Would you like to comment on that?

Lord Hunt of Kings Heath: Well, I am always happy to learn from other countries when it comes to trust in government. I have to say though in general, and as we have seen from the recent local meetings and exhibitions that have been organised in relation to the 10 possible sites for new nuclear development by 2025, that we have had a very positive response, and there are people who disagree and people who agree, but they have been very positive in terms of being able to follow the documents, and, as members of the Committee will know, we produced an extensive suite of documents, but also in terms of the willingness of my officials to engage in a very open way with members of the public who had come to these meetings. I hope that this would be so in relation to dealing with waste, both legacy and from new nuclear, and I will obviously be happy to discuss with

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the Committee whether there are any lessons that we can learn, but our whole effort in relation to waste has been about ensuring public engagement. That is why we have not made perhaps as much progress as some members of the Committee would wish us to have done, because we want to make absolutely sure that the voluntarism approach is based on as solid a foundation as possible, but, my Lord Chairman, I think that the issue of public confidence in Government in this country is perhaps a much wider issue than just the issue of nuclear waste.

Q83 Chairman: But you are aware of this issue and you and your officials have been working on this with volunteers.

Lord Hunt of Kings Heath: Indeed so, and it is vitally important to maintain public confidence.

Q84 Lord Tombs: The NDA have said that CoRWM's starting point should be "established government policy, with its role being scrutiny of the implementation of that policy". Does the Government agree with that?

Lord Hunt of Kings Heath: Yes, I do. It is absolutely clear here that policy decisions, whether about geological disposal, interim storage or ongoing research and development, these are for the Government to take. However, they have been taken as a result of evidence and recommendations from the first CoRWM report in 2006. We have now moved on from there with the reconstituted CoRWM and their terms of reference are now very much focused on scrutinising and providing advice on the implementation of the policy rather than making new policy recommendations, and of course the deliberations of the Committee alongside other bodies are very helpful to the Government in understanding some of the dynamics of future policy decisions, but I do think that in terms of both public confidence and clarity of thought it is very important that it is the Government who makes the policy decisions and is held accountable for those decisions and it should not be for advisory committees to make the policy decisions.

Q85 Lord Tombs: Given the fact that there are two policies for the disposal of waste, one in Scotland and one in England and Wales, how can one committee and one set of advisers deal with that, or how do they deal with that?

Lord Hunt of Kings Heath: You tempt me very much to talk about the issue of Scotland and their decision not to go down the route of new nuclear, which I very much regret. I think, however, that it is not unusual for either advisory bodies or statutory bodies to deal with both the UK Government and with the devolved administrations, and I think it is clearly quite within

the competence of an advisory committee to be able to do that.

Q86 Lord Tombs: Perhaps I have not made my position clear. What I was really commenting on was the favouring of deep geological disposal in England and Wales, but not in Scotland with shallow disposal. *Lord Hunt of Kings Heath:* Indeed so, but that is the view of the Scottish Executive. We do not share that view. We do not share the view of the Scottish Executive either in relation to new nuclear or the way in which waste is dealt with.

Q87 Lord Tombs: But they have their own Health and Safety Department also, so there is always the possibility of a difference of opinion within CoRWM.

Lord Hunt of Kings Heath: I think that must be within the Devolution Settlement and I think that has always been abundantly clear, that that is perfectly possible, but, as far as England and Wales are concerned, I am confident that we have made the right decision about long-term dealing with waste. We have had advice from the Committee, which I welcome, and equally I think it is right that they should be able to give advice to the Scottish Executive as well.

Q88 Lord O'Neill of Clackmannan: Is it not the case, however, in the decommissioning of Chapelcross Station that the waste has in fact been transported from Chapelcross to Sellafield, to England?

Mr McKirdy: The position is that the Scottish Executive have defined spent fuel from reactors not as radioactive waste, so it is shipped out from Chapelcross to Sellafield as spent fuel which is still potentially a resource and not waste. How that fits in with the Scottish policy and the Scottish policy for those wastes which would remain in Scotland and then be subject to shallow disposal, I believe, is still under consultation by the Scottish Government. From the NDA perspective, we will need to implement the policy that emerges from that current consultation.

Q89 Lord Tombs: So perhaps we should refer to "policies" rather than the singular?

Lord Hunt of Kings Heath: Well, quite clearly the policy of the Scottish Executive is at variance from the policy of the UK Government.

Lord Tombs: Or vice versa.

Q90 Lord O'Neill of Clackmannan: Except when it suits their purpose, as in the case of the definition of spent fuel as being spent fuel and not waste, or am I putting words in your mouth?

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Lord Hunt of Kings Heath: Well, you may well say that. I am not sure where this is taking us. If you are tempting me towards a discussion about the tragedy for Scotland in not being able to develop new nuclear, I am very happy to go down that route and, given the heritage of Scotland and the fantastic skills there, I think it is a very, very great pity.

Lord Cunningham of Felling: But, Chairman, there is nothing new in used fuel rods going from Chapelcross to Sellafield; it has happened all the time. It happened with the other Scottish reactors too, for that matter, so there is absolutely nothing new in that at all.

Q91 Lord Jenkin of Roding: Can I just follow up what you said earlier which was very important, that it is for the Government to make decisions, and I wholly accept that and we have had that in other contexts as well. It is appearing to me that the effective arrangements paragraph in EN6 is turning out to be one of the more controversial bits of that National Policy Statement. We were told this morning that CoRWM are preparing a paper to come in on that, and you cannot of course answer what you would do in the event of a paper coming in, but how firm is that as a part, the effective arrangements, of the Government's policy? From the point of view of investors, it is of course enormously important, but they are not the only stakeholders, they are not the only players, so can you say anything about that?

Lord Hunt of Kings Heath: Yes, indeed and, Lord Jenkin, I think you are right to refer to the importance of effective arrangements. I am confident and satisfied that we have gone through due process in order to be assured that effective arrangements will be in place in relation to new nuclear. I would rather not comment on a submission that the Committee might make and clearly we will consider it very carefully, but I wonder if I could invite Mr Higson to say a little bit about how we have gone through the process of ensuring that effective arrangements are in place.

Mr Higson: It is a very important test, you are right, and the test is that ministers have to be satisfied that effective arrangements will exist before new nuclear can be approved. That does not mean to say that we have to be absolutely certain that every last detail has been solved, but we need to reach an appropriate degree of confidence that satisfactory arrangements will exist. The evidence of that we set out in the National Policy Statement and associated documents and it basically goes on three levels. First of all, is it technically possible to have a geological repository which will take spent fuel as waste? We think the answer to that is yes. The second question is: is it possible to find a location for a geological repository? Again, we set out why we believe we are making progress towards that end. Then, the third element is:

are we satisfied that in the meantime, which can be quite a long period of time, satisfactory interim arrangements for the storage and management of spent fuel as waste can exist? Again, we have set out the reasons why we have come to the conclusion that that is the case. All of these arguments are exposed to public scrutiny. It is a draft statement that we have made and we shall have to consider very carefully all the comments that are made and advise ministers accordingly, including any comments that CoRWM itself makes in due course.

Lord Hunt of Kings Heath: And the Committee will be aware that, in addition to the Commons Select Committee, the House of Lords is shortly to embark on scrutiny of the National Policy Statements which shall take place in February/March.

Q92 Lord Jenkin of Roding: March 7.

Lord Hunt of Kings Heath: Well, we start, I think, in February with the overarching—

Lord Jenkin of Roding: You might start in February, but the nuclear one is March 7.

Q93 Baroness Perry of Southwark: I think my question has, in part, been opened up already, but we did hear from CoRWM earlier today that they are quite clear that they do not want to be seen to be complicit with the Government when it issues its draft statements, that they want to retain their independence. Nevertheless, we do wonder whether in the National Policy Statement on nuclear power generation your Department had consulted with CoRWM at all on the rather bold statement that you are satisfied that effective arrangements will exist to manage and dispose of the waste.

Lord Hunt of Kings Heath: No, and the noble Baroness is right, that, in a sense, we have covered this before and I am very clear that it is ministers who have to take responsibility for that decision and have to make the statement. My officials did contact individual members of the Committee to ask them to look at the factual statements, but this is very much a decision by ministers. Just to reflect on the point Mr Higson has made, these are draft statements, they are subject now to proper public consultation and parliamentary scrutiny and of course, in that context, we will look very carefully at the views of the Committee. I think that we were right actually not to have that formal engagement until we had produced the draft National Policy Statements and to have made the assessment that you have just heard from Mr Higson.

Q94 Lord O'Neill of Clackmannan: Greenpeace feel that "there is no effective liaison between CoRWM and government departments and agencies", and

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they have said that CoRWM should not be blamed for this. Would you agree with that assessment?

Lord Hunt of Kings Heath: No, I find that a very extraordinary statement and I would be very interested in learning what it is actually based upon. I met the Chairman of the Committee last November and I made it clear to him that he had open access to me and to my officials. My understanding is that considerable engagement takes place between the Committee collectively and individual members of my Department. If there are any identified problems, I will sort it out, but I am just not aware of any problem in terms of effective liaison.

Q95 *Lord O'Neill of Clackmannan:* So you do not think that they can improve upon what is a very good relationship?

Lord Hunt of Kings Heath: I would not be as arrogant as to say that we could not improve on how we do business at the moment, and indeed, if the Committee itself came with some suggestions, I would sit down with the Committee and the Chairman to discuss it. What I am saying is that it is to my understanding that we have completely open access for the Committee and that there is a lot of engagement.

Q96 *Lord Cunningham of Felling:* The Environment Agency said in its evidence to us, "Government's oversight of the MRWS programme could . . . be made more transparent to stakeholders and the public". How do you react to that, and do you think there could be something in what they say?

Lord Hunt of Kings Heath: Well, I certainly take note of what they have said and certainly will give it some consideration. We are obviously working in terms of our communications with both stakeholders and the public about the progress that has been made in the programme. I am also setting out milestones for the future and we certainly co-ordinate our work in that area with the Nuclear Decommissioning Authority, and the Authority itself will shortly be publishing their *Steps Towards Implementation* document which sets out their detailed planning for geological disposal. Now, as far as oversight mechanisms are concerned, we have two main official-level groups. First of all, there is the Geological Disposal Implementation Board concerned with the geological disposal programme management and the co-ordination of effort to ensure geological disposal becomes a reality, and the second group is the Waste Management Steering Group, which is part of the broader hierarchy of groups to oversee NDA's strategy to development and delivery of wider government policy commitments. Both groups are chaired by officials in my Department, they have membership from the Treasury, the NDA and the relevant devolved administrations and they advise,

and interact with, each other, and I understand that they are regularly observed by members of CoRWM.

Q97 *Lord Cunningham of Felling:* And the public? Does any of this get through to the public?

Lord Hunt of Kings Heath: No, they are not in public.

Q98 *Lord Cunningham of Felling:* Do they publish any decisions for the public?

Mr Cairns: The minutes and papers of those meetings have already been made publicly available in the past. The minutes are drafted so that they will be accessible for a wide audience and are available on request.

Q99 *Lord Cunningham of Felling:* Well, I think we all know what that means!

Lord Hunt of Kings Heath: On the substantive point, I am certainly happy to look at what the EA has said, and I clearly take the message about more certainty over timing of the programme.

Q100 *Lord Cunningham of Felling:* Forgive me for interrupting, but, if the public are really genuinely going to be carried forward and they think there are two working groups going on to which they have no access, that is not helpful.

Lord Hunt of Kings Heath: No. I think clearly there is always though some benefit in having officials working together and making sure that there is open discussion between different departments in the UK Government and the devolved administrations. However, I take the point that in terms of perhaps giving more certainty, in giving people a greater feel about the timetable, there may be something more that we need to be doing, and we are also reflecting this in the light of comments we have received as part of the consultation on the draft National Policy Statements, so I would be very keen to take the view of your Committee on this as well. We have not got a closed door. I think there is clearly more that we need to do in this area and we would be very keen to work with stakeholders.

Q101 *Lord Cunningham of Felling:* I think that is a very helpful answer if I may flatter you a little. It is a very positive response. Just in the interests of more openness and transparency, and you will not have this figure in your head, I am sure, you probably have not even got it in your brief, could your officials give the Committee a note on just how much the taxpayer from the inception of Nirex, which was effectively public money, and CoRWM, has invested in all of this?

Lord Hunt of Kings Heath: We will have a go. I think the cost of the Committee is about half a million pounds a year at the moment, but subject to the

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overriding issue of cost of finding the information out, I will certainly see if we can find that.

Q102 Lord Tombs: On this issue of general transparency, Minister, the 1998 report drew attention to the fact that the timescales involved are quite unique in our experience and therefore suggested that there should be an annual report to Parliament, statutorily required with a debate to follow, because it is something that can be lost sight of and it is something of great continuing importance?

Lord Hunt of Kings Heath: I am very happy to consider that suggestion alongside the question of whether we need to give more information to the public. Whether an annual debate would be appropriate, I do not know, but alongside my response to Lord Cunningham I am very prepared to have a look at this and see whether there would be some advantage in having some more parliamentary debate and accountability on this matter. Overall my general principle is that the more we are transparent, the more clarity we can give you, the more likely there is to be public confidence. Although we have to separate the waste issue from the nuclear generation programme, the fact is the two also go together in terms of public confidence.

Q103 Lord Tombs: Yes but this is a public duty in response to management of nuclear waste over very, very long periods which are quite inconsonant with the parliamentary timetable.

Lord Hunt of Kings Heath: I agree and you have already heard the evidence this morning about spent fuel potentially being stored for 160 years. I think that is somewhat of a conservative estimate but when you are dealing in those sorts of lengths of years sometimes it may not seem very realistic to people, and I very much take that point.

Q104 Lord Jenkin of Roding: I too was a member of the Select Committee when Lord Tombs produced that report in 1998. Of course you have not followed the main recommendation which was that there should be a body outside government which should be responsible for the whole programme. However, the point that Lord Tombs has just made was echoed by CoRWM this morning where they said they were concerned about the long-term political commitment. It would seem to me that therefore the Government could do very well to look at the idea, perhaps not annually but at least once in every Parliament, when there should be a very clear Government motion calling for parliamentary support for the continuation of the programme and I think that all those engaged in this—and CoRWM would only be one, there are many other

stakeholders—would regard a positive vote regularly taken as a very considerable reassurance. Would you accept that?

Lord Hunt of Kings Heath: No, I do not think I necessarily would, Lord Jenkin. I think that one might read uncertainty into that if there was a sense in which every four years there had to be a vote in Parliament or the programme would not be allowed to continue. I understand exactly the point you are making but I think there might be some perverse incentives in it as well. I have said to the Committee that in terms of looking at the potential for reporting to Parliament I will certainly have a look at that suggestion. On the question of the one body, I think we have got it right now where essentially we have government setting the policy; we have the various regulatory agencies ensuring that implementation is carried out to safe, secure high standards; and then we have the role of the Committee in terms of scrutinising how it is being delivered. I think that is a sensible approach to this.

Q105 Lord Jenkin of Roding: Of course the Nuclear Decommissioning Authority is the main government agency for carrying the programme forward. We are where we are and one always starts from here. I think that is probably what we would accept but we did just have this anxiety as to whether there would be continuing political commitment.

Lord Hunt of Kings Heath: Of course governments can never promise what their successors are going to do.

Q106 Lord Jenkin of Roding: Nor can Parliament bind its successor.

Lord Hunt of Kings Heath: On the other hand, I do think the careful approach to dealing with both nuclear new build and also waste is bearing fruit. I think that there is broad consensus that geological disposal is the right way forward. The fact that we have set out such a careful approach does lend confidence that this is going to be the long-term approach of this country. I take your point about reporting to Parliament. As I have said, I would worry if it were read into this that the policy had to be approved by Parliament every few years; I think that might induce more uncertainty.

Lord Jenkin of Roding: That is something for the future.

Q107 Chairman: Let me continue a minute on the long-term strategy. Minister, you were saying to me earlier before the session that there are 10 sites being considered for new build. Presumably you see CoRWM as having an overview of that situation whereas if we had a single disposal site then we would be transporting nuclear waste all over the country?

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First of all, do you see the Committee as having to develop a view on that? Secondly, do you have a view? Might it be better to have more than one site?

Lord Hunt of Kings Heath: Clearly the issue of one site or more is a matter that will need to be decided upon as we go through the process. Certainly the White Paper allows for more than one site to be considered. On the other hand, there is no reason why both legacy waste and new waste cannot be accommodated within one site. I do not think one can be absolutely definitive about the likely outcome. As far as new nuclear is concerned, in 2006 when we started to develop our policy in relation to new nuclear, we said that given the special circumstances of nuclear power generation that we would undergo a rigorous assessment in terms of which sites we thought would be potentially suitable for nuclear development. We have now done that. The outcome of that work is in the draft National Policy Statement. We have identified 10 sites as being potentially suitable for nuclear power development by 2025, and clearly, as part of that, we have also gone through the question of assuring ourselves that waste can be dealt with satisfactorily. As far as the Committee is concerned, it is not for the Committee to concern itself with whether we should have new nuclear power development or not, but certainly when it comes to the issue of how waste will be dealt with from nuclear power stations then the Committee has a legitimate role to play.

Q108 *Baroness Perry of Southwark:* How do you see CoRWM's wider remit? Do you see it just as giving you technical/scientific advice or do you see it as being broader than that? When commenting on the implementation of Government policy is it expected to comment on the ethical and political aspects as well or would you have it just technical?

Lord Hunt of Kings Heath: Obviously we have the terms of reference of the Committee and we would certainly expect the Committee to keep to them. I do not need to read out the terms of reference again as you have them.

Q109 *Baroness Perry of Southwark:* We have them.

Lord Hunt of Kings Heath: I do think that in the end it plays a very important role in terms of technical advice as to how policy can best be carried out. I do not think it is for the Committee to comment on decisions about whether we embark on new nuclear development or not. That is very much it seems to me for the Government to do. I think it is very important that we do not have grey areas of responsibility here and the Government must take responsibility for making these decisions and it must then be accountable to Parliament for that.

Q110 *Baroness Perry of Southwark:* Presumably you have other technical experts whom you consult? For example, when you feel confident that the new build waste can be dealt with you must have consulted other technical experts and not CoRWM about that?

Lord Hunt of Kings Heath: I will ask Mr Higson to detail that but clearly we have the Nuclear Decommissioning Authority itself; we have the Environment Agency; we have the Health and Safety Executive. This country is not short of both official committees and stakeholders who have an interest and clearly the Government listens to what they have to say.

Mr Higson: In terms of the key questions that I mentioned earlier, we look very much to the NDA to advise us in coming to the preliminary judgment that is in the draft National Policy Statement.

Mr McKirdy: We undertook disposability assessments of the fuel and waste likely to be generated by the new reactors that are being proposed at the moment and we found those to be acceptable against the safety cases which we have developed under scrutiny from the regulatory bodies. Those disposability assessments will go to the requesting parties and form part of the generic design assessment carried out by the joint regulatory body, so we have satisfied ourselves that we can accommodate such wastes in a disposal facility.

Q111 *Baroness Perry of Southwark:* Forgive me for pursuing this, Minister, but, as you said, there are quite a lot of bodies that you rightly consult. Are there too many? Is there a possibility of an embarrassment to government of having received advice from one set of technical experts that in this case the new build waste is taken care of, so to speak, and then you might get from CoRWM a comment several months later when they produce their paper saying that is not case and for a Government that would be embarrassing, would it not?

Lord Hunt of Kings Heath: I think we have to accept that experts do not always agree with each other—

Q112 *Baroness Perry of Southwark:* Just so.

Lord Hunt of Kings Heath: And that part of the testing out, if you like scrutinising, of policy and technical advice is that if experts disagree we had best know about it and that is the way in which things can be tested. I am very comfortable with that, even if it were to mean that some agencies were disagreeing with each other. I have to say that my general impression as we stand at the moment is that there has been a consensual approach not in terms of a woolly compromise but really based on the best evidence available. One has to go back to the original CoRWM report if we are talking about geological disposal, and of course it was the original CoRWM

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report which started the Government down this particular route.

Q113 Lord Methuen: Could we talk briefly about timescales. CoRWM suggested that we are not going to get anything that is useful until about 2040 and the first 10 years of this 30 years is actually doing detailed rock characterisation by drilling boreholes and making tunnels, and it could be that you find that is all totally impracticable. Do you really think 2040 is even achievable?

Lord Hunt of Kings Heath: I am going to ask Mr Higson to comment on that but certainly that is the assumption that we are working on; essentially we think that it is perfectly possible. We have been working on an assumption of two to three decades from the beginning of this site-selection process and about one and a half decades from selection of site to the beginning of underground work. That is the base programme on which we have been working.

Mr Higson: 2040 is the planning assumption. We are of course mindful that we have to work at a speed which can be agreed with the partnership communities so that is why there is necessarily some degree of flexibility. Personally I am convinced that 2040 is a perfectly realistic date. There is a lot of work to do but there is time in which to do it.

Q114 Lord Methuen: What does that demand as an authorisation for “go”?

Mr McKirdy: If I could unpack the 2040 date. It requires about five years of desk-based studies from now, looking at areas that express an interest and then deciding to proceed in the process. It then requires 10 years of detailed site investigations using boreholes to a depth of about a kilometre and then 15 years of construction. The 15 years of construction is using tried and tested construction techniques but in parallel with that we would envisage further confirmatory underground testing to show that the geology is suitable. We would look in particular not to try and speed up the five years. We need to work, as Mark said earlier, at stakeholder’s speed to make sure everybody is comfortable with that. Later in the programme during the construction period there may be some opportunity for compressing the programme but we would not want to assume that at this stage.

Mr Higson: Could I make one additional point as well which is that clearly having a target date is very useful. We need to get on with this project; it is important. However, we also need to be satisfied that there will be interim storage in a safe and robust manner which will last long enough for us to overcome whatever problems arise. If the timetable is delayed, there is no question of having to do something by 2040 otherwise we have a serious problem. 2040 is a good planning date but we must be

satisfied that interim storage can last for very much longer if it is needed.

Chairman: That technology is already in place? We have some interim storage, I have seen some at Sellafield, and that is the type of storage to which you are referring?

Q115 Lord Jenkin of Roding: Some of it.

Mr Higson: Some of it. I hesitated there briefly because it will be spent fuel that will need to be stored from new build as well as the existing legacy waste, so there is experience both in the United Kingdom and elsewhere of the relatively long-term storage of spent fuel but, yes, we do have experience at Sellafield of managing wastes.

Q116 Lord O’Neill of Clackmannan: Would it be right to say that this timescale does not really take account of the possibility of technical and scientific improvements in the period? I make that point because when you have a relaxed timescale—and I am not saying this is relaxed but it is long term—people tend to find work to fill the space rather than reduce the work that technology can afford.

Lord Hunt of Kings Heath: I think that is a very interesting comment. There are two points I would like to make on that. The first is that 100 years’ cooling is a conservative assumption. Clearly because you are working to such long time-lines I agree that one has to guard against complacency and the sense that “Oh, a few years can slip.” I would pray in aid the work of the Nuclear Decommissioning Authority which since it has come into being has really done some quite excellent work in relation to decommissioning. Historically, you have had a sense that decommissioning is going to take decades and therefore there is not an imperative to get on with it, but I think we have seen from the work of the NDA in the last year or two how with a very much more focused approach towards decommissioning you can make better progress. I think that is a very salutary lesson in relation to how we take forward geological disposal.

Q117 Lord O’Neill of Clackmannan: Unfortunately, as a consequence of that, people say, “But you are rushing it.” You are damned if you do and you are damned if you do not, but I kind of feel because things have taken so long so far that people assume that if they were done more quickly it would be at the expense of something. I feel that we ought to keep qualifying that these dates and, regardless of the 100 or 160 years debate, we have a lot of waste that we could be getting on with dealing with right away and if there were a gap in the middle that might be something that we could fill with other activities.

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Lord Hunt of Kings Heath: Again, I would say that in terms of the work of the NDA that I have always been very careful to ensure that I also have the advice of the regulators and that they are very much involved in ensuring that we make the right decisions. I chair the Sellafield Remediation Forum which is very much looking at decommissioning progress in Sellafield where we have the NDA, the private contractors and the regulators round the table who are able to advise me on progress and on priorities. Clearly we need to continue that, with safety being of course the paramount consideration, but also wanting to get on with decommissioning where that is possible.

Q118 *Lord Jenkin of Roding:* Could I move to the question of research and development. You said earlier of course that your response to CoRWM is in the first draft and quite understandably you are not prepared to give a date at which you might be prepared to issue that response and clearly we may need to report before we have it. Of course, they are not the only ones who have been critical in their report of the research effort. There was a report recently in the technical press—*Nuclear Fuel* of 25 January—and perhaps Mr McKirdy might like to answer this one—the UK Nuclear Decommissioning Authority’s Radioactive Waste Management Directorate “does not appear to have a clear picture of the knowledge base needed for development of the safety case for a geological disposal facility”, according to a recent review by key UK regulators. They were the UK’s Health and Safety Executive, which of course includes the Nuclear Installations Inspectorate, the Environment Agency and the Department for Transport. That has come quite recently but does Mr McKirdy have any comments to offer on that?

Lord Hunt of Kings Heath: Can I comment generally first and then ask Mr McKirdy to come in. We are taking this seriously. I particularly take the point that was raised in your earlier session that R&D is important both in terms of the geological disposal process but also of course because the experience that we are going to gain will be relevant to geological disposal in other countries as well, so we need to see this as an opportunity for UK expertise in other countries. We do recognise the need for funding to be made available for research to allow the independent regulators to undertake their functions and we will in our response be seeking to deal with those matters. I would like to reassure you that I do take this seriously.

Mr McKirdy: I think the review in question was a review undertaken by those three regulators—the Environment Agency, NII and the Department for Transport—of the Radioactive Waste Management

Directorate’s route towards becoming a delivery organisation for geological disposal, at which stage it will need to become a site-license company like any of our other site-license companies, able to apply for and hold an authorisation. What the regulators were reviewing was not the technical basis for our work, which they have reviewed before under different fora; they were looking at the organisational capability that we had built up since the decision in 2006 that the NDA would be the implementing body and how we were progressing towards the time at which we may need to make an application, which is still some years off. Their conclusion was that we had made good progress and that we should start operating now as a prospective site-license company under voluntary regulatory scrutiny. We have started acting as of December last year as if we were a site-license company and the regulators submit us to regulatory scrutiny. There is still work to be done; we have recognised it. There were a number of findings. They have a traffic light system in the report. There were one or two reds, a few ambers but mostly greens. We will be working with the regulators towards the conclusion of becoming an appropriate organisation to apply for a site licence before we have to apply for a site licence. The regulators have stated in their conclusions that they think that is achievable.

Q119 *Lord Jenkin of Roding:* Of course the NDA will be a rather different kind of site-license company than a number of the others that have been appointed by the NDA to look at decommissioning in the north, decommissioning in the south and running the Sellafield site and the Magnox reactors and so on. I would like to put it on record that I think the choice of these companies has brought a remarkable breath of fresh air and of new thinking to the whole of this operation. If I may say so, I think it has been well-handled by the NDA and you have some very good people there but, at the same time, as you rightly said, there is a lot of work still to be done. On the question particularly of research, the National Nuclear Laboratory was set up by the Government and exists and I have had discussions with its managing director and it is feeling rather disappointed that it is not yet being made full use of.

Lord Hunt of Kings Heath: Lord Jenkin, can I say that we are in discussion with the National Nuclear Laboratory about the extent to which its facilities can contribute to the required research and that will be part of our response to the Committee. On your general point, I agree with you that having now met some of the companies involved in decommissioning work, I have been impressed with the work that has been done. Also I must say that I am very impressed with the board of the NDA and the work that they are doing to make sure that this is done in the most

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Rt Hon Lord Hunt of Kings Heath, Mr Mark Higson,
Mr Bruce Cairns and Mr Bruce McKirdy

effective way possible. What is interesting visiting Sellafield and other sites is meeting so many people from different countries and realising that what we are seeing is a lot of people with expertise in other countries being brought on to UK sites but, equally, meeting UK people who have gone to other countries as well. There is a sense in which we are very much learning from each other and I think that can only be to the good.

Q120 Lord Jenkin of Roding: Those of us who may have visited Cap de la Hague, which is of course run by Areva, recognise that it has very considerable skills and achievements which are not always matched at Sellafield. I think it is very valuable that there should be the maximum collaboration. Of course Areva is part of one of the site-license companies there.

Lord Hunt of Kings Heath: I agree with that and I am also very keen to ensure that as we take forward new nuclear development that we develop a very strong UK supply chain because this country has taken its decision to go back to nuclear and we need to make sure that not only we get the benefits of generation but that we get the benefit of being able to reenergise the industry.

Q121 Lord Jenkin of Roding: Could I say, Chairman, as President of the Energy Industry Council that there is a lot of catching up to be done.

Lord Hunt of Kings Heath: Yes, but nonetheless I am confident that there are also a lot of opportunities for UK companies and we need to make sure they make the most of it.

Lord Jenkin of Roding: I think our people are aware of it.

Q122 Chairman: In finishing I would also like to say I am highly encouraged by your statement about international interaction because in most areas of engineering and science that is how the world works. In this field over the decades we seem to have almost felt that we had to do everything from scratch ourselves and not interact enough internationally where a lot of the problems have been solved. In science and engineering one does not work on something that somebody else has solved; one swallows one's drive to be innovative oneself and accepts other people's good ideas. I hope that will be something that will spread throughout this whole operation.

Lord Hunt of Kings Heath: Thank you, Lord Chairman. I think there are many lessons to be learned from the first phase of civil nuclear development in this country. The advantage now of coming back afresh is that we can learn those lessons. We have fantastic science and engineering skills in this country. I am confident that we can develop a strong UK supply chain but, equally, we are working in an international industry where we certainly need to learn from others. I think it is worth saying that as far as geological disposal is concerned, we are not alone. Many other countries are going along the same route as we are. That does give us some confidence and just as we can learn from other countries, equally, I am hopeful that the kind of approach that we are taking will also have benefits for other countries as well.

Chairman: Thank you, Minister, for your coming to speak to us today; it has been very useful indeed. As I said to the previous group, I hope that you will keep us informed of any changes or anything that is new in the next few weeks while we are preparing this report, but thank you very much for coming this morning.

Written Evidence

Memorandum by the Environment Agency

1. INTRODUCTION

1.1 The Environment Agency is the organisation that would ultimately regulate the disposal of solid radioactive wastes in a geological disposal facility in England or Wales. We regulate all radioactive discharges and disposals from English and Welsh nuclear sites and from a wide range of non-nuclear premises. We work closely with colleagues in the Health and Safety Executive Nuclear Directorate to provide comprehensive and coherent nuclear regulation, in particular to ensure that the generation of radioactive wastes is minimised, and that any wastes that are produced are managed in ways that protect people and the environment.

1.2 We have a strong interest in the work of the Committee on Radioactive Waste Management (CoRWM). We have always enjoyed a very constructive working relationship with CoRWM, both before and after the Committee was reconstituted in 2007. Our responses below relate to CoRWM in its reconstituted form.

2. CoRWM'S PERFORMANCE

2.1 CoRWM has enthusiastically addressed the scientific and technical aspects of its remit, and its reports have generally been insightful and positive. During the past year, the Committee's work programme may have been rather broad, and we are pleased that the draft programme for 2010–13 appears to be more focused. The Committee will need to focus on matters which are vital to the effective and safe management of the wastes.

2.2 CoRWM has actively sought our views on the subjects it has addressed. The Members have taken account of what we have said to them, for example in the reports on research and development, storage of radioactive wastes, and implementation of geological disposal. We regard the Members of the Committee as experts in their individual fields, and collectively they have a range of capabilities relating to their remit. The makeup of the Committee is largely from the academic community. Because of this, the Committee might benefit from additional membership that has an in-depth practical knowledge of operations and engineering on nuclear sites, along with the cost implications of different management options. It might wish to consider secondments for particular tasks.

3. CoRWM'S REMIT

3.1 We are content with CoRWM's terms of reference, which are broad. Government should keep CoRWM's terms of reference and work programme under review as the implementation programme proceeds, to ensure they complement, and are consistent with, the regulatory process. The Committee should also continue to take care that its activities do not become quasi-regulatory. Since the management and disposal of radioactive wastes has major societal, scientific and technical implications, CoRWM should engage with a wide range of stakeholders on its work, to ensure it is soundly-based. More generally, managing radioactive waste safely (MRWS) stakeholder engagement processes should be led by those organisations that are accountable. For example:

- The relevant local Siting Partnership should engage with communities who have expressed an interest in hosting a geological disposal facility, and CoRWM should be involved as an observer. This is already happening in West Cumbria.
- The Nuclear Decommissioning Authority (NDA) should engage with stakeholders about their technical work on a candidate site and development of a repository concept, design and safety case.

3.2 The 2008 Managing Radioactive Waste Safely White Paper, together with the 2008 White Paper on Nuclear Power, Meeting the Energy Challenge, imply that wastes arising from any new build, or from nuclear materials that may be declared as waste in the future, are within CoRWM's remit. The Committee has included these items in its work programme, and in our view this is appropriate. In future, we believe CoRWM should place an increasing emphasis on constructively critiquing Government's and the NDA's plans, and on encouraging Government to make timely progress with the MRWS programme.

4. CoRWM AND GOVERNMENT

4.1 In our view, geological disposal is the best available approach and a sustainable solution to the long-term management of higher-activity solid radioactive wastes. It is required both to clean up the existing nuclear legacy and to provide a disposal option for any new nuclear build that will be needed as part of the national energy mix. We believe Government and the NDA should clearly demonstrate a credible commitment to develop a geological disposal facility for those wastes. This means they should:

- provide the necessary resources, both now and throughout the development programme;
- build trust with communities through open and honest engagement; and
- ensure that the NDA's research and development will be of sufficiently high quality to support any application for an environmental permit.

4.2 To date, Government has accepted many of CoRWM's recommendations. This acceptance needs to be translated into demonstrable progress. Government's oversight of the MRWS programme could also be made more transparent to stakeholders and the public. It is a positive development that the Department of Energy and Climate Change (DECC) has brought together the nuclear and radioactive waste responsibilities of the Department for Environment, Food and Rural Affairs and the former Department for Business, Enterprise and Regulatory Reform. This provides opportunities for further improvement. Government will need to ensure that DECC's and the NDA's resources are sufficient to deliver the MRWS programme. Whilst public spending will be under severe pressure, we believe this programme should remain a Government priority.

January 2010

Memorandum by the Geological Society of London

1. The Geological Society is grateful for the opportunity to submit evidence to the inquiry. This document has been prepared in consultation with a contact group of Fellows of the Society who are regularly involved in our activities relating to radioactive waste management, and has been agreed by our Council. The scope of the comments below is limited to CoRWM's scrutiny role with regard to geoscience, its capability in this respect, and our relationship and interactions with CoRWM to date. We are not a competent body to comment on CoRWM's relationship with Government.

2. The Geological Society has a friendly and constructive working relationship with CoRWM, and has usefully contributed to its work on several occasions. A January 2006 one-day meeting which was attended by the chairman and several other members of the original CoRWM was influential on its July 2006 report, particularly with regard to the confidence which it felt able to place in the concept of geological disposal. Since CoRWM's reconstitution with a new brief, the Society has organised two meetings bringing together members of the committee's working groups, Fellows of the Geological Society and representatives of other Earth science societies and institutions. The meeting with members of Working Group C, which examined current R&D provision and likely future requirements, at an early stage in its work was particularly constructive. The Society subsequently commented on two drafts of the report of this Working Group, and it is clear that our input shaped it considerably. This was a strong report, and we were pleased to support CoRWM's work in this way.

3. The Society was recently invited by CoRWM to comment on its draft work programme for 2010–13. We expressed the view that the proposed programme is very broad, lacks a clear focus and runs the risk that the committee will be too thinly spread, both in terms of capacity and expertise. Our impression is that to date, the reconstituted CoRWM has been somewhat stretched, and at times has struggled to keep pace with its planned activities, but that by and large it has discharged well those in which the Geological Society has been involved. Since we would be sorry to see these efforts dissipated, we encouraged CoRWM to take stock, assess its own strengths and weaknesses, and agree with Government a realistic and useful work programme which has the potential to add real value in the coming years.

4. CoRWM includes among its members a small number of individuals with considerable geoscientific expertise and experience. The Society in no way questions their fitness to serve on the committee. However, as the MRWS programme develops, there will be a need for detailed independent scrutiny of the geoscience carried out within the programme, primarily by NDA RWMD, and also by the British Geological Survey and others. As currently constituted, CoRWM does not have the range of geoscientific expertise required effectively to scrutinise this element of the programme.

5. The Committee may wish to consider how this deficit might be addressed, and explore possible alternative mechanisms for provision of independent scrutiny of the geoscientific work done in support of the MRWS programme. For example, the Committee might examine:

- Whether there are candidate organisations better placed than CoRWM to provide such scrutiny of the geoscience;
- Whether the membership of CoRWM should be changed to include a much wider range of Earth scientists with a variety of areas of expertise (although we recognise that the management of radioactive waste is not a purely technical, let alone a purely geoscientific, matter—and that to distort the membership of the committee in this way could hamper effective scrutiny of the overall process);
- Whether a subcommittee of CoRWM should be set up specifically to provide geoscientific scrutiny.

6. Irrespective of any changes to the mechanism by which geoscientific work within the MRWS programme is scrutinised, the Geological Society will continue in its endeavours to provide appropriate support, advice and constructive criticism to CoRWM and others involved in the process.

29 January 2010

Memorandum by Greenpeace

Greenpeace is aware that the Lords Science and Technology Committee (STC) has requested information from only one environmental organisation (Greenpeace) on this matter. For the record, we are making a submission but on the understanding that Greenpeace does not approve of such an “exclusive” approach to gathering views.

We understand that the STC has sought a submission from only one NGO, as a matter of urgency, because it needs to report before a general election is called. Exactly why this is the case has not been explained.

We would also like to note that at present many NGOs and others interested in issues around nuclear waste management are engaged in responding to very lengthy and complex consultations on the Justification (of new nuclear reactors) and on the Nuclear National Policy Statement. That the STC is taking evidence on a related matter at the same time as these other consultations—without a general call for evidence—may result in the validity of the Committee’s report on this matter being questioned..

RESPONSES TO QUESTIONS

CoRWM’s PERFORMANCE

Has CoRWM effectively scrutinised the implementation of the Government’s MRWS programme?

CoRWM’s efforts to scrutinise implementation of the Government’s MRWS programme are not as effective as they could be. The main reason for this appears to be lack of funding for CoRWM’s work. From discussions we have had with various CoRWM members, and from what has been said at a CoRWM stakeholder meeting, lack of funding means CoRWM is not in a position to undertake stakeholder work, or independent research, to the extent it would like to. The STC should keep this in mind when examining the work of CoRWM. We understand the Committee will be responding to the draft Nuclear National Policy Statement and is seeking to meet NGOs on this. However, it is not planning to respond to the draft decision on Justification (of new reactors). It is extremely remiss of the Committee not to be responding to this—particularly as it may have an impact on many aspects of the MRWS programme. Whether this is because of lack of funding or lack of time (or both) is not clear at present.

Are Government decisions on its MRWS programme evidence-based? What mechanisms are in place to ensure this is the case? How does CoRWM scrutinise this?

Many Government decisions on its MRWS programme simply cannot be “evidence based” eg there is no operating repository for spent fuel and other higher activity wastes anywhere in the world. As a result, much of what the Government says on these matters is based on claims rather than being “evidence based.”

From observation of what Government officials have said at a variety of meetings over a number of years, from reading documents by the Nuclear Decommissioning Authority etc, it would appear that although there are mechanisms in place to examine the evidence for decisions made by government—there are not enough resources for the relevant organisations to undertake engage in the examining claims (this appears to be the case for regulators too).

Remarks made by CoRWM members at stakeholder events make it clear that CoRWM is not in a position to be able to undertake the level of scrutiny it believes it should be doing. We recognise that, conversely, some work cannot be fully scrutinised before it happens. Some work can only be monitoring of progress and examining claims made about progress. It is essential the STC considers the ability of CoRWM—and others—to be able to respond to Government assertions not only in the short term but over the longer term as well.

Does CoRWM have sufficient scientific and technical expertise to meet its remit?

CoRWM appears to have sufficient scientific and technical expertise to meet its remit (whether this is independent enough is another matter). However, it could certainly do with more Committee members with expertise on social, political and ethical matters (as CoRWM I had) to examine the social, political and ethical impact of proposals by Government and to examine its own assumptions. It is expected that social and ethical matters will become an increasing part of the discussion on MRWS processes on legacy waste. When this happens CoRWM may also have to look outside for expertise or seek new members (such expertise must be drawn from independent sources and not from within the industry).

On the current level and mix of CoRWM's expertise, we ask the STC consider CoRWM's draft statement¹ on new build where it reiterates the views of CoRWM 1:

“CoRWM’s position on the consideration of wastes in the public assessment of proposals for building new nuclear power stations remains as set out in paragraph 21 of its 2006 Recommendations (see paragraph 2 above). It believes that a range of issues, including social, political and ethical issues of a deliberate decision to create new wastes, should be considered in the new build public assessment process.”

The paper serves as a timely reminder that, when considering new build wastes—as CoRWM 1 found when considering with legacy wastes—the current Committee's work must encompass more than just scientific and technical matters.

A further example of how CoRWM's 2 expertise and work may need to be expanded comes from a report in which CoRWM 1 considered the implications of long term storage of new build wastes (in its Implementation Report). In a little remarked paragraph the Report stated:

“It is clear that CoRWM’s recommendations on implementation must be applied at least to new central or major regional stores at new locations if CoRWM’s recommendations are to inspire public confidence. The extent to which they should be applied to other new stores and existing stores is a matter for further consideration”. (Moving Forward: CoRWM’s Proposals for Implementation, February 2007, p 10, Doc 1703).

It has then been considered that the voluntarism process (for a geological disposal facility for legacy wastes) might also apply to long term stores at new locations. This is an issue which CoRWM should examine further, either for legacy wastes and as part of its examination of issues around new reactors. This will require social, political and ethical experts.

CoRWM may also wish to engage the services of appropriately trained economists to comment on the funding arrangements for dealing with legacy wastes, new build wastes or the reuse of nuclear materials.

CoRWM's REMIT

Is CoRWM's remit appropriate? If not, why not? To what extent should CoRWM be responsible for engaging with the public and representing their views within Government?

CoRWM 1 undertook much work on stakeholder engagement, and therefore could do much more to reflect public/stakeholder views, this has not been the case for CoRWM 2. Again, a lack of finance for the Committee's ability to liaise with stakeholders appears to be the main reason for this change. Having said that, CoRWM can never fully represent the public's views to Government or *within* Government. Indeed, we note that in a recent draft document (CoRWM 2748, draft 2 NPS Consultation Response) that it defines the public as:

People who have no particular interest in, and are not affected by, radioactive waste management. [CoRWM distinguishes between “stakeholders” and the public.]

Exactly who is completely untouched by radioactive waste management—given the level of taxpayer funding for both past and current operations—is something that should be explained.

¹ Doc no 2749 DRAFT CoRWM STATEMENT OF ITS POSITION ON NEW BUILD WASTES, 18 January 2010
<http://www.corwm.org.uk/Pages/Plenary%20Meetings/2749%20Draft%202%20CoRWM%20Stmt%20new%20build%20wastes.pdf>

However, it is the case that CoRWM could have a role to play in reflecting of the views of both stakeholders and the public—but only if engages appropriately (given time, money and its own consideration to such engagement). This is not the case at present.

Does CoRWM's remit cover emerging areas of activity, such as new build waste and the UK's plutonium stock pile, or longer term issues and horizon scanning? If not, should it?

CoRWM's remit does not specifically cover “emerging areas of activity”—such as new build waste and the UK plutonium stock pile. It is however inevitable, that (as with CoRWM 1) its work will address these matters if only because of the potential impact these may have on legacy wastes. As noted earlier, CoRWM has recently issued a draft statement on new build wastes. It is planning to do work on new build waste later this year.

It has already commented on issues around plutonium disposition.² In the case of plutonium, an existing nuclear material, CoRWM will have to look at the issues surrounding disposal of this as a waste. If proposals are made to reuse plutonium it will be expected to comment on the potential impacts of waste resulting eg the MOX spent fuel that will be produced will be much more hazardous even than the problematic spent fuel that new build will create. How these might impact on legacy waste disposal, or the disposal of other wastes from new build, is something CoRWM may feel it should comment on.

What is crucial is that CoRWM does not take a position on the desirability of new nuclear and/or the reuse of plutonium. We refer the STC to a letter sent to CoRWM 2 on how it should address new build wastes (received but not printed).

Are there any plans to change the composition or role of CoRWM as the Government's MRWS programme continues? Should there be?

It is not known if there are any plans to change the composition or role of CoRWM. On what additional expertise it might need, see earlier comments on social, political, ethical and financial issues.

CoRWM AND GOVERNMENT

How effective is CoRWM's interaction with different Government departments and agencies?

From what we can gather, even in issues such as the timing of consultations, there is no effective liaison between CoRWM and Government departments and agencies, despite some effort on CoRWM's behalf of make such interaction more effective. Equally important, judging from many conversations and much correspondence on various nuclear events and consultations, we would say that liaison between, and even within Government departments and agencies, is still pretty poor.

Are lines of responsibility and accountability within Government, and between CoRWM and Government, clear?

This presumably concerns responsibility and accountability within Government on matters relating to nuclear waste management? This is a question for CoRWM to answer. However, from an NGO perspective lines of responsibility and accountability seem, at the best blurred and at the worst in conflict. The transferral of the MRWS programme from Defra to the Office of Nuclear Development has created further mistrust within the NGO community and public over the way in which Government is now attempting to “manage” this issue rather than have a full and open dialogue. It is wrong that the department charged with promoting new build is now in control of managing legacy wastes. There is no doubt that claims made about how legacy waste can and will be dealt with are being extended to cover new build wastes—giving the impression that this particular hurdle to new build has been overcome. There are many, many unresolved issues around legacy waste are not being fully discussed. If CoRWM gets sucked into this deceit it will not help its credibility, which is already being undermined (see answer to following question).

Does the Government respond to and use CoRWM's advice effectively? Has the Government taken on board CoRWM's recommendations in its recent reports on geological disposal and interim storage?

No, from when CoRWM 1 reported—and the Government made its initial response to that report—it is quite clear that the Government does not intend to fully respond to, or act on, CoRWM's advice. It has consistently cherry-picked those parts of CoRWM's work it believes are helpful to its case, on legacy wastes and particularly on new build wastes. The Government selectively uses CoRWM's work to give the impression

² Doc No 2523 CoRWM Meeting with NDA on management of spent fuels, plutonium and uranium, 11 December 2008. <http://www.corwm.org.uk/Pages/Other%20Meetings/2523%20-%20meeting%20with%20NDA%20on%20SF%20Pu%20U%20%2011%20Dec%2008%20final.pdf>

legacy can or will be dealt with in order to justify the creation of more wastes through new reactors and possibly the reuse of nuclear materials from reprocessing.

On this issue in particular we urge the STC to consider the letter published by four former members of CORWM 1, including the chairman, Prof Gordon McKerron.³

For the second part of this question, the STC need look no further for the type of discussion CoRWM has had on the Government's response to its work than the draft report on "*Views on Government's response to CoRWM's 2009 report on geological disposal.*"⁴

We understand that parts of that draft were accepted (eg on monitoring the work CoRWM should undertake), but the substantive comments were not accepted in full. However, the document serves as a good indication of the kind of issues that have been discussed by CoRWM in terms of Government response to its work.

Others have also been critical of CoRWM's own approach to dialogue.⁵ Greenpeace is in no position to substantiate the criticisms made in the document referenced, but offers it as an example of some of the criticisms made of CoRWM's own processes.

January 2010

Memorandum by the Nuclear Industry Association

The Nuclear Industry Association (NIA) welcomes this opportunity to respond to the Committee's inquiry into radioactive waste management.

NIA is the trade association and information and representative body for the civil nuclear industry in the UK. It represents over 180 companies operating in all aspects of the nuclear fuel cycle, including the current and prospective operators of the nuclear power stations, the international designers and vendors of nuclear power stations, and those engaged in decommissioning, waste management and nuclear liabilities management. Members also include nuclear equipment suppliers, engineering and construction firms, nuclear research organisations, and legal, financial and consultancy companies.

We note that the Committee has decided to focus on the role and performance of CORWM and so our response covers this area. We wish, however, to be clear that the issue of key significance to the industry is continued good progress by all those involved with the timely delivery of the Managing Radioactive Waste Safely (MRWS) strategy. The NIA also wishes to place on record the importance we attach to maintaining public confidence in the implementation of the MRWS strategy. CORWM has in the past and should in the future continue to play an important part in achieving this.

CoRWM's PERFORMANCE

CoRWM has scrutinised the Government's MRWS process thoroughly but we have noticed some inconsistencies and are concerned about how efficient its scrutiny has been in some areas. While CoRWM's response to government is in many cases presented with a strong evidence base it contains some statements which are presented with no evidence base to back them up (and often there are inaccuracies). For example in their draft response to the Energy NPSs, CoRWM dismisses the NDA's disposability assessments (which have a strong and documented evidence base) in order to say there is no evidence as to the disposability of new build waste. It does this without providing evidence to support the view that this conservative reference scenario is invalid. In contrast Government would appear to have taken a more consistently evidence based approach to decisions on MRWS.

This may of course relate to resources and the extent to which CoRWM has been able to bring in external technical and scientific expertise. However it seems to us that the main problem is that CoRWM has taken a broad approach to its work, attempting to examine a very wide range of complex issues, and we feel it could be more effective if its work were more focused on specific topics, relevant to the stage the Government has reached with its MRWS programme. On occasions CoRWM also seems to stray beyond its remit which we discuss further below.

³ http://www.nuclearwasteadvisory.co.uk/uploads/6140CoRWM1_Letter_201109.pdf

⁴ CoRWM Doc. 2738 Draft 3 (3 December 2009)

<http://www.corwm.org.uk/Pages/Plenary%20Meetings/2738%20Draft%203%20Views%20on%20Government%27s%20response%20CoRWM%27s%202009%20report%on%20GD.pdf>

⁵ <http://www.nuclearwasteadvisory.co.uk/uploads/6072HoL%20Sci%20-%20CoRWM%20-%20Resp%20-%2024%20Jan%202010.doc>

CoRWM's REMIT

We acknowledge that CoRWM's remit is broadly speaking correct but there have been some examples when it appears to stray beyond its remit. For example, the organisation's remit confines it to the issue of wastes rather than other parts of the fuel cycle. So it is right that it considers the issue of new build waste but plutonium could only come within the remit of CoRWM if it is declared a waste. It should therefore not be investigating the government's policy formation in this area. CoRWM's remit is to scrutinise the implementation of government policy in the area of nuclear waste disposal and provide feedback to government to assist in that implementation. It is not to suggest or formulate new policy or to scrutinise other areas of policy. Scrutiny of government policy in the nuclear sector is carried out by select committees in both houses of Parliament and by competent expert regulators including the Health and Safety Executive, Environment Agency, and Scottish Environment Protection Agency.

CoRWM's remit is also not to re-scrutinise its own policy decisions which were arrived at in a lengthy and open debate as this is not within its remit. Much of the value in the original CoRWM process lay in this fundamental deliberative approach, and there is a danger in reopening issues without any such process. For example, we think that opening the issue of borehole disposal again is neither helpful nor productive. We suggest it would be useful if the sponsoring departments could engage more directly with CoRWM over its work programme in order to get the advice they need at the time they need it, focusing explicitly on the waste disposal process rather than broader issues.

CoRWM rightly operates in an open manner and allows the public to participate in its meetings and have a dialogue with it. However its operating method of producing papers—often written only by one member—for debate in the plenary sessions sometimes leads to preliminary views being interpreted as formal CoRWM positions. It would be better if more complete papers which had been subject to internal debate and review were considered instead with the key options outlined for debate in plenary sessions.

CoRWM AND GOVERNMENT

It is difficult for us to comment on the interaction between CoRWM and government departments. However from what we can see Government clearly takes CoRWM's advice into account in formulating its policies although as we stated above the interaction might be improved if CoRWM's work programme was more closely related to the work being carried out under the MRWS programme.

January 2010

Minutes of Evidence

TAKEN BEFORE THE SELECT COMMITTEE ON SCIENCE AND TECHNOLOGY
(SUB-COMMITTEE I)

TUESDAY 9 FEBRUARY 2010

Present	Broers, L (Chairman)	O'Neill of Clackmannan, L
	Cunningham of Felling, L	Oxburgh, L
	Jenkin of Roding, L	Perry of Southwark, B
	Methuen, L	Tombs, L

Memorandum by the Committee on Radioactive Waste Management (CoRWM)

INTRODUCTION

1. This response to the call for evidence is from the Chair of the Committee on Radioactive Waste Management (CoRWM). While it has been discussed with CoRWM Members, it has not been agreed in a plenary meeting.
2. CoRWM was established in 2003 to advise the Government on the method (or methods) to be adopted for the long-term management of the UK's higher activity radioactive wastes (HAW).¹ It reported in 2006 and recommended geological disposal, preceded by robust interim storage and accompanied by an intensified programme of research and development (R&D) (CoRWM, 2006). The UK Government accepted these recommendations and began to implement them (UK Government *et al*, 2006; Defra *et al*, 2007; Defra *et al*, 2008). In 2007 the Scottish Government decided against geological disposal and in favour of a policy of near-surface, near-site storage, while supporting R&D.
3. CoRWM was reconstituted in late 2007 with the role of carrying out scrutiny of the UK programme for the long-term management of HAW and providing independent advice to Government (Defra *et al*, 2007). It reports to the Secretary of State for Energy and Climate Change and to the Environment Ministers in Scotland, Wales and Northern Ireland.

SCOPE OF CoRWM'S WORK

4. CoRWM's Terms of Reference are to:

“provide independent scrutiny and advice to UK Government and devolved administration Ministers on the long-term management, including storage and disposal, of radioactive waste. CoRWM's primary task is to provide independent scrutiny on the Government's and Nuclear Decommissioning Authority (NDA) proposals, plans and programmes to deliver geological disposal, together with robust interim storage, as the long-term management option for the UK's higher activity wastes.”

5. The “primary task” in paragraph 4 corresponds broadly to scrutiny of the Government's Managing Radioactive Waste Safely (MRWS) programme. CoRWM takes it to include the conditioning and packaging of HAW, as well as its interim storage, and the transport of HAW between storage facilities and from these to a geological disposal facility. We take “proposals, plans and programmes” to include R&D and also public and stakeholder engagement (PSE).
6. In addition to its work on the MRWS programme, CoRWM carries out scrutiny and provides advice on the following topics:
 - work by organisations other than NDA (eg British Energy, Ministry of Defence) on the long-term management of the existing and committed^{2, 3} HAW that they own;
 - waste-related aspects of plans for the long-term management of spent fuels, plutonium and uranic materials;

¹ HAW includes both high level waste (HLW) and intermediate level waste (ILW).

² “Committed waste” is waste that will arise in future from the operation or decommissioning of existing nuclear facilities. (As distinct from existing waste, which already exists, and new build waste, which will only arise if new facilities are built.)

³ Sometimes the term “legacy wastes” is used instead of existing and committed wastes.

- plans for the long-term management of spent fuel and ILW from new nuclear power stations (“new build wastes”); and
- the Scottish Government’s development of its policy framework for the long-term management of HAW.

CoRWM’s WORK IN 2008 AND 2009

7. In the two years after its reconstitution in late 2007, CoRWM prepared and submitted three reports to Government. These reports cover:

- conditioning, packaging, storage and transport of HAW, and the management of spent fuels, plutonium and uranic materials (CoRWM, 2009a);
- geological disposal of HAW (CoRWM, 2009b); and
- R&D for interim storage and geological disposal of HAW, and management of spent fuels, plutonium and uranic materials (CoRWM, 2009c).

8. For each report we gathered evidence from and held meetings with NDA and other waste owners, regulators (the Health and Safety Executive, the environment agencies) and other stakeholders such as Local Authorities for existing nuclear sites, communities near those sites, NGOs, Research Councils and Learned Societies. We then produced a first draft of the report and checked its factual accuracy with selected stakeholders, including Government and NDA. We carried out consultation on a second draft of the report via our website (www.corwm.org.uk) and via a stakeholder workshop. We published the results of these consultations on our website, with the reports.

CoRWM’s CURRENT WORK

Geological Disposal

9. One part of our current work on geological disposal consists of scrutinising progress in the voluntarism and partnership approach to the siting of a geological disposal facility (GDF). This includes attending meetings of the West Cumbrian MRWS Partnership as an observer and monitoring Government initiatives in other areas about the invitation to express an interest in holding discussions about hosting a GDF. With respect to Cumbria, we are also scrutinising the British Geological Survey work to screen out unsuitable areas.

10. Our scrutiny of NDA work covers its planning for the implementation of geological disposal, its development of a generic “Disposal System Safety Case” and its formulation of a geological disposal R&D programme. This programme will begin the implementation of the R&D strategy the NDA published last year and on which CoRWM commented at the draft stage (NDA, 2009). We are also scrutinising NDA’s implementation of its PSE framework for geological disposal and its processes for producing a Strategic Environmental Assessment (SEA).

HAW Conditioning, Packaging, Storage and Transport

11. Our focus for 2010 on conditioning, packaging and storage of HAW is the NDA’s development of its HAW “topic strategy”. This will reach a key stage in the summer and will feed into the second NDA overall strategy (“Strategy II”), which will be the subject of a public consultation in the late summer and the autumn. We are currently considering what work to carry out on transport of HAW. At some point we will look at transport logistics and infrastructure requirements but we do not think it is urgent to do this.

Spent Fuels, Plutonium, Uranic Materials

12. The NDA is developing topic strategies for Magnox fuel, oxide fuels, exotic fuels, plutonium and uranic materials. We are following waste-related aspects of its work. In addition, we may also respond to the forthcoming UK Government consultation on the long-term management of plutonium.

New Build Wastes

13. We are preparing a statement of CoRWM’s current position on new build wastes and a response to the Government consultation on the draft National Policy Statement for new nuclear power stations. To ensure that we understand the proposals for managing new build wastes, we have held meetings with the regulators’ Generic Design Assessment (GDA) team and with the companies whose reactor designs are being assessed in the GDA (the “Requesting Parties”, Westinghouse and EDF/AREVA).

Scottish Government Policy

14. We advised the Scottish Government on the preparation of its draft policy framework and accompanying SEA. Now that the consultation on these has begun (Scottish Government, 2010), we are holding meetings with a number of stakeholders to gather information. We will then prepare a formal response to the consultation. After this, we will evaluate the whole of the Scottish Government's policy development process, including its PSE activities and how it has taken into account the views of the public and stakeholders.

CoRWM's ASSESSMENT OF ITS OWN PERFORMANCE

15. CoRWM has devised three criteria by which it will judge its own success. These are that CoRWM:

- is considered to be a trusted and authoritative source of advice;
- carries out its work to a high standard and to time and budget; and
- has demonstrable positive effect on UK programmes for the long-term management of HAW.

16. We judge our success by asking stakeholders and the public for their views on the Committee's performance. We do this by letter, via our website and at our own PSE events. We intend to internally review whether we are meeting our success criteria through discussions at plenary meetings, about twice per year.

GOVERNMENT RESPONSES TO CoRWM's RECOMMENDATIONS

17. Government has responded to two of our 2009 reports (DECC et al, 2009; DECC & DoENI, 2009). A response to the other report is expected shortly.

18. We have discussed the Government responses in our plenary meetings and have decided to judge Government by its actions, rather than its words. We recognise that some of the issues on which we have made recommendations are difficult and that it will take Government time to decide what to do about them.

19. The response to our geological disposal report is recent (November 2009) and it is too soon to reach a judgement on it. The Government response to our report on interim storage was issued in July 2009. Thus far, neither the Government nor any other organisation mentioned in the response appears to have taken any major actions to meet our recommendations. We are continuing to monitor developments.

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28 January 2010

Examination of Witnesses

Witnesses: PROFESSOR ROBERT PICKARD, Chairman, PROFESSOR WILLIAM LEE, Deputy Chairman, and Ms MARION HILL, Member, CoRWM, examined.

Q1 Chairman: I would like to welcome our witnesses this morning and members of the public. This is the Select Committee on Science and Technology's only evidence-taking session for their inquiry into radioactive waste management: a further update. The Committee has looked at this subject on a number of occasions before, so we are just holding this very short inquiry this time so we can get it through before the election, and it is primarily orientated, as you know, towards understanding the role of CoRWM 2 and how you feel it is proceeding. Everybody should be aware that we are being webcast; I see the red light is on. There is an information note outside that I hope members of the public have picked up. There are also declarations of interest for all of us on the Committee. Perhaps we may start by our witnesses identifying themselves for the record so that we have that on the audio record.

Professor Lee: My name is Bill Lee. I am Head of the Materials Department at Imperial College and Deputy Chairman of CoRWM.

Professor Pickard: Robert Pickard, Chairman of the Committee on Radioactive Waste Management.

Ms Hill: I am Marion Hill. I am a member of CoRWM and I lead its task groups on interim storage and on new build wastes.

Q2 Chairman: Thank you very much. If you like, you can make an opening statement or we can go straight into questions. Would you like to make any opening statement?

Professor Pickard: Thank you, my Lord Chairman, no.

Q3 Chairman: Let me start then. Greenpeace felt that CoRWM's scrutiny of the MRWS programme was "not as effective as it could be" mainly due to a "lack of funding". Does CoRWM feel that it has sufficient resources to carry out its scrutiny function?

Professor Pickard: I think we would say that our funding is adequate at present for the task we have in hand. I think it is almost inevitably true of most organisations that with additional funding one can achieve more in many different ways. We could see, for example, that if we had enhanced secretarial support we might be able to achieve certain things that we might not otherwise undertake later on in the process. We could develop our website more, which would be a real advantage because nowadays through the website we can conduct a lot of engagement with the general public and stakeholders, but I would say our funding is adequate at the present time.

Q4 Chairman: What support do you have for the website?

Professor Pickard: We have identified within our existing budget a sum of money that we have been using to develop the website and we hope to launch a new website in April.

Q5 Chairman: And you have contracted that out, have you?

Professor Pickard: Yes.

Ms Hill: It is contracted out and it is done through the Central Office of Information. They have given us help and advice, as have the Department of Energy and Climate Change. It has gone to a contractor but the contractor is working for all of us to revamp the website essentially, completely rebuild it, because the one we have at the moment is really a temporary stopgap. For CoRWM 2 we need something much more professional.

Q6 Chairman: And there is considerable public interaction over the website, is there?

Ms Hill: It is fairly well visited, but one of the main things is to make it more attractive so that it attracts more casual visitors, if you like. We obviously get people using it who know the committee and want to follow what is going on, but one of the challenges is to make it more attractive to others because we probably do not get that many casual visitors at the moment.

Q7 Lord Tombs: Does CoRWM feel that the MRWS programme is progressing at sufficient speed, and in particular with progress made in siting the geological site?

Professor Pickard: Certainly, if we look at the international experience, other countries have found this a very longwinded process.

Q8 Lord Tombs: So do we.

Professor Pickard: So in a sense we should not have high expectations of too rapid progress because of the nature of the work, which is to encourage a voluntary approach and to give local communities time to absorb the information and feel comfortable about the development of the process. Bearing in mind that that is the nature of the game that is afoot, I think things are progressing satisfactorily at the present time. I must say that initially the committee was concerned that, having sent out invitations to communities to volunteer or to express an interest in volunteering to be a host community, there was very little immediate action to follow up the invitation. CoRWM itself then made inquiries of local authorities and found that in at least 17 cases the

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individual who received the letter of invitation did not take it forward to initiate a debate within that particular authority, so we were concerned. We made our concerns clear to Government, that it would have been helpful to have more follow-up of the original invitation immediately, but I am pleased to say that when Lord Hunt took over the portfolio with the transfer of the committee's secretariat from DEFRA to DECC, he did make efforts to renew the invitation and follow through just to encourage other regions to show an interest.

Q9 Lord Tombs: This Committee's first report on waste disposal was in 1998, which is 12 years ago, and I think you would probably agree that we have not made much progress since then. What would you take as the effective starting point? There was a lot of wasted time, of course.

Professor Pickard: Of course, the MRWS White Paper in 2008 set the scene for a new beginning by emphasising the voluntarism approach and there is no doubt that there has been positive progress since the issue of that White Paper.

Q10 Lord Tombs: Fairly recent.

Professor Pickard: Yes.

Q11 Lord Oxburgh: Could you give us some indication of the number of expressions of interest that have been received?

Professor Pickard: There is only one, of course, in regional terms, from Cumbria which involves a slightly difficult situation because you have a two-tier authority so you have Cumbria County Council with statutory interests and then you have Copeland and Allerdale district councils effectively, of course, having their own statutory interests. That creates a difficulty because they have to decide amongst themselves who will make a final decision to participate and at the moment the Government has left it to the local people to decide how that decision-making process works for them.

Q12 Lord Cunningham of Felling: Perhaps I should start by declaring an interest, my Lord Chairman, in that I was the Member of Parliament for Copeland for 35 years and, as Lord Tombs has said, we have watched progress, or the lack of it, on these issues for a very long time. Has CoRWM, or anyone else for that matter that you may know of, ever made an environmental impact assessment of the case for moving this waste from Sellafield to somewhere else in the country?

Professor Pickard: I am not aware of a search for a specific place but from time to time there have been investigations of different geologies superficially.

Q13 Lord Cunningham of Felling: Let me set that aside, if I may. The point I am trying to get at is this. Is there not a huge series of environmental implications about taking the waste from where most of it is currently located, namely, in Sellafield, and transporting it across the country to somewhere else? What is the case for doing that?

Professor Pickard: There is no doubt that transportation of radioactive waste does create new risks and, of course, it can be a very expensive procedure as well, so there is a lot to be said for trying to deal with radioactive waste as close as possible to the point of origin; there is no doubt about that. There is no doubt also, though, that the committee feels that it would be helpful if there were at least two regions expressing an interest simply to provide comparative data between the two situations and also offer more variety of choice for technical solutions, particularly different types of geology. Notwithstanding the transport problems and difficulties, I think CoRWM still feels that it would have been helpful if there had been more than one region showing an interest.

Q14 Lord Jenkin of Roding: Of course, the Treasury were always deeply unhappy with the thought that there would only be one volunteer and it would be screwed. Have you studied at all the Swedish experience that was very well written up in the *Financial Times* magazine in September as to how they chose between the two volunteer communities? It seemed to me that that was an absolute object lesson in how it should be done.

Professor Pickard: Yes, the committee has also visited Sweden and Finland to look at the facilities and talk to the local people involved in that process, and I will be going to Sweden myself again in May to talk to the local people about their process. One thing that was noted in a comparison between Sweden and the United Kingdom was that the Swedish communities did seem to have a relatively high level of trust in Government and government activities in a way we do not find as obvious here in the United Kingdom.

Q15 Chairman: Have some dates been set for making decisions in Cumbria?

Professor Pickard: No. From the White Paper onwards the Government has simply allowed sufficient time for deliberation and discussion and opportunities for the local authorities to gain independent expert advice themselves, so it has not set a deadline for the next stage of the process to be activated, I think deliberately because it does not want to put pressure unduly on local communities.

Q16 Chairman: But this could go on and on, could it not? There is not even a date when people think they might have a date.

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Professor Pickard: It is true that there is not a specific date but, in fairness certainly to the partnership that has developed in Cumbria, they are moving on. They have formed a very good democratic system of representation for Copeland, Allerdale and Cumbria. They are sharing the chairmanship of the partnership meeting. They have set up a website. They have distributed many thousands of leaflets and explained the situation to all the local people. They have had lots of focus group meetings on a systematic basis to reach out to the electorate in Cumbria to gather in their information. I think they have made a very good start and they are definitely progressing. They are gathering information. They are providing in a sense educational material to the local community. I think it is, so far, so good, but they are progressing probably as rapidly as they can locally.

Q17 Chairman: And the progress they are making is not being hindered by a lack of any information from Government?

Professor Pickard: I do not think so at the present time. They have approached CoRWM from time to time for information to explain terminology, for example, and they did in fact ask us to give us a presentation on the concept of retrievability, but we declined to give the presentation ourselves because in scrutinising the process we did not want to become part of any policy in developing the process but what we did was direct them to sources of information that would answer their questions. I think Bill probably has something to say in this area.

Professor Lee: On sources of information?

Professor Pickard: Do you think they have enough information?

Professor Lee: Yes. I think all the interaction we have had with the community up there indicates that they are quite happy with the support they are getting both from CoRWM and also from the Government side. I think there has been a distinct improvement in their perception of government support over the last few months.

Q18 Baroness Perry of Southwark: Have they been themselves to visit Sweden and talk to their opposite numbers there? It might be very reassuring to them to see a good example and see how things were done.

Professor Pickard: I do not believe they have been yet.

Q19 Baroness Perry of Southwark: Perhaps you could take the chair of this splendid democratic committee with you when you visit them.

Professor Pickard: I think that is a good point. We did invite Elaine Woodburn, who was chairman at the time of the partnership committee in Cumbria, to give a presentation to CoRWM at a public meeting and that went extremely well. It was interesting that she did raise points that again you can only gather by

talking to people on the ground. For example, she said that people forget how one initiative in an area can impact on another initiative which appears to be quite unrelated. She mentioned, for example, that there had been a downgrading of a major road in the area such that it would not be maintained at the standard that it would be otherwise if it were kept at a higher rating. As a consequence, that seems to have flagged up to the local community that that particular communication track was not considered important in a national sense, and yet it is the very track that would be used to bring materials in and out and to help in the development of the facility. She did feel that sometimes initiatives that were happening in their area did not in a sense dovetail with other activities, because if such an important development were to go ahead in Cumbria, again, they would expect the roads and the infrastructure to be suitably developed to meet the demand.

Q20 Lord Jenkin of Roding: That must be the primary price, as it were, that the local community should properly demand in order to host the facilities, the communications to West Cumbria, which are in fact such a problem, not only for the transport of nuclear materials but simply for the whole upgrading of the area for development.

Professor Pickard: That is right. This should be one of the community benefits of engaging in such a large civil engineering project.

Q21 Lord Jenkin of Roding: I hope that they are focusing on that and not on other more, as it were, peripheral things.

Professor Pickard: Government has been very even-handed in that respect. It has said to the community, "Discuss amongst yourselves what developments you feel would be helpful to this process in the area and would help economic development in the area", so it is up to the local people to carefully consider what benefits would be beneficial to the project and also beneficial to the community.

Q22 Lord Jenkin of Roding: And I mention this because a former senior manager at Sellafield, Laurie Haines, who came from the Department of Transport, his eyes lit up and he said, "That's the answer! That's what we must have!"

Professor Pickard: I hope they will take full advantage of that opportunity.

Lord Cunningham of Felling: It is difficult not to indulge myself in wry smiles, listening to some of this, I must say. The people of West Cumbria know what they want pretty clearly. They want far better road and rail communications. They have known that for decades. They have borne the burden of all of this stoically and very reasonably, in my view far too reasonably, and it is no good us just sitting round here

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saying that they should say what they want. They have said what they want to me and other representatives, to successive Westminster administrations, almost to no avail. That is the reality of that side of the argument. To come back to the question of people visiting Forsmark in Sweden or wherever it might be, the problem with this is that successive leaders of all the political parties over decades have visited facilities in other countries. The problem is they then either retire, they die or they move away and a new leader comes along and he or she then goes and still nothing happens. You can educate people for as long as you like but they move on, they pass away, so this is a continuum of people learning and getting up to speed but no decisions ever come.

Q23 Chairman: I think we have got to move on past this topic. It was behind my question, this very fact: was the Government clear about the benefits it would provide to the region, because if that information is not clearly available and some commitment is made I can see people being very reluctant to proceed?

Professor Pickard: I think the Government has made an effort not to be too specific and not in a sense to lead the argument. What it has done is give encouragement to the local community to debate amongst the local people in order to identify what community benefits would be really appreciated. Clearly, the Government would like to see at the end of the day promotion of the economic development of the area.

Q24 Lord O'Neill of Clackmannan: How do you go about developing your work programme? In the future where do you see yourselves going? What would be your areas of activity, because there is always a danger that you run into territory that belongs to other regulators? How are you addressing these challenges?

Professor Pickard: The most important thing, of course, is liaison and interactive communications. The interpersonal activity at all levels between CoRWM and all cognate organisations is absolutely critical to CoRWM's ability to do its job properly, so we are constantly interacting with the regulators at several different levels. I try to maintain at least three levels. I try to maintain contact with all cognate organisations directly with the chief executive or chairman of the organisation and I encourage members to build relationships with the intermediate and senior management, and then I encourage members to take every opportunity to talk to people who are actively out there inspecting facilities or building facilities at the cutting edge. By encouraging a lot of personal communication and interaction we gather information that allows us to initially put on the table all the different issues that we could be

looking at, and we get an enormous number of issues. We then go through an extremely lengthy iterative process of trying to focus down on which items need to be looked at more immediately and which items can be put on the back burner with a watching brief. When I say "iterative", we are in a sense continuously consulting with cognate organisations but, of course, we are also continuously consulting with our sponsors, both in Westminster and in devolved governments, because at the end of the day they will feed in very critical information about the timeliness of that advice that they would like to see. The work programme has eventually to be agreed with Government, so we begin looking at the work programme about six months before it has to be agreed with Government.

Q25 Lord O'Neill of Clackmannan: We have had criticism of you from the Environment Agency and the Geological Society, and this process in some respects is borne out by what you have said, that your work is far too wide, that you cast the net too widely and perhaps as a consequence of that you are insufficiently disciplined and you perhaps take longer to do things than is necessary.

Professor Pickard: No, it is not a lack of discipline. It is a process of beginning by getting all the issues out on the table so that everyone can see them and there is a degree of induction then in that, having looked at all the issues, certain issues really do shout out in terms of immediacy and other issues do not. To be inclusive and to win the confidence of all stakeholders and the general public in particular, they have to see that we are aware of all the different issues, even though subsequently, at the end of the crystallisation of the work programme, we may give a very low priority to a particular issue that a particular group in society feels very concerned about. It is important that they see that we were aware of it, we deliberated on it and then subsequently we decided that in terms of timeliness and the immediacy of a particular requirement and the limitation, of course, of the resources at the end of the day, we adopted a prioritisation process. To my mind that seems to be the best way forward to carry everyone with us. I think the worst thing that can happen is if we appear to go straight to focus on three or four different issues and there is very little evidence or audit trail to indicate that we have considered the other issues. Initially it may look as if we are looking at too many things but at the end of the day I think people will see that our work programme, when it is agreed with Government, will be much more focused than it looks like at the beginning of the process.

Q26 Lord O'Neill of Clackmannan: The NDA have said that the academic background of many of your members seems to suggest that you are more seeking

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after truth or driven by curiosity rather than by a set of objective priorities or criteria.

Professor Pickard: I will let Bill comment on that.

Professor Lee: I am mildly offended by the comment, being an academic. The academic community is well aware of the need for a safety case and the practical implications of this programme, and we also are aware that to understand fully the implications of storing radioactive waste and then disposing of it over hundreds of thousands of years you do need some fairly clear fundamental understanding of the likely processes that may occur over those timescales and you also have to argue that in your safety case. Yes, we are aware of the need for a fundamental understanding, and, yes, we are also aware of the need for the engineering and pragmatic approach to getting the waste encapsulated, safely stored and disposed of.

Q27 Lord O'Neill of Clackmannan: Maybe I can just tie up this area with one last point about the MRWS programme. To what extent do you see yourselves having to structure your agenda to pass comment and advice on their programme? That seems to be something which has not been mentioned by you in terms of your work programme development.

Professor Pickard: Yes, I think some observers of CoRWM's activity will initially see differences between the way in which CoRWM functions at the moment and the way in which it functioned, for example, four or five years ago, because initially the committee was asked to examine different policy options and then recommend particular policy options to Government for ministerial decision, and in that sense it was proactive about its initial objectives. Once the Government accepted the bulk of the CoRWM recommendations the committee moved into a new phase and was appropriately reconstituted because the new phase is a phase of scrutiny of the implementation of the policy that the Government is following, so here we need to know what NDA is planning and other implementation groups, and we need to know what Government is planning so that then we can fulfil our remit, which is to deliver appropriate advice in a timely way. In that sense we have to be reactive to what is going on. We are proactive where we can be, for example, in talking to all the different groups and sharing drafts of our documents and drafts of their documents with them so there is a mutual exchange of preliminary document development and strategic development going on. At the end of the day I think we are getting the right balance between being proactive where we can be and being driven by other people's agendas where we have to be because we cannot scrutinise a particular strategy finally, of course, until it is produced. We try to obtain timetables from cognate groups that are relevant to our work and then we will

try to synchronise the objectives of our work programme to those timetables, and that is an inevitable aspect of the scrutiny function.

Q28 Lord Jenkin of Roding: The Environment Agency has noted that CoRWM should engage with a wide range of stakeholders but it must ensure that the work is soundly based, and DECC has made that point as well, that the work needs to be evidence-based. There have been some criticisms, as I am sure you are aware. Both the NDA and the Nuclear Industry Association have been critical that at times there were inaccuracies and that you have missed the point. Do you understand those criticisms?

Professor Pickard: I understand them and the committee certainly understands them, but when the point is made as you have made it in a sense it is taken out of context with regard to the process that we follow. Because we are trying to be as open and transparent as possible we expose our preliminary thinking and our preliminary drafts of reports at a very early stage, and we do that at the risk of exposing naïve thinking and gaps in the information base because when we do that it is at a preliminary stage and we are trying to give people every opportunity to see how we are developing our formal advice. By the time we get to our formal advice, of course, we have then filled in the gaps in the information. We have invited the NDA, the Environment Agency and the regulators generally to give us advice, which they do, and give us information, which they do, so that by the time we have then gone into one or two consultation phases with stakeholders as well on the intermediate draft documents, the final document is usually extremely sound. We cite all the evidence in our reports to Government, and I am very confident that our final authoritative, formal reports to Government which give recommendations to Government are solidly evidence-based and the sources of the evidence are always quoted and cited very precisely in the documents. We produced three such documents in 2009 and I have not had a single complaint about accuracy or lack of evidence.

Q29 Lord Jenkin of Roding: I want to come to how you do this in a moment, but one thing that has come to us in evidence is that in what they describe as your draft response to the energy national policy statement you dismissed the NDA's disposability assessment which had a strong and documented evidence base in order to say that there is no evidence as to the disposability of new build waste. Was that draft subsequently amended?

Professor Pickard: I will let Marion answer this because she is leading the task group in this area.

Ms Hill: I am the culprit; I drafted that. The wording will be changed but I think the nuclear industry association has perhaps misread in some sense what

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we have written. The intention was not to dismiss the NDA evidence and say it is not evidence. The intention was to say that it is a very narrow focus that they have taken and they could have put forward much more evidence about the disposability of new build wastes and they did not, and that is what we say. I think they have misread to some extent what we have written, so the words need changing to make our point clearer. We are not dismissing what they have done as not being evidence; that is not the point. We are saying there are other things they could have done and should have done.

Q30 Lord Jenkin of Roding: We are not seeing the NDA. They have put in what I regard as an extremely good paper and I listened to them giving evidence at the other end of the Palace to the Select Committee there, but I note what you say. Coming back to the question of how you consult, I have been given sight of the workshop which Bill Lee chaired in September, I think it was, when they were looking at the R&D for long-term management of radioactive wastes. It is a rum document. The question I want to ask is, bearing in mind what appears to be the comparative middle rank of the people who attended that—and I do not know them all, of course, but there are very few names that come from a senior position—what weight do you give to the outcome of that? As I understand it, it helps you to answer the question, “Are we missing anything?”, but when they come and vote, seven votes for this and four for that and so on, I would find that a pretty rum way of making decisions. Would you like to comment?

Professor Lee: Yes. That is a clear part of our stakeholder engagement and public engagement. There were members of the public and interested stakeholders. They may not have been the top people in the particular industry or regulators, but we got useful feedback. It was also part of our process of letting other people know what we were doing about the R&D report, and the whole process of gathering evidence requires that we do that. That was an opportunity for people to meet us and speak to us. There were other opportunities for consultations that went out for people to give written evidence, and I think our evidence base for our formal reports is entirely sound.

Q31 Lord Jenkin of Roding: Of course, we have had the report but neither you nor we have had the Government response. Having seen what you have recommended in your report, I am not surprised that they are taking a bit of time over it. Could you just explain a little further then how you move from this sort of almost scattergun approach to the thing to where you come down to some fairly clear and specific and, it seemed to me, quite wise recommendations?

Professor Lee: I can do that. The executive summary of the R&D report explains how we work in some detail, paragraph 4. We gathered information from the NDA, site licence companies, other nuclear site licensees, the research councils, learned societies. We spoke to everyone whom we thought it was appropriate to speak to. We also held stakeholder events; that was just one of them. We held technical meetings to gather evidence on storage options and disposal options in Sheffield. We met with the Institute of Physics in London with a crowd of invited relevant stakeholders and discussed in some detail the technical cases. We produced drafts and they were put up for consultation. We received a large number of responses, some of which corrected factual errors; others of which provided us with much useful information. We responded to all of those and all of that information was incorporated into the final report.

Q32 Lord Jenkin of Roding: One should not read too much into the various little polls that you had?

Professor Lee: I am surprised you have read it.

Q33 Lord Jenkin of Roding: I am comforted by that. I think it is worth noting that only in January in the journal *Nuclear Fuel* there was a very interesting article under the heading “Regulators find UK repository group lacks clear path on research needs”. It seemed to me that that was the Environment Agency and others making a point, and it seems to me to follow very closely what you have said: there is no co-ordinating mechanism, and it seems to me that that is hugely important.

Professor Lee: Yes, and in part of that report we say that the regulators should be encouraged to use the powers and facilities that they already have to commission appropriate research themselves. It is one of the contributing agencies.

Q34 Lord Jenkin of Roding: One of the problems, of course, is that you have got this huge, lovely research building run by the NNL at Sellafield and almost nobody uses it because at the moment they are not allowed to, for instance Manchester University; they are only allowed to use it if people come along and pay. Do you have a view on that?

Professor Pickard: We have a definite view that active research facilities where intermediate level and high level waste can be properly studied are relatively limited in availability in the United Kingdom, and where they do exist it is quite difficult for many researchers to gain access to those facilities. Bill might want to say more about that as an active researcher.

Professor Lee: I think you highlight a problem that there is no obvious route for people to get access to do research on radioactive materials in the UK. There is

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some confusion about the process. I have received a few communications in the past few weeks which suggest that there is an improvement. People are becoming aware of other active facilities at other institutions and people are trying to share those, and also there is the opportunity through various European programmes, but it is rather unfortunate that the UK, which has a large nuclear industry, does not really have the active facilities that are needed.

Q35 Lord Jenkin of Roding: And who do you think is responsible for co-ordinating that? Would it have to be Government?

Professor Lee: That is a tricky question. It gets complicated because NNL is owned by some other companies now. I think there needs to be perhaps some direction from Government.

Chairman: It is something that you can bring up in your response to the Government's response when eventually you get that response. I think we have got to move on now. We have got so many questions and we are seriously running out of time.

Q36 Lord Methuen: The Environment Agency noted that CoRWM might benefit from "additional membership that has an in-depth practical knowledge of operations and engineering on nuclear sites". Would you care to comment? The Geological Society also commented on the need for further geoscience expertise going forward.

Professor Pickard: In a committee of 15 members we have three members from the geological sciences and we have three members with a physics and engineering approach. One of them was an active worker in the nuclear industry at Dounreay for many years before retiring and is extremely knowledgeable about the management of nuclear projects on site. I have held appraisals with every member of the committee where I have always asked them a series of formal questions, one of which has been, "Do you identify any skill shortages on the committee during our deliberations and, if so, do you think we should be trying to fill those skill shortages?", and the response I have had from all the members individually in private conversation and in the appraisal interview particularly as well is that they feel that there is adequate representation of the different disciplines. We have the opportunity to co-opt to the committee or its sub-committees any particular expertise that we feel is missing during the debate on any particular issue, and we would not hesitate to do that if we felt it was necessary. And, of course, whenever we have wanted specific information we have found that the existing committee members do have adequate linkage to the different scientific societies and the different cognate bodies to be able to talk to a particular expert in a particular area, so we have not felt the need so far to

co-opt an individual with a particular skill. In answer to your question, I would say that at the moment knowledge of the nuclear industry and the way in which it works is adequately represented and geological sciences are adequately represented at the moment. In fact, in many ways the geologists are chomping at the bit to see the process move on to where they can see some data around about geology, so I would not want to strengthen the geological representation at this moment in time.

Lord Methuen: At the expense of the engineering.

Q37 Lord Cunningham of Felling: The late Harold Wilson once coined a phrase to describe the pressure he came under to set up royal commissions. He said, "Royal commissions take minutes and spend years". We have been at this process now in this country since the mid to late eighties. I cannot recall off the top of my head how much Nirex expended on seeking solutions to finding a long-term repository for nuclear waste but it must have been somewhere around £1 billion. When you look at your criteria for success what place does your financial cost take in all this?

Professor Pickard: That is a difficult question to answer. Our criteria for success I feel we are meeting within the timescale that we have been functioning in. We have been functioning now for two years.

Q38 Lord Cunningham of Felling: Excuse me, yes, CoRWM 2 has been functioning for two years but we have several years of CoRWM 1 before that, did we not, so all in all it is probably nearer 10 years?

Professor Pickard: I think CoRWM 1 did extremely well in reviewing all the different policy options and then putting together advice that had broad support for dealing with legacy waste. Clearly, a complication arises with the arrival on the scene of the deliberations in relation to new build waste and the committee is extremely concerned that any planning and discussion about new build waste should not inadvertently delay our progress towards the safe interim storage and safe disposal of legacy waste which we already have on our doorstep. One of the things that is changing in terms of pressure for progress is that many of the materials that we have were packaged with a view to being stored for a certain length of time. Whether that is 30, 50 or 100 years, clearly a lot of material has been packaged now for 30 or 40 years and there will come a point where, as packages deteriorate, the material will have to be repackaged, and repackaging is a very expensive process. It would seem very sensible economically in terms of use of public monies and public resources not to unnecessarily keep packaging and repackaging if a disposal option can be enacted because it simply takes money away from the fulfilment of the long-term protection of future generations. Therefore, in a

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sense, because of the packaging issues and the cost of packaging, there is a little bit more pressure to try and get some progress at least with legacy waste.

Q39 Lord Cunningham of Felling: You said that CoRWM 1 did a good job but in reality they came to the same conclusion Nirex had come to 10 years earlier, did they not?

Professor Pickard: There is some truth in that, but what I would say about the first three years of CoRWM's existence is that it was a very different process of consultation. It did carry with it sectors of our community that felt alienated during the Nirex activity years, who felt that their voice was not heard, and CoRWM will make every effort to continue to listen to all the different sectors of the communities. That is important.

Q40 Lord Cunningham of Felling: I am not criticising that, but, in consideration of your remit and the expenditure that is involved, can you give us any cockshy prognosis of when you think will be the point, as football managers would say, for getting a result?

Professor Pickard: Ideally, we ought to be in a position by 2040 to be putting wastes into a geological facility for disposal.

Q41 Lord Cunningham of Felling: Excuse me. You say you should have a repository of some kind open and operating in four years' time?

Professor Pickard: It will take 120 years to complete the process of starting to build a geological facility and completing the filling of it with existing legacy waste, so by 2040 we would like to have the operation under way.

Q42 Lord Cunningham of Felling: I am sorry; I must have misheard. You said 2040, did you?

Professor Pickard: Yes.

Q43 Lord Cunningham of Felling: Two-zero-four-zero?

Professor Pickard: Yes.

Q44 Lord Cunningham of Felling: That is incredible.

Professor Pickard: If we could be in a position to start placing wastes in the repository by 2040, then I would consider that to be very good progress, considering all the different interests, communities, policies and also the financial implications. One of the real problems is maintaining political continuity and political will to get this job done. That is terribly important and I understand; I sympathise with the Government not wanting to rush too much and therefore being accused of railroading some particular process through against the wishes of local people, so I understand Government's reluctance to

set targets that are immediate. I think if we could start placing the waste in there, one would anticipate that it would be a continuous process of creating a cavity and placing the waste, backfilling, sealing and then creating another cavity and then placing waste, so we do not have to build an underground cathedral that is then emptied which takes a very long time and then start placing the waste. I would expect some continuous process of fill and build, fill and build. It will be fill, seal and then build another area.

Q45 Lord Cunningham of Felling: Not retrievable?

Professor Pickard: Not retrievable in the initial concept, because if it is designed to be retrievable, CoRWM would not consider that to be disposal; CoRWM would consider that to be storage.

Q46 Baroness Perry of Southwark: Moving on to the committee's remit, do you see your role as providing scrutiny and advice solely on scientific and technical matters, or do you also see your role as commenting on social, political and ethical aspects of the MRWS programme?

Professor Pickard: I think it was John Donne who gave us the statement, "Any man's death diminishes me because I am involved in mankind", so I have no doubt myself that all individual human beings carry a societal responsibility and an ethical responsibility in relation to the actions that they perform, and it will be true to say that every member of CoRWM was selected not just because of their scientific and technical capability and nuclear capability; they were also selected in terms of the evidence that they were able to provide, that they had exercised societal and ethical responsibility in their past endeavours; they were very important criteria in the selection of individuals. Having said that, clearly we have neither the remit nor the resources to embark on a large philosophical study of the broader aspects of societal and ethical issues, but where we come across a situation where societal and ethical issues either impede or enhance the implementation of the Government's policy then I think CoRWM would be attracted to that particular issue and would consider it, but we will not set out initially to develop and apply a large amount of our resource to looking at societal and ethical issues unless they are clearly identified to be influencing the success of the implementation process because our terms of reference are quite specific, that we must scrutinise the implementation of the process. We are not required to form judgments about whether or not the government has got the right energy policy or the wrong energy policy, but where the government's energy policy has ramifications in terms of fulfilling the MRWS process, then, of course, we would take an interest.

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Q47 Baroness Perry of Southwark: I understand your choice of your technical members because you say that you have evidence that they do have a concern for the ethical and social issues, but do you feel that you need additional expertise with this particular thing?

Professor Pickard: Yes, we would not hesitate. If an ethical issue or a societal issue arose in conjunction with the implementation of the Government's policy of developing safe interim storage and safe and secure disposal and we felt that we needed more expert advice from social sciences or from persons who have experience in dealing with very specific ethical issues, I am certain that the committee would not hesitate to bring in that experience.

Q48 Lord Oxburgh: I think my question you have at least partially answered in your previous answer to Baroness Perry, but, as you are aware, Greenpeace draws attention to the fact that CoRWM 1 got involved in public engagement to a significant extent and that you have not, and I think you have already said that this is outside your terms of reference, which I think is a fair answer. On the other hand, if one looks, for example, at the negotiations that are being carried on with the Cumbrian authorities, that is one level of public engagement, if you like. Do you scrutinise and keep an eye on the processes by which that engagement and that interaction with the Cumbrian authorities takes place, and if you thought this was not being done in the right way to whose attention would you draw this?

Professor Pickard: Initially observers of this discussion could draw an inference from your statement that we do not regard PSE as part of our remit, but concern about PSE is very much part of our remit, so our starting point is to scrutinise the public and stakeholder engagement processes of all cognate parties, particularly the NDA and the Government, and if we detect that they are not fulfilling their purpose and they are not giving an adequate representation of the different views that we feel are out there, then we would not hesitate to bring that to the attention of Government and to the attention of the relevant bodies. We do envisage periodically undertaking public and stakeholder engagement workshops just to check that what other process are delivering match up to our own, but we do not have the resources at the moment to conduct the quantity of engagements in a formal way that CoRWM did during its first three years. We have a special task group devoted to looking at the PSE issues and all the members are concerned to know what is happening in terms of public opinion and stakeholder activity. We hope to develop a website where we may put questionnaires on it that go out on a regular basis to opinion formers and members of the public to keep testing the water to see if people

feel that they are being included in the process, and we will use the website as efficiently as we can to improve our public and stakeholder engagement. If we do find difficulty, one thing we have to be very careful about is that we do not generate stakeholder fatigue because if the NDA is organising gatherings and local communities are organising gatherings and Government is organising gatherings we do not want then to add an extra burden onto the process so that people feel that they keep giving their view but it is not having any effect. We do not want to make things worse by having too intensive a programme of engagement, but where we feel there is a critical point that is not being tested or reached then I would expect the committee to identify that and debate and determine what way we could use to test that particular aspect of public opinion, and then when we have tested it as independently as possible we would make that information, of course, immediately available to all interested groups.

Q49 Lord Oxburgh: Can you not do some of this monitoring indirectly by looking at the minutes of the consultations and so on, which would tell you quite a lot?

Professor Pickard: We do and we share draft documents constantly with cognate groups that are involved in PSE, and we send members of the committee along as observers. We have two observers, for example, at the West Cumbrian partnership and we have observers at all the major committees that are discussing these issues, and we gather as much information as we can. We conscientiously feel we understand what is happening in public and stakeholder engagement. For us it is absolutely critical for our own credibility that every sector of society that has an interest in radioactive waste has an opportunity to communicate with us and share its concerns with us; that is absolutely critical to our method of working.

Q50 Lord Oxburgh: Coming back to this question of timescale which underlies quite a lot of what we have been talking about, who actually has the responsibility of moving on or not these consultations and discussions, and who has the responsibility for their success or not?

Professor Pickard: Well, Government will take the key decisions as decision points are reached. The NDA and the implementers clearly have a mandate to press ahead at an appropriate pace to ensure that there is progress, the regulators themselves have got to be sure that preparations are in place so that environmental assessments can be adequately undertaken, and the Environment Agency, for example, produced an excellent document recently to give guidance on what sorts of issues would be involved in the development of a case for a geological

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disposal facility, so I think a lot is happening that is of a preparatory nature, and I am reassured that, at least as far as Cumbria is concerned, the local authorities there and the interested parties there are doing an excellent job in getting things under way.

Chairman: I think we have discussed public engagement as much as we can.

Lord Jenkin of Roding: I think Professor Pickard has answered the question which I was going to ask, which was how much you feel it is your duty to help to develop government policy rather than just, as the NDA said, taking it as read and scrutinising that. I think you have answered that.

Chairman: So let us get on to the specific question for Government.

Q51 Lord Tombs: Were CoRWM consulted by the Government before they published their draft National Policy Statement on energy infrastructure?

Professor Pickard: Yes. While the document was being developed, those aspects which related to radioactive waste management were discussed with a representative group of the Committee because we have a focused task group looking at the implications of new build in terms of radioactive waste management, and I will invite Marion to give a comment on that in a minute because she takes a special leadership role in that area. When we were consulted, of course we were consulted, in a sense, within the limitations of questions about factual accuracy in the document and questions about clarity of expression because one of the things that CoRWM has tried to do throughout its work is it has tried to encourage organisations not to be unnecessarily secretive because public confidence is definitely more likely to grow in proportion to the openness of the debate and the discussion, so clarity of expression was very important to us, and I believe that we were able to help the Government in that respect, but it is not just clarity of expression for the informed, it is clarity of expression for the relatively uninformed so that they get sufficient understanding to be able to make a judgment, but I will ask Marion if she would like to comment on this.

Ms Hill: Yes, we were asked to comment on drafts of the Nuclear National Policy Statement, the summary of evidence on waste and the actual part of the consultation document which deals with waste, but it was an agreement with Government that we did this on the basis that we would only comment on factual accuracy and clarity of expression because we wanted to be free to respond to the consultation in an open way and actually respond to the question and, in particular, the question about the effective arrangements. In a way, those were our groundrules that we chose to do it that way because, otherwise, we would be seen to be in some way colluding with Government and perhaps agreeing in advance with

the preliminary conclusion that they reached, and that we did not want to do, we wanted to be open about that, so it is a rather different process than we had gone through before.

Q52 Lord Jenkin of Roding: I want to share my view based on, shall we say, fairly extensive experience, that a lot of useful work has been done by a lot of committees, but, in a sense, it is shadow-boxing until somebody decides what they want to do. Something which will have a big effect on CoRWM is when somebody decides they want to build a nuclear power station, a safety case is approved and a public inquiry ensues, and at that stage the whole issue of waste, and the public will not differentiate between legacy and future, has to be far firmer than it is at the moment.

Professor Pickard: Yes, I think that is true and CoRWM is developing a position statement on the wastes that are likely to be produced by the new build programme and, as I say, we have this special task group focused on that entire issue that is chaired by Marion. We would like to be in as prepared a position as possible for the future when a specific development is discussed and, particularly, we would like to encourage everyone involved to identify, in a sense, a degree of educational role in their communication activities because there is no doubt that misrepresentation and misunderstanding clearly thrive in an atmosphere of ignorance, and it is important for Government and the NDA to recognise that it does have an educational role as well as, in a sense, a promotional role and not to forget that educational role. There are an awful lot of people who are unable to make decisions in local communities in relation to nuclear waste because they just lack a basic education in the terminology and, provided people make an effort, education is about making an effort, it is not about writing something and just distributing it as a leaflet, but it is about taking someone's hand, sitting down with them and interacting with them and leading them into the light and, unless Government and the NDA treat education seriously as a very professional and specialised activity, then it will not be enough to simply distribute information on a take-it-or-leave-it basis.

Chairman: Lady Perry, you have a question about this.

Q53 Baroness Perry of Southwark: I think really you have, in part, answered it. The statement that you are preparing on the new build waste, is that going through your normal process of stakeholder consultation and scrutiny of the evidence base?

Ms Hill: We are actually doing two things, one is preparing a statement about the position on nuclear waste, and that is a statement of the Committee's views, so no, it has not gone out to stakeholder

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consultation and neither does it have an evidence base in the same way that other things do, so it is very short, a couple-page statement, so no in that case. In our response to the nuclear consultation on new build, again, we see this as slightly different from the way we provide evidence in our major reports, so we have not gone through such a long-winded process. On the evidence base, we are largely scrutinising the Government's evidence base, and we have done that and we have gone out for ourselves and gathered evidence. We have asked people to send us information that they want to send us and NGOs, for example, have done so. We have gone to talk to the reactor vendors and prospective operators about what they are doing and we have talked to the regulators, so we gathered our own information in that sense and increased our evidence base on that. We are not sending that response to a consultation out to stakeholders to consult because in a government consultation we feel that everybody should express their own independent view, and it is for others to respond as they wish and we will respond from our point of view and not try in this instance to reflect the views of others, so it is a different process.

Professor Pickard: Should the matter move forward to a point where the Government welcomed advice from us in a formal manner on this subject, then clearly the position statement and our work to that point would effectively be the base upon which we would then build our normal rigorous process which iteratively consults with various stakeholders and the general public to devise and deliberate on the final advice to Government, so there are many different processes under way.

Q54 Baroness Perry of Southwark: Government will be able to use your position statement and quote it to us as the advice they have had from you, nevertheless, will they not?

Professor Pickard: They will, although we are making a very big effort to draw the distinction between what is formal advice to Government with maximum rigour being applied because it is incredibly resource-intensive to do this and it would not be cost-effective in terms of our functioning as a committee and our use of public money to apply that same level of rigour and time to everything that we do, so, in order, in a sense, to protect ourselves and not to mislead people, wherever we develop a draft document now, we have a leading paragraph which explains quite precisely that this is a document in process of development and it should not be taken to present either the views of the Committee or the views of the individual that actually wrote it because that can all change with subsequent deliberation in the light of new information. We also ask every member who gives a lecture in the course of their daily life on radioactive

waste-related material to put up a first slide which emphasises that what is said in the lecture is their own opinion and not the opinion of the Committee, unless specifically stated, so we are going to, in a sense, great lengths to draw a distinction between, on the one hand, the formal advice to Government, into which we put an enormous amount of resource and effort to ensure that everything is correctly cited and based, and there is an intermediate situation where we have deliberations in public that people can quote. There, we would have a rubric which I read now at the beginning of every public meeting which says, "Unless the Chairman actually identifies a statement in the minutes as a formal CoRWM position, then it cannot be quoted as such and misrepresented by individuals that have their own agenda", and then I make the special point about the drafting of documents and I make the point continuously, that it is a price that we have to pay for openness and transparency that occasionally we do have to show our preliminary workings, but, in the best standards of mathematics, it is helpful to all to know what the workings were and not just what the result was.

Baroness Perry of Southwark: I can hear you now on the *Today* programme saying all that while John Humphrys quotes at you!

Chairman: Well, we do not have the time of the *Today* programme even!

Q55 Lord Cunningham of Felling: I get the impression we have gone to great lengths and very successfully to get the social engineering of all of this well-established and in place, but I do not get the impression that we have gone to the same lengths with the actual civil engineering or the science or the geology or the other things that we need to know and understand equally thoroughly. Can you identify any gaps in our knowledge which could cause serious delay to actually designing and constructing a facility?

Professor Pickard: There are huge uncertainties. We have a mining engineer who is a member of the Committee and he is constantly pointing out the need initially to look at alternatives of an engineering and technical nature and not simply to put all the eggs in one basket and put all the effort into one particular engineering solution because it may turn out that that particular solution may be inappropriate when we actually get down to looking at the rock and the characteristics of the geology. He is constantly pointing out that, if you put too much money into a process of engineering development that turns out not to be successful, it is very, very difficult to work your way backwards to redesign a whole concept, so this particular member of our Committee is constantly raising that debate and issue with us of maintaining a degree of openness to other options. Now, we do find that implementers tend initially to be

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resistant to our encouragement to keep options open. They are not resistant because they just are recalcitrant, but they are resistant because they themselves only have a limited resource and they want to push ahead with their planning, so, in a sense, they pick one or two generic designs and they explore those, but they do not want to go too far in the commitment of resources because they do not want to waste resources. I can understand their dilemma, but the Committee is at pains constantly to encourage implementers not to burn alternative boats in terms of design and engineering solutions until they really have to. Before I hand over to Bill who knows a lot more about this in research and development specifically, as a biologist, I have to note that, when we excavate down to, let us say, a kilometre depth, we will introduce micro-organisms into that environment that were not there before and we know very little about what would be the consequences of that, which is why we have said that there will certainly be a need for investigations at that depth with that sort of introduced biological material to see what consequences it has, and implementers will be very concerned at finding out—

Q56 Lord Cunningham of Felling: Does the history of coal-mining over several hundred years tell us anything about that kind of effect?

Professor Pickard: It is interesting that of course with coal-mining we have accumulated a huge amount of experience and there are lessons that we can learn from that, but this is a very unique situation and I think there will be some very unique problems that we will have to tackle. The irony is that people often debate applied and pure research as if they were two ends of a totally different spectrum, but the reality is that, when you have a problem to solve, you nearly always need a quantity of pure research to set the boundaries of uncertainty and then you can bring in your application.

Q57 Chairman: I do not want to interrupt, but we are running out of time and we are a bit off the subject at this stage. Did you want to make a brief comment, Professor Lee?

Professor Lee: Yes, just on the technical side. This engineering project is on a scale of, if not bigger than, the Channel Tunnel, and I remember as a kid being really excited by that programme. This is a big opportunity for the scientific and engineering community in this country to really get involved and I think the steps that are being taken are pushing that forward. There are some difficulties, such as the issue of whether you can put all the waste in one single repository or you might need more than one, and there are technical issues associated with the sorts of rocks that we find and at this stage we are not sure of those, so there are difficulties, but that is what

engineers and scientists spend their lives doing, solving those sorts of problems, so I do not believe they are show-stoppers.

Q58 Lord Jenkin of Roding: I want to come back to the point that Marion Hill mentioned of the effective arrangements. Are you going to actually put in a recommendation to the Government that that paragraph of the National Policy Statement should be reviewed or amended?

Professor Pickard: We are deliberating that issue at the present time in public meetings, so we do not know the final conclusion, but we are debating it.

Q59 Lord Methuen: You are presenting it?

Professor Pickard: Yes.

Q60 Chairman: Let me go on now to a rather critical question, and we just have two remaining questions that we really want to address. Does CoRWM feel that the Government listens to, and acts on, its advice? Your evidence, Chairman, to us states that one criterion you use to judge your performance is whether CoRWM has a “demonstrable positive effect” on radioactive waste management programmes in the UK, yet your letter also says that thus far the Government does not appear to have taken any major action to meet your recommendations. What is the Committee’s assessment of your success in this field so far, when does it expect government movement on its recommendations, and what action might it take if the Government does not take forward its recommendations?

Professor Pickard: I feel that the Government is listening to CoRWM and I feel that the Government is genuinely interacting with us. When we ask for extra information, they do make every effort to give it to us and they do allow us active interaction at all levels from the Secretary of State through to the Minister of State through to the director of the appropriate department in DECC, right the way through to members of staff within that department, so I do think that they are engaged with us. I think also the Scottish Government and the Welsh Government are engaged with us, and we have had a lot of interaction and we have tried to help the Scottish Government, in particular, with the development of its new policy by explaining terminology and giving advice on expression and terminology, so I think we are being listened to. It is probably too early to tell whether or not we are having a significant effect on bringing about beneficial change in the way in which the Government is behaving, not least because we have not yet had the Government’s formal response to our last report on research and development and skills where we are quite, in a sense, critical of what has happened in the past, the way in which the United

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Kingdom has allowed its skills base in nuclear science to deteriorate and the way in which one research council in particular, in line with that national mood, funded less and less research which, we think, was really critically needed nationally. We are waiting with interest to see what the Government does say about our last report which was submitted in October 2009. The Government has undertaken in the past to try to give us a response within three months, so we are expecting their response to that report imminently. In answer to the second part of your question, if we felt that the Government was not responding to our advice, that does not in any sense change our advice, but we would repeat it as appropriate at all the opportunities that were presented in our discourse with the public and with the scientific community and with the stakeholders and, if we felt it was still maintained and the evidence was still there, then we would continue to deliver that advice. Clearly, we would not embark, and we are not, in a sense, tasked to embark, on a policy of trying to badger government officials in any way whatsoever. Our remit is to deliver advice that is sound, honest, well-consulted, well-considered and evidence-based and in a timely manner to Government and, as long as we can do that, we will feel that we are doing our job adequately.

Q61 Lord O'Neill of Clackmannan: The glacial speed at which this seems to move suggests, and Greenpeace have made this point, that there does seem to be a lack of liaison between government departments, agencies and yourselves. Do you think that is a valid criticism? I should say, they do not seem to put the blame on you, that is Greenpeace, on this occasion, so do you think there is a need for improvement in liaison and, if there is such a need, how were you hoping to carry out the necessary improvement?

Professor Pickard: I think we have good interaction with Government. Politics is defined as the art of government and not the science of government.

Q62 Lord O'Neill of Clackmannan: It is actually the art of the possible, which is more accurate.

Professor Pickard: That would certainly be a parallel definition, and I take that to mean that we cannot unreasonably expect scientific and technological considerations to be the only considerations of an active government, so there are many, many other aspects of the art of government that have to be factored in by politicians in the exercise of their democratic function. We will be content if we can say with our hands on our hearts, "This is the very best advice we can give you in this area. We have considered all the evidence that is available and this is the best advice. After that point, what you choose to do with it in political terms is effectively your job

to which you have been entrusted by the electorate". If we felt that we were not getting adequate liaison, then of course I would speak directly to the Secretary of State about it.

Q63 Lord O'Neill of Clackmannan: You said that 2040 would be the year that you would hope that things would start to happen in terms of the deposit of waste materials. Do you think that is a wee bit optimistic, given what you have been telling us and the speed with which things seem to be moving?

Professor Pickard: There is no doubt that, if we could start to place some high-level waste into a disposal facility in 2040, that would fit into all sorts of other things, such as development programmes for the production of new build waste which will not come on stream immediately because high-level waste will have to be cooled at the surface for a considerable length of time before it can be actually placed in a disposal facility. In terms of dealing with legacy waste, we have got the waste and, if we could start disposing of it safely and effectively in 2040, then we would be in a position to deal with new build waste when it became available for disposal in perhaps 100 years' time after that.

Q64 Lord Jenkin of Roding: Companies are talking about 140 years.

Professor Pickard: Yes, it could be 140/150 years for high-level waste to cool down at the surface before it would be available for disposal. It is extremely important that we do not let the process slip because of all the waste of money that would be involved in the packaging and repackaging of the existing material, which would be ridiculous, and of course with climate change there are, in a sense, threats to surface facilities, so we need to be mindful of unexpected climatic events occurring, we have to be mindful of flooding and things like that, so we need to really move forward in ensuring that our legacy waste, as soon as possible, is very, very safely stored for the interim period and safely and securely disposed of underground. I think the Government's policy is a sound policy and it is based on an awful lot of evidence, and it is interesting to see what is happening in other countries where every effort has been made in other countries to look at different types of solutions and the same sorts of solutions that CoRWM originally put forward are being employed and enacted in other countries around the world.

Chairman: I think I have to cut this off now because we are well out of time. Thank you very much indeed for coming. You have given us very thorough evidence. I might say, observing as Chairman of this Committee, I understand all you are trying to do to keep this moving, but Lord O'Neill referred to glaciers and I sometimes get the feeling that this

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whole project is behaving like a glacier in the northern hemisphere at the moment and it may be gradually retreating up the hill rather than moving down the hill to a solution, but we appreciate your efforts to keep it moving, and thank you very much

for coming and giving evidence to us; it is very valuable. If you think of things we need to know which have not come up in this discussion, please write to us and we will include them in our deliberations.

Supplementary memorandum by the Committee on Radioactive Waste Management (CoRWM)

INTRODUCTION

1. This addendum to the written evidence from the Chair of the Committee on Radioactive Waste Management (CoRWM) is to clarify and amplify a number of matters that arose during the oral evidence session on 9 February 2010.

RETRIEVABILITY

2. CoRWM's view on whether a geological disposal facility (GDF) should be designed so that waste is retrievable is given in its 2009 report to Government on geological disposal (CoRWM, 2009a). It is unchanged from the view expressed in CoRWM's 2006 Recommendations to Government (CoRWM, 2006).

3. CoRWM is of the view that early closure of a GDF is the best course of action. It considers that there are no scientific or technical advantages in providing for extended reversibility or retrievability⁴ and that there could be significant disadvantages in such provision.

4. However, CoRWM recognises the Government position that the option of retrievability be left open for the time being and a decision made when a GDF is being designed for a specific site, in discussion with the local community and regulators (Defra *et al*, 2008). It notes that the Nuclear Decommissioning Authority (NDA) has provided information about retrievability to the West Cumbria MRWS Partnership and will engage further if the area decides to participate in the siting process.

UNDERGROUND INVESTIGATIONS AT THE SITE OF A GDF

5. During the Government's oral evidence it was stated that the estimated date of 2040 for the start of waste emplacement was based on allowing about five years for desk-based studies of prospective sites, about 10 years for surface-based investigations (boreholes, etc) at a smaller number of sites and about 15 years for construction and underground investigations at one chosen site. It was further stated (Q114) that there might be an opportunity to shorten this last time period, allowing waste emplacement to begin before 2040.

6. While CoRWM would not rule out this possibility, it considers that it is important to recognise that the underground investigations must include research and development (R&D), as well as gathering further data about the site (CoRWM, 2009b; NDA, 2009a). It is difficult to estimate how long it will take to carry out this underground R&D and to disseminate and assimilate the results. It may be of the order of 10–15 years but it could be decades (CoRWM, 2009c).

7. In CoRWM's view, it is also essential to bear in mind that underground investigations may show that a site is not suitable, in the sense that it is not possible to make a sufficiently robust site-specific safety case for a GDF to hold a large fraction of the UK's higher activity waste. There is general agreement amongst geologists that, despite developments in surface-based investigation techniques in recent years, it will only be after considerable underground investigation that enough will be known about a site to take a decision to construct a GDF (CoRWM, 2009c). Thus, while it is hoped that underground investigations will confirm the suitability of a site (Defra *et al*, 2008), they could conceivably cause a site to be rejected.

KEEPING GEOLOGICAL DISPOSAL OPTIONS OPEN

8. In its oral evidence CoRWM referred to the need to keep options open and to avoid rejecting alternative designs and engineering solutions at too early a stage (Q55). CoRWM wishes to clarify that its advice on this issue is about options within geological disposal, not alternatives to geological disposal. In its 2009 report on

⁴ CoRWM defines "reversibility" as the ability to remove waste by merely reversing the procedures used to emplace it. It defines "retrievability" as the ability to remove waste before a whole GDF is backfilled and closed. Providing reversibility implies that there is no backfilling of vaults, tunnels or other excavations. In providing for retrievability there may be local backfilling and if so retrieval would entail removing the local backfill before removing the waste.

geological disposal, CoRWM recommended that a wide range of geological disposal concepts be considered, including facilities constructed using various techniques, at depths ranging from about 200m to more than 1km (CoRWM, 2009a).

PROGRESS IN CONDITIONING AND PACKAGING EXISTING WASTES

9. In the oral evidence session questioning about timing, the focus was on how long it might take to establish a GDF. CoRWM is also monitoring progress in conditioning and packaging waste for interim storage and then geological disposal (CoRWM, 2009d).

10. The latest figures from the NDA for the volumes of intermediate level waste (ILW) and high level waste (HLW) expected to arise from the current nuclear power programme, the volumes in stock and the volumes conditioned and packaged are shown in the following table (NDA, 2009b).

	<i>Total volume expected (cubic metres)</i>	<i>Volume now in stock (cubic metres)</i>	<i>Volume conditioned and packaged (cubic metres)</i>	<i>Percentage of total conditioned and packaged</i>
ILW	275,000	79,000	23,500	9%
HLW	1,360	650	650	48%

11. There is thus considerable work to be done to prepare existing and committed wastes for disposal, as well as to develop a GDF (or GDFs if more than one is needed).

WASTES FROM NEW NUCLEAR POWER STATIONS

12. CoRWM's response to the Government consultation on the draft nuclear National Policy Statement has now been submitted to the Department of Energy and Climate Change and published on the CoRWM website (CoRWM, 2010a). At the same time CoRWM has published a statement of its position on new build wastes (CoRWM, 2010b). For ease of reference, CoRWM's answer to the consultation question about whether there will be effective arrangements for the management and disposal of new build wastes is reproduced in Annex A to this addendum.

MONITORING ACTIONS TAKEN IN RESPONSE TO CoRWM'S RECOMMENDATIONS

13. In oral evidence CoRWM indicated that it would continue to repeat its advice in various fora if it felt that Government had not taken adequate action (Q60). There may also be occasions when CoRWM would do more than this.

14. A recent example concerns CoRWM's recommendation that more information be made available to the public about how the security of storage of radioactive wastes, spent fuels and nuclear materials is assured (CoRWM, 2009d). The issue arose again in the autumn of 2009 in connection with the British Energy plan to build a dry store for spent fuel at Sizewell B and with the possibility that spent fuel from new nuclear power stations may have to be stored at the stations for about 160 years before it can be placed in a geological disposal facility. A particular concern for stakeholders is whether new spent fuel stores will be designed to withstand the impact of a large commercial aircraft that has been hijacked by terrorists.

15. CoRWM asked questions of the regulators (the Office for Civil Nuclear Security and the Nuclear Installations Inspectorate) about their requirements for the assessment and mitigation of the risks of aircraft impact on spent fuel stores, including terrorist attacks. The regulators' responses were included in a note of CoRWM's understanding of the subject, which was published on the CoRWM website (CoRWM, 2010c).

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2 March 2010

Annex A

CoRWM RESPONSE TO QUESTION 19 IN THE GOVERNMENT CONSULTATION ON THE DRAFT NATIONAL POLICY STATEMENTS FOR ENERGY INFRASTRUCTURE

QUESTION 19

THE QUESTION

Do you agree with the Government's preliminary conclusion that effective arrangements exist or will exist to manage and dispose of waste that will be produced by new nuclear power stations in the UK?

CoRWM's RESPONSE

1. CoRWM agrees that some arrangements exist that would be effective for the management of higher activity waste (HAW) from new nuclear power stations. For example, the policy and regulatory frameworks for the management of all HAW largely exist and there is technology available for the conditioning, packaging and storage of intermediate level waste (ILW).
2. Whether there will be effective arrangements for all the steps in the management, including the disposal, of new build HAW is a matter of judgement. It is for the Government to make this judgement, based on the information available to it.
3. CoRWM considers that the Government should take into account when making this judgement that, while the current UK process for siting a geological disposal facility (GDF) for HAW is sound, it is at an early stage. Its success depends on finding a combination (or combinations if more than one GDF is needed) of a willing host community and a site that is technically suitable to hold enough HAW. At present, it is uncertain whether the appropriate combination (or combinations) of community and site can be found in this country. This uncertainty applies to existing and committed HAW, as well as to new build HAW, and is likely to persist for many years.
4. In addition, CoRWM considers that the Government should recognise the need for optimisation of the management, including the disposal, of new build HAW. To meet legal and regulatory requirements, it is necessary for prospective operators of new nuclear power stations, with the assistance of the Nuclear Decommissioning Authority (NDA), to identify, assess and compare options for the management of new build spent fuel, including the design and location of stores, the storage period and a range of possible geological disposal concepts.
5. CoRWM also considers that it is essential for the public to have confidence in the management of new build HAW. The need for public confidence is being taken into account in the implementation of geological disposal. To date, insufficient attention has been paid to it in planning for storage of new build spent fuel. This needs to be rectified in future, particularly by prospective operators of new nuclear power stations.
6. CoRWM notes the Government commitment to keep arrangements for managing and disposing of new build HAW under review and to revisit its conclusion about the effectiveness of these arrangements if there is new evidence that provides grounds for doing so.

CoRWM's REASONING

7. The response (CoRWM, 2010a) goes on to give reasons separately for the various stages in the management of spent fuel and ILW.

Memorandum by the Department of Energy and Climate Change

INTRODUCTION

1. The UK Government and the devolved administrations (for Scotland, Wales and Northern Ireland) October 2006 statement in response to the recommendations of the Committee on Radioactive Waste Management (CoRWM) made clear there will be strong independent scrutiny of the proposals, plans and programmes to deliver geological disposal of higher activity radioactive waste. In June 2007 Scottish Ministers announced a policy of near-surface, near-site long-term storage rather than geological disposal although they continue to sponsor CoRWM on storage and related research and development matters.
2. CoRWM was reconstituted with modified terms of reference and expertise to provide independent scrutiny and advice to the UK Government and devolved administration Ministers on long-term radioactive waste management, including storage and disposal. CoRWM's primary task is to provide independent scrutiny of the Government's and the Nuclear Decommissioning Authority's (NDA's) proposals, plans and programmes to deliver geological disposal, together with robust interim storage, as the long-term management option for the UK's higher activity wastes.
3. The response below sets out the position of the UK Government.

CoRWM'S PERFORMANCE

Has CoRWM effectively scrutinised the implementation of the Government's MRWS programme?

4. The Government believes that the reconstituted CoRWM's reports and recommendations have provided a useful opportunity to consider such issues as the strategic co-ordination of aspects of waste management as well as the co-ordination of public and stakeholder engagement and the amount and quality of publicly available information. The reports have also provided Government an opportunity to clarify some of the co-ordination structures already in place and to highlight some of the ongoing and more recent work.
5. The Government supports the consultative manner in which the committee has drafted its reports and its engagement of key organisations, stakeholders and the public. There is a need for the Committee to analyse and assess views and bring forward advice that is clearly evidence-based if its words are to carry weight.

Are Government decisions on its MRWS programme evidence-based? What mechanisms are in place to ensure this is the case? How does CoRWM scrutinise this?

6. Government decisions on Managing Radioactive Waste Safely (MRWS) policy were taken in light of the evidence and recommendations from CoRWM in 2006. This followed from extensive consultation with experts, stakeholders and the public.
7. Following further consultation on how to implement MRWS policy, and publication of the "MRWS White Paper: a Framework for Implementing Geological Disposal" in 2008, Government has set in place clear mechanisms to manage and make decisions on the programme as it moves forward. These mechanisms enable the consideration and discussion of evidence by Government and NDA officials as well as being open to CoRWM observation. The mechanisms are:

Geological Disposal Implementation Board (GDIB)

GDIB is a coordinating group which was set up to manage the Government and NDA arrangements for planning and staged delivery of a geological disposal facility. The Board is a means by which officials from the relevant Government bodies can discuss the programme and prepare and present advice to Ministers.

Those represented on GDIB are the Department of Energy and Climate Change (as Chair), HM Treasury, the Welsh Assembly Government (also representing the Department of Environment Northern Ireland) and the NDA as the Government's delivery body. Other Government Departments, regulatory bodies and other organisations can be invited to contribute to supporting work. The Board is intended to co-ordinate the work of Government and NDA.

Waste Management Steering Group (WMSG)

WMSG is a more wide-ranging group considering the NDA's wider waste management planning and development programmes, taking a joined up approach to radioactive waste management. As appropriate, it also considers issues relating to spent fuel and other nuclear materials. It is involved in the arrangements for oversight of NDA Strategy development and provides assurance to UK, Scottish, Welsh and Northern Ireland Ministers that Government policies on radioactive waste management are being implemented efficiently and effectively.

WMSG also considers any substantive advice from the CoRWM on the delivery of the NDA's long term waste management planning and delivery programmes and may make proposals to Ministers on how the Government should respond to such advice

Those represented at WMSG are DECC (as Chair), the Shareholder Executive at BIS, HM Treasury, the Scottish Executive, the Welsh Assembly Government, the Department of Environment Northern Ireland and the NDA.

8. Reconstituted CoRWM's primary role is to scrutinise the proposals, plans and programmes to deliver geological disposal of higher activity radioactive waste and CoRWM members are invited to observe both GDIB and WMSG meetings for relevant agenda items. In practice, a CoRWM member regularly observes the meetings and receives the agendas, minutes and papers.

9. GDIB and WMSG have different primary roles but also advise and interact with each other. GDIB provides co-ordination of effort to ensure geological disposal becomes a reality whilst WMSG is part of the broader hierarchy of groups to oversee NDA strategy development and delivery of wider Government policy commitments. The role of both groups is kept under review to ensure they remain the most effective means of providing the required oversight.

Does CoRWM have sufficient scientific and technical expertise to meet its remit?

10. The Chair and Members of the Committee are not mandated representatives of organisations or sectoral interests. In developing the new Committee, departmental Chief Scientific Advisors were consulted to ensure CoRWM had the appropriate make up of skills and experience for this stage of the process. The relevant skills identified at the time the Committee was reconstituted are set out in the table below, but it is acknowledged that over time the precise skillset required may vary as the staged implementation process advances, so this list will not be exhaustive:

— nuclear science	— environmental impact assessment
— radioactive waste management	— local government, planning
— radiation protection	— regulatory processes and ethics.
— environmental law	— Geology/geochemistry/hydrogeology
— environment issues	— finance/economics
— social science (including public and stakeholder engagement)	— civil engineering/underground construction technology
— repository performance/safety issues	
— materials science	

11. To be appointed, members had to demonstrate evidence of having sound skills and experience in one or more, or similar, of the relevant skills identified above. The Committee may also co-opt additional expertise to form or support temporary sub-groups to examine specific and defined problems and may also utilise other appropriate means of securing expert input, such as sponsored meetings or seminars. Given this we believe that there is the right mix of expertise available to the Committee at the moment. This will be kept under review and can be revisited in future under the normal public appointments process, scrutinised by the Office of the Commissioner for Public Appointments.

CoRWM'S REMIT

Is CoRWM's remit appropriate? If not, why not? To what extent should CoRWM be responsible for engaging with the public and representing their views within Government?

Does CoRWM's remit cover emerging areas of activity, such as new build waste and the UK's plutonium stock pile, or longer term issues and horizon scanning? If not, should it?

Are there any plans to change the composition or role of CoRWM as the Government's MRWS programme continues? Should there be?

12. Strong independent scrutiny strengthens the programme to deliver geological disposal. We believe CoRWM's remit, set out in its terms of reference, is appropriate. CoRWM's primary role is to be focussed on the long-term management of radioactive waste although sponsoring Ministers may also ask the Committee to provide advice on other radioactive waste management issues as necessary.
13. CoRWM agrees a three year rolling work programme with all sponsor ministers annually. In so far as there could be long-term higher activity waste management implications, the work programme can cover areas of work such as radioactive materials or new nuclear power. For example, their work programme for 2009–10 includes tasks on scrutinising NDA development of strategies for management of spent fuels, plutonium and uranium. Whilst it is not CoRWM's role to scrutinise Government's policy development processes on all nuclear issues they do have an interest in issues with direct impact on waste management.
14. Other bodies, such as government departments and the regulators, may also propose work to sponsoring Ministers for consideration in the Committee's work programme.
15. Lead responsibility for engaging the public and stakeholders at this stage in the MRWS process lies with those bodies directly involved in the volunteer site selection process—local community representatives, Government and the NDA as implementing organisation. Other bodies with distinct roles to play in the process, such as the regulators, also have their own public and stakeholder arrangements.
16. It is important that there is as much opportunity as possible for stakeholders and the public to comment and feed into the process. CoRWM's terms of reference set out that they must continue to inspire public confidence in their work and they already operate in an open and transparent manner, carrying out public and stakeholder engagement relevant to their reports and recommendations. In doing so it is important that the Committee analyse and assess such views in producing clear, evidence-based recommendations to Government.
17. The composition of the Committee is kept under review. MRWS is a long-term programme and it is acknowledged that over time the precise skillset required may need to vary as staged implementation proceeds. If potential changes are identified in the future these will need to be agreed by sponsor Ministers and will be discussed with the Chair.

CoRWM AND GOVERNMENT

How effective is CoRWM's interaction with different Government departments and agencies? Are lines of responsibility and accountability within Government, and between CoRWM and Government, clear?

18. As set out in the MRWS White Paper, Government is responsible for setting policy and is the ultimate decision maker on issues such as site selection. The NDA is responsible for implementing this policy, alongside Government, and in doing so it will develop strategy, plans and programmes to deliver its objectives. CoRWM's primary role is to provide independent scrutiny and advice to Ministers on the implementation of higher activity radioactive waste policy. It is for Government to then decide how to apply CoRWM's advice in further developing the policy implementation process.
19. As well as UK Ministers meeting the Chair at least annually, sponsor officials formally meet the Chair and other appropriate members approximately every two months. As set out in paragraph 8 of this response, CoRWM members regularly attend and observe meetings of the MRWS programme board (GDIB) and the wider Waste Management Steering Group.
20. Furthermore, as and when required by either the Committee or sponsor governments, there are frequent meetings between officials and specific working groups of the Committee to discuss current issues. This includes interaction with other sponsor administrations in respect of areas on which policies differ. In particular, the Committee are currently scrutinising the development of Scottish policy for the management of higher activity waste, which diverges from the MRWS process for implementing geological disposal.
- Does the Government respond to and use CoRWM's advice effectively? Has the Government taken on board CoRWM's recommendations in its recent reports on geological disposal and interim storage?*
21. Government is committed to responding to all CoRWM's substantive advice and has so far responded to their reports on "*Interim Storage of Higher Activity Wastes and Management of Spent Nuclear Fuels, Plutonium and Uranium*" and the "*Geological Disposal of Higher Activity Radioactive Wastes*". Both the reports, and Government's responses have been placed in the libraries of the House. Government is currently considering its response to the Committee's latest report into research and development.
22. Government has received three detailed reports in the last year. In general, Government has accepted many of CoRWM's recommendations. The reports have provided a valuable opportunity, highlighting key issues and providing Government an opportunity to clarify some of the ongoing or proposed work as well as

making clear where further thought and discussion might be needed to address recommendations. In taking forward work directly flowing from CoRWM's recommendations, Government will look to consider any common themes that emerge and CoRWM will be invited to input to and scrutinise key proposals as they develop.

29 January 2010

Memorandum by the Nuclear Decommissioning Authority (NDA)

INTRODUCTION

1. The House of Lords Science and Technology Select Committee has appointed a sub-committee to follow up on its previous enquiries into the Government's management of radioactive waste. The Committee is focusing on the role and performance of the Committee on Radioactive Waste Management (CoRWM), and on whether Government is using its advice effectively. This submission is from the Nuclear Decommissioning Authority (NDA), a non-departmental public body established in 2005 by the Energy Act 2004, in response to a call for evidence.

2. We were established in order to deliver the Government's commitment to deal effectively with the nuclear legacy and are responsible for driving substantial change to improve delivery and cost efficiency in a large and complex industry. Our mission is to:

Deliver safe, sustainable and publicly acceptable solutions to the challenge of nuclear clean up and waste management. This means never compromising on safety or security, taking full account of our social and environmental responsibilities, always seeking value for money with the taxpayer and actively engaging with stakeholders.

3. In June 2008 the UK Government and the devolved administrations for Wales and Northern Ireland (Government) set out a framework to implement the geological disposal policy in the Managing Radioactive Waste Safely (MRWS) White Paper.ⁱ This sets out the framework for the implementation of geological disposal coupled with safe and secure interim storage and ongoing research and development, including a flexible site selection process based on voluntarism and partnership.

4. We are responsible for the storage of wastes on our own sites and in support of the MRWS framework and in response to recommendations of the original CoRWM, we have published a UK wide review of waste storage arrangements for legacy wastes.ⁱⁱ We have interim storage facilities that are and will be safe and effective, and will remain so for as long as is necessary, until a Geological Disposal Facility is available for use.

5. The MRWS White Paper confirmed NDA as responsible for planning and implementing geological disposal in the United Kingdom. Accordingly, we have established a new directorate called the Radioactive Waste Management Directorate to develop into an effective delivery organisation to implement a safe, sustainable and publicly acceptable geological disposal programme. We are successfully transforming this Directorate to become an organisation that will ultimately be able to hold a nuclear site licence and disposal authorisation for a geological disposal facility. Following a detailed review by regulators this Directorate has commenced operation as a prospective site licence company under voluntary regulatory scrutiny.

6. As set out in the terms of reference,ⁱⁱⁱ CoRWM's primary task is to provide independent scrutiny of the Government's and NDA's proposals, plans and programmes to deliver geological disposal, together with robust interim storage of higher activity wastes. Our work is therefore subject to scrutiny by CoRWM. We are also subject to scrutiny by the independent regulators, including the Health and Safety Executive, Environment Agencies and Department for Transport.

CoRWM's PERFORMANCE

Has CoRWM effectively scrutinised the implementation of the Government's MRWS programme?

7. We have engaged with the reconstituted CoRWM since its inception. We believe this engagement has facilitated both the development and fulfilment of CoRWM's work programme. Interactions supporting scrutiny of our activities have ranged from us providing available information, commissioning and providing new reports, holding meetings with Committee members, inviting Committee members to NDA workshops, and commenting on draft material prepared by CoRWM. CoRWM has provided a valuable role through commenting on draft material prepared by us and by responding to our consultations. These interactions have involved a large number of NDA staff, including the Chairman and Chief Executive, and have required significant resource. However, such a commitment of resource is considered necessary to ensure appropriate communication of information.

8. CoRWM has prepared three substantive reports to Government to-date, covering:
- Interim storage of higher activity wastes and the management of spent fuels, plutonium and uranium (March 2009);
 - Geological disposal of higher activity radioactive wastes (July 2009); and
 - National research and development for interim storage and geological disposal of higher activity radioactive wastes, and management of nuclear materials (October 2009).
9. We believe through these main reports and the other activities undertaken to date, CoRWM has effectively scrutinised the key aspects relating to the implementation of the MRWS programme. The main recommendations to Government in these reports are generally made at the appropriate, proposal, plan and programme level, and are valuable contributions to aid the effectiveness of the MRWS programme. For example, a number of recommendations identify opportunities for better coordination of waste management-related activities within the UK and where additional communication material would be of benefit.
10. These reports were produced following extensive evidence gathering and engagement by CoRWM members. The process involved: evidence gathering; testing that evidence base with stakeholders; full Committee discussion and formulation of views and recommendations; consultation on the draft full reports and consideration of responses; and publication of reports representing full Committee views. The value of the Committee comes from it functioning in such a methodical and collegiate manner, allowing the full range of skills and experience to be applied to an issue. In some instances, this meant delays to the intended original publication timetable, but this was essential to ensure the quality of the final output.
11. One example of where interaction with the Committee has been of particular value to us has been on the research and development needs for implementation of geological disposal. CoRWM advice has assisted us in the development of our research and development strategy and we are now engaging with them on the associated research and development programme.
12. Such collegiate working is crucial for there to be confidence in the output of the Committee. It is important that recommendations are seen to be impartial, rather than reflecting members particular interests. The Committee has recognised the possibility of there being disagreements within its membership on particular aspects, and has usefully set out how these will be treated.
13. In producing these main reports, and as part of the wider programme, CoRWM produces and publishes on its website a significant number of documents of differing status. These tend to be produced by subsets of the Committee for plenary discussion. Production of such material is necessary for the working of the Committee, but there have been instances where its evidence base does not seem to have been tested with relevant stakeholders prior to publication. On occasions, unsupported assertions and a few factual errors have been presented. As well as impacting on the quality of CoRWM's deliberations this can also misinform stakeholders.

Are Government decisions on its MRWS programme evidence-based? What mechanisms are in place to ensure this is the case? How does CoRWM scrutinise this?

14. We believe Government decisions on its MRWS programme are evidence-based. Government has put in place a number of mechanisms and forums to support ongoing decision making by enabling evidence to be provided by relevant parties, including recommendations and advice from CoRWM. Such forums include the Geological Disposal Implementation Board and the Waste Management Steering Group.

Does CoRWM have sufficient scientific and technical expertise to meet its remit?

15. CoRWM needs sufficient scientific and technical expertise to understand the information it gathers, recognise the key issues and "ask the right questions". The current membership provides for a wide range of scientific and technical expertise. In some areas that expertise is drawn heavily from members with an academic or research background. We feel that on occasions this has led to an emphasis on acquisition of knowledge driven by curiosity. At times this has been at odds with our position that our research should be driven by the needs of the programme.

CoRWM's REMIT

Is CoRWM's remit appropriate? If not, why not? To what extent should CoRWM be responsible for engaging with the public and representing their views within Government?

16. As recognised by Government, visible independent scrutiny and advice can provide reassurance to the public and stakeholders. Thus, putting in place a suitable committee to provide such independent scrutiny and advice in relation to the implementation of the MRWS programme has a valuable role to play.

17. CoRWM has been set up to meet the needs of the MRWS programme. We take this to focus CoRWM's remit on the scrutiny of, and provision of advice on, the long-term management of higher activity wastes through geological disposal, coupled with safe and secure interim storage. Within its remit, CoRWM's primary task is to provide independent scrutiny on the Government's and NDA's proposals, plans and programmes to deliver geological disposal, together with robust interim storage, as the long-term management option for the UK's higher activity waste. The terms of reference do provide flexibility for sponsoring Ministers to ask CoRWM for advice on other radioactive waste management issues as necessary.

18. With such a wide remit there is potential for overlap with the roles of other organisations, particularly the regulators. For this reason, we believe CoRWM needs to ensure it focuses its efforts at the proposal, plan and programme level. Taking an overview of how all the necessary organisations and components are working together, and whether there are suitable plans and processes to address the relevant issues. Particular care is needed to avoid conflict with the role of the regulatory organisations in making judgements on the adequacy of safety and environmental protection measures. CoRWM should be clear that its starting point is established Government policy, with its role being scrutiny of the implementation of that policy. It should not, we believe, be scrutinising the historical basis for that policy.

19. CoRWM should engage with stakeholders and the public as required to fulfil its function of scrutiny and advice.

Does CoRWM's remit cover emerging areas of activity, such as new build waste and the UK's plutonium stock pile, or longer term issues and horizon scanning? If not, should it?

20. CoRWM's remit is sufficient for it to consider "emerging areas" such as new nuclear build and strategies for the management of nuclear materials. However, any scrutiny and advice should be concerned with how those emerging areas might affect the MRWS programme. This is unless specifically requested by Ministers to consider wider aspects.

Are there any plans to change the composition or role of CoRWM as the Government's MRWS programme continues? Should there be?

21. We are not aware of any plans to change the composition or role of CoRWM.

CoRWM AND GOVERNMENT

How effective is CoRWM's interaction with different Government departments and agencies? Are lines of responsibility and accountability within Government, and between CoRWM and Government, clear?

22. We believe we have effective arrangements for interacting with CoRWM. Opportunities could be taken for more engagement between the whole of the Committee and the NDA to discuss the ongoing scrutiny and advice programme in the round.

23. We believe lines of responsibility and accountability within Government, and between CoRWM and Government are clear. Government sets policy and makes the ultimate decision in the various site selection stages for a geological disposal facility. CoRWM provides advice on, and scrutiny of, implementation of that policy.

Does the Government respond to and use CoRWM's advice effectively? Has the Government taken on board CoRWM's recommendations in its recent reports on geological disposal and interim storage?

24. Government has provided written responses to CoRWM's recommendations on geological disposal and interim storage, and is preparing a response to the recommendations on research and development. Government engages with the NDA regarding CoRWM's advice, including Government's response to it and any actions that are necessary.

REFERENCES

ⁱ Defra, BERR, Welsh Assembly Government, Department of the Environment Northern Ireland, *Managing Radioactive Waste Safely: A Framework for Implementing Geological Disposal*, 2008.

ⁱⁱ NDA, *UK Radioactive Higher Activity Waste Storage Review*, 2009.

ⁱⁱⁱ *Terms of reference for the Committee on Radioactive Waste Management*, CoRWM Document no 2235. 29 January 2010

Examination of Witnesses

Witnesses: RT HON LORD HUNT OF KINGS HEATH, a Member of the House, Minister of State, MR MARK HIGSON, Chief Executive, Office for Nuclear Development, and MR BRUCE CAIRNS, Head, Nuclear Materials and Waste Strategy, Department of Energy and Climate Change; and MR BRUCE MCKIRDY, Repository Technical Director, Nuclear Decommissioning Authority, examined.

Q65 Chairman: Minister, thank you very much for coming to give evidence to us this morning with your colleagues. Perhaps we could start by having you introduce yourselves for the record.

Lord Hunt of Kings Heath: Thank you, my Lord Chairman, and thank you very much for the opportunity of giving evidence this morning. I am Philip Hunt and I am the Minister for Energy and Climate Change in the Department of Energy and Climate Change. On my right is Mr Bruce Cairns, who is an Assistant Director for the Office of Nuclear Development, on my immediate left is Mr Mark Higson, who is the Chief Executive of the Office for Nuclear Development, and on my second left is Mr Bruce McKirdy, who is from the Nuclear Decommissioning Authority.

Q66 Chairman: Would you like to make an opening statement or can we go straight into questions?

Lord Hunt of Kings Heath: I am very happy to go straight into the questions.

Q67 Chairman: Well, let me ask the first question: does the Government feel that CoRWM has carried out its scrutiny role effectively? DECC told us that CoRWM needs to “analyse and assess views and bring forward advice that is clearly evidence-based if its words are to carry weight”. Does the Government feel that this is not the case at present? CoRWM set out three criteria by which it judges its success: how does the Government feel they have performed against these criteria to date?

Lord Hunt of Kings Heath: My Lord Chairman, the Committee undertakes important functions and I would like to state on the record that we value the work of the Committee and of its members. We have welcomed very recently three substantive reports from the Committee. We have responded to the interim storage report and the geological disposal report, and we are considering the recommendations of the R&D report published on 30 October. My Lords, as I have said, I believe that the Committee does carry out valuable work. I think it is important the Committee is clear about its primary remit, which is scrutiny advice to Government on the delivery of stated radioactive waste management policy. I do think the Committee should be careful not to be drawn into wider issues of policy development, unless they are comments on specific radioactive waste management aspects of the topics covered. In response to your direct question, the reference to

CoRWM needing to “analyse and assess views and bring forward advice that is clearly evidence-based if its words are to carry weight” in our written evidence is very much intended to point out a key requirement of the Committee’s work if it is to retain the respect that it has built up over the past few years. My Lords, that is not to say it is not doing that now, merely pointing out the dangers if things were to slip. The Government has a requirement for constructive, evidence-based advice that assists in developing radioactive waste management programmes over the long term and it is important that that advice is in a form that is well-considered and helpful in identifying practical improvements with clear benefits. Can I also say that overall the Committee has performed satisfactorily against its own performance criteria, and I would also say, my Lord Chairman, that I do welcome its commitment to review its performance on a regular basis and I am sure that the Sub-Committee’s inquiry will be very helpful in that regard.

Q68 Chairman: Are you content at the pace at which it is pursuing its activities?

Lord Hunt of Kings Heath: Yes, I think so. Certainly, the Committee, as I have said, has produced three important reports in 2009, the work programme is agreed with sponsoring government ministers and I think we have a very good process of engagement to agree the programmes that will be taken forward, so I do not have a problem in terms of the progress and the speed of the Committee’s own work.

Q69 Lord Cunningham of Felling: Minister, can you give us your overall assessment of the implementation of the Radioactive Waste Management Strategy?

Lord Hunt of Kings Heath: Yes, I believe that we are making good progress. I think one has to recognise, going back to 2001, that there was no firm policy at all for disposing of high-activity radioactive waste. We have had extensive consultation with experts, stakeholders and the public, we had the formal consultation in 2007 and we produced the White Paper in 2008, and that set out the steps that needed to be taken to ensure that our preferred option of a geological disposal facility was in place, and you already heard this morning that the kind of date we have in mind is around 2040, so we have a very clear process that is set out, a very careful, staged process which has at its heart taking local communities with

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us. Since the publication of the White Paper, we have had expressions of interest from three local communities in Cumbria. It is very important that we continue to take communities with us because of the importance of the voluntarism approach, but I do think that we are making progress and that there is no reason to suppose we will not ensure that there is a facility available when we want it to be available.

Q70 Lord Cunningham of Felling: Does the Department have sufficient financial resources to develop the programme?

Lord Hunt of Kings Heath: I do not think it is a question of resources, and I am aware clearly of the discussion that you had earlier this morning about the progress in terms of timetable, but this is not an issue of resources, this is an issue of getting the balance right. Of course we want to make progress as quickly as possible, but it is vital that we take local communities with us, and that is why we are taking this very, very careful approach; it is not an issue of resources.

Q71 Lord Cunningham of Felling: Does the Government think that the people of those communities in west Cumbria who are actually doing a national service to the nation as a whole by accepting, working with and supervising all of this radioactive waste, which is the nation's legacy, not their legacy, the nation's legacy, does the Government recognise that there is a price to pay for that?

Lord Hunt of Kings Heath: Well, if Lord Cunningham is asking me to use this as an opportunity to pay tribute to the people of Cumbria, I am very happy to accept that opportunity.

Q72 Lord Cunningham of Felling: I was thinking in more material terms!

Lord Hunt of Kings Heath: Well, I rather understand that point and of course he will know that, since I got this—

Q73 Lord Cunningham of Felling: I am sure your good wishes are very welcome to my former constituents!

Lord Hunt of Kings Heath: He will know I have made a number of visits to Cumbria in the last few months and I think I am very much aware of the thinking there, and of course he will know that in the White Paper, and indeed in the recent submission we have received from the Committee, the whole issue of community benefits is discussed, and I understand that. I do, however, think that it is probably a little premature to get down to the nitty-gritty of that—

Q74 Lord Cunningham of Felling: Go on!

Lord Hunt of Kings Heath: I must say, whilst I am absolutely delighted that we have had these three expressions of interest, of course I would also be keen to see other expressions of interest as well. I wrote a few months ago to all local authorities in England to just remind them that we do have this process that is going on at the moment and encouraging other expressions of interest too, but I do very much take the point that there are significant issues around community value which we will, I can assure you, be taking forward, and the Committee has of course commented on that in its recent report.

Q75 Lord Tombs: I am sure you would agree, Minister, that the question of new build is important and it seems to be taken as a slightly secondary point, for reasons I can fully understand, because of the path CoRWM is following, but an important thing, when somebody decides that they are going to build a nuclear power station and apply for consent, will be the public reaction to long-term storage of that, so in the development strategy for long-term storage we have to be aware of that need for reassurance and develop the case with that bias or have that taken account of anyway.

Lord Hunt of Kings Heath: Well, I very much agree with that comment and, as you will know, the Government published a White Paper in 2008 which signalled that it was giving the green light to new nuclear development and, alongside that, we have gone through the process of an assessment of policy in relation to waste as far as new nuclear is concerned. We are in the middle of a process of both parliamentary scrutiny, but also public consultation on the National Policy Statements which place the context in which future planning applications will be made, and clearly the issue of the long-term dealing with high-level waste has come to the fore in those discussions, so I am very much aware that, in dealing with the issue of waste, we have to focus both on legacy waste, but also on waste emanating from new nuclear developments.

Q76 Lord Tombs: Could I mention the happy coincidence that the White Paper was just a decade after the publication of this Committee's report on the management of nuclear waste, the conclusions of which remain valid today.

Lord Hunt of Kings Heath: Well, sometimes it takes the Government a little time to respond, but I am glad we made it!

Q77 Lord Oxburgh: Minister, in its response to us only this morning, CoRWM said that, although they had very good relations with individuals in your Department and with you yourself, they were not

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able to detect any immediate influence that they have had on government policy-making. Is that likely to happen in the future, or do you regard it as true?

Lord Hunt of Kings Heath: I think perhaps the Committee has rather underestimated the importance of its work and the account that Government takes of it. Clearly, we do take account of the work of the Committee, and of course one has to go back to say that the original Committee, and we are of course now dealing with a reconstituted Committee—

Q78 Lord Oxburgh: Yes, CoRWM 2.

Lord Hunt of Kings Heath: But of course the original Committee was directly influential in terms of the decision by the Government to move towards geological disposal as a long-term option. Now, we have got the three reports that the Committee published last year and I can assure the Committee that we do take account of the views of the Committee and we take them very seriously. In the end, of course its job is to scrutinise and advise and I think it is very important that it is the Government's role in the end to decide on policy, but we certainly listen very carefully to the Committee and, I think as you have heard, we have an open-door policy as far as members of the Committee are concerned in terms of being able to discuss with both officials and with ministers any issues that they are concerned with.

Q79 Lord Oxburgh: I think the Committee was absolutely clear on its role vis-à-vis the Government in this, but I think they were just looking for a little bit more in the way of response. When is the response expected to their most recent report?

Lord Hunt of Kings Heath: On the R&D response, a first draft is now being carefully circulated around Whitehall. You will understand, particularly with the comment about the research council funding, that this just does not concern my own Department. I cannot give you a definitive date for publication of our response, but certainly a lot of work is being done on it at the moment. Although it is an easy get-out to say that an important report like that deserves a lot of work in terms of responding, that would actually be my answer, that we are giving a great deal of attention to it.

Q80 Lord Oxburgh: So you would expect it within a month or so?

Lord Hunt of Kings Heath: No, I am sorry, my Lord Chairman, I am not going to be caught by that! I understand why it is important that we do respond as quickly as possible, but, as I have said, this is a report which will concern a number of government departments and we have to make sure that we are able to reach agreement across Whitehall and then

ensure that our response is substantive, as the Committee undoubtedly wishes it to be.

Q81 Lord Methuen: How does the Government see CoRWM's role in terms of public engagement? How important does it feel public engagement is to CoRWM's duty to inspire public confidence in the way it works?

Lord Hunt of Kings Heath: I think, as I said earlier in relation to the issue about the timetable that we have in relation to a geological disposal facility, that engagement with the public is very, very important indeed in ensuring public confidence. The terms of reference of the Committee set out that they must continue to inspire public confidence in their work, and of course the Committee does operate in an open and transparent manner, holding plenary meetings open to the public and carrying out public and stakeholder engagement relevant to their report and recommendations. The lead responsibility for public engagement at this stage in the geological disposal process though lies with those bodies directly involved in the volunteer side process, in other words, local community representatives, the Government and the NDA, and obviously other bodies, such as regulators, have their own distinctive public and stakeholder arrangements, but I would just conclude by saying that of course this is very explicit in their terms of reference, that they have to be concerned about public engagement, and we would obviously continue to encourage them to be so concerned.

Q82 Chairman: I might like to ask a question about public engagement. We learned earlier this morning that members of CoRWM had gone to Sweden to talk to them about the public engagement, and we learned that the Swedes start from a position of more trust in government activities than they have encountered in this country. Would you like to comment on that?

Lord Hunt of Kings Heath: Well, I am always happy to learn from other countries when it comes to trust in government. I have to say though in general, and as we have seen from the recent local meetings and exhibitions that have been organised in relation to the 10 possible sites for new nuclear development by 2025, that we have had a very positive response, and there are people who disagree and people who agree, but they have been very positive in terms of being able to follow the documents, and, as members of the Committee will know, we produced an extensive suite of documents, but also in terms of the willingness of my officials to engage in a very open way with members of the public who had come to these meetings. I hope that this would be so in relation to dealing with waste, both legacy and from new nuclear, and I will obviously be happy to discuss with

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the Committee whether there are any lessons that we can learn, but our whole effort in relation to waste has been about ensuring public engagement. That is why we have not made perhaps as much progress as some members of the Committee would wish us to have done, because we want to make absolutely sure that the voluntarism approach is based on as solid a foundation as possible, but, my Lord Chairman, I think that the issue of public confidence in Government in this country is perhaps a much wider issue than just the issue of nuclear waste.

Q83 Chairman: But you are aware of this issue and you and your officials have been working on this with volunteers.

Lord Hunt of Kings Heath: Indeed so, and it is vitally important to maintain public confidence.

Q84 Lord Tombs: The NDA have said that CoRWM's starting point should be "established government policy, with its role being scrutiny of the implementation of that policy". Does the Government agree with that?

Lord Hunt of Kings Heath: Yes, I do. It is absolutely clear here that policy decisions, whether about geological disposal, interim storage or ongoing research and development, these are for the Government to take. However, they have been taken as a result of evidence and recommendations from the first CoRWM report in 2006. We have now moved on from there with the reconstituted CoRWM and their terms of reference are now very much focused on scrutinising and providing advice on the implementation of the policy rather than making new policy recommendations, and of course the deliberations of the Committee alongside other bodies are very helpful to the Government in understanding some of the dynamics of future policy decisions, but I do think that in terms of both public confidence and clarity of thought it is very important that it is the Government who makes the policy decisions and is held accountable for those decisions and it should not be for advisory committees to make the policy decisions.

Q85 Lord Tombs: Given the fact that there are two policies for the disposal of waste, one in Scotland and one in England and Wales, how can one committee and one set of advisers deal with that, or how do they deal with that?

Lord Hunt of Kings Heath: You tempt me very much to talk about the issue of Scotland and their decision not to go down the route of new nuclear, which I very much regret. I think, however, that it is not unusual for either advisory bodies or statutory bodies to deal with both the UK Government and with the devolved administrations, and I think it is clearly quite within

the competence of an advisory committee to be able to do that.

Q86 Lord Tombs: Perhaps I have not made my position clear. What I was really commenting on was the favouring of deep geological disposal in England and Wales, but not in Scotland with shallow disposal. *Lord Hunt of Kings Heath:* Indeed so, but that is the view of the Scottish Executive. We do not share that view. We do not share the view of the Scottish Executive either in relation to new nuclear or the way in which waste is dealt with.

Q87 Lord Tombs: But they have their own Health and Safety Department also, so there is always the possibility of a difference of opinion within CoRWM.

Lord Hunt of Kings Heath: I think that must be within the Devolution Settlement and I think that has always been abundantly clear, that that is perfectly possible, but, as far as England and Wales are concerned, I am confident that we have made the right decision about long-term dealing with waste. We have had advice from the Committee, which I welcome, and equally I think it is right that they should be able to give advice to the Scottish Executive as well.

Q88 Lord O'Neill of Clackmannan: Is it not the case, however, in the decommissioning of Chapelcross Station that the waste has in fact been transported from Chapelcross to Sellafield, to England?

Mr McKirdy: The position is that the Scottish Executive have defined spent fuel from reactors not as radioactive waste, so it is shipped out from Chapelcross to Sellafield as spent fuel which is still potentially a resource and not waste. How that fits in with the Scottish policy and the Scottish policy for those wastes which would remain in Scotland and then be subject to shallow disposal, I believe, is still under consultation by the Scottish Government. From the NDA perspective, we will need to implement the policy that emerges from that current consultation.

Q89 Lord Tombs: So perhaps we should refer to "policies" rather than the singular?

Lord Hunt of Kings Heath: Well, quite clearly the policy of the Scottish Executive is at variance from the policy of the UK Government.

Lord Tombs: Or vice versa.

Q90 Lord O'Neill of Clackmannan: Except when it suits their purpose, as in the case of the definition of spent fuel as being spent fuel and not waste, or am I putting words in your mouth?

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Lord Hunt of Kings Heath: Well, you may well say that. I am not sure where this is taking us. If you are tempting me towards a discussion about the tragedy for Scotland in not being able to develop new nuclear, I am very happy to go down that route and, given the heritage of Scotland and the fantastic skills there, I think it is a very, very great pity.

Lord Cunningham of Felling: But, Chairman, there is nothing new in used fuel rods going from Chapelcross to Sellafield; it has happened all the time. It happened with the other Scottish reactors too, for that matter, so there is absolutely nothing new in that at all.

Q91 Lord Jenkin of Roding: Can I just follow up what you said earlier which was very important, that it is for the Government to make decisions, and I wholly accept that and we have had that in other contexts as well. It is appearing to me that the effective arrangements paragraph in EN6 is turning out to be one of the more controversial bits of that National Policy Statement. We were told this morning that CoRWM are preparing a paper to come in on that, and you cannot of course answer what you would do in the event of a paper coming in, but how firm is that as a part, the effective arrangements, of the Government's policy? From the point of view of investors, it is of course enormously important, but they are not the only stakeholders, they are not the only players, so can you say anything about that?

Lord Hunt of Kings Heath: Yes, indeed and, Lord Jenkin, I think you are right to refer to the importance of effective arrangements. I am confident and satisfied that we have gone through due process in order to be assured that effective arrangements will be in place in relation to new nuclear. I would rather not comment on a submission that the Committee might make and clearly we will consider it very carefully, but I wonder if I could invite Mr Higson to say a little bit about how we have gone through the process of ensuring that effective arrangements are in place.

Mr Higson: It is a very important test, you are right, and the test is that ministers have to be satisfied that effective arrangements will exist before new nuclear can be approved. That does not mean to say that we have to be absolutely certain that every last detail has been solved, but we need to reach an appropriate degree of confidence that satisfactory arrangements will exist. The evidence of that we set out in the National Policy Statement and associated documents and it basically goes on three levels. First of all, is it technically possible to have a geological repository which will take spent fuel as waste? We think the answer to that is yes. The second question is: is it possible to find a location for a geological repository? Again, we set out why we believe we are making progress towards that end. Then, the third element is:

are we satisfied that in the meantime, which can be quite a long period of time, satisfactory interim arrangements for the storage and management of spent fuel as waste can exist? Again, we have set out the reasons why we have come to the conclusion that that is the case. All of these arguments are exposed to public scrutiny. It is a draft statement that we have made and we shall have to consider very carefully all the comments that are made and advise ministers accordingly, including any comments that CoRWM itself makes in due course.

Lord Hunt of Kings Heath: And the Committee will be aware that, in addition to the Commons Select Committee, the House of Lords is shortly to embark on scrutiny of the National Policy Statements which shall take place in February/March.

Q92 Lord Jenkin of Roding: March 7.

Lord Hunt of Kings Heath: Well, we start, I think, in February with the overarching—

Lord Jenkin of Roding: You might start in February, but the nuclear one is March 7.

Q93 Baroness Perry of Southwark: I think my question has, in part, been opened up already, but we did hear from CoRWM earlier today that they are quite clear that they do not want to be seen to be complicit with the Government when it issues its draft statements, that they want to retain their independence. Nevertheless, we do wonder whether in the National Policy Statement on nuclear power generation your Department had consulted with CoRWM at all on the rather bold statement that you are satisfied that effective arrangements will exist to manage and dispose of the waste.

Lord Hunt of Kings Heath: No, and the noble Baroness is right, that, in a sense, we have covered this before and I am very clear that it is ministers who have to take responsibility for that decision and have to make the statement. My officials did contact individual members of the Committee to ask them to look at the factual statements, but this is very much a decision by ministers. Just to reflect on the point Mr Higson has made, these are draft statements, they are subject now to proper public consultation and parliamentary scrutiny and of course, in that context, we will look very carefully at the views of the Committee. I think that we were right actually not to have that formal engagement until we had produced the draft National Policy Statements and to have made the assessment that you have just heard from Mr Higson.

Q94 Lord O'Neill of Clackmannan: Greenpeace feel that "there is no effective liaison between CoRWM and government departments and agencies", and

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they have said that CoRWM should not be blamed for this. Would you agree with that assessment?

Lord Hunt of Kings Heath: No, I find that a very extraordinary statement and I would be very interested in learning what it is actually based upon. I met the Chairman of the Committee last November and I made it clear to him that he had open access to me and to my officials. My understanding is that considerable engagement takes place between the Committee collectively and individual members of my Department. If there are any identified problems, I will sort it out, but I am just not aware of any problem in terms of effective liaison.

Q95 Lord O'Neill of Clackmannan: So you do not think that they can improve upon what is a very good relationship?

Lord Hunt of Kings Heath: I would not be as arrogant as to say that we could not improve on how we do business at the moment, and indeed, if the Committee itself came with some suggestions, I would sit down with the Committee and the Chairman to discuss it. What I am saying is that it is to my understanding that we have completely open access for the Committee and that there is a lot of engagement.

Q96 Lord Cunningham of Felling: The Environment Agency said in its evidence to us, "Government's oversight of the MRWS programme could . . . be made more transparent to stakeholders and the public". How do you react to that, and do you think there could be something in what they say?

Lord Hunt of Kings Heath: Well, I certainly take note of what they have said and certainly will give it some consideration. We are obviously working in terms of our communications with both stakeholders and the public about the progress that has been made in the programme. I am also setting out milestones for the future and we certainly co-ordinate our work in that area with the Nuclear Decommissioning Authority, and the Authority itself will shortly be publishing their *Steps Towards Implementation* document which sets out their detailed planning for geological disposal. Now, as far as oversight mechanisms are concerned, we have two main official-level groups. First of all, there is the Geological Disposal Implementation Board concerned with the geological disposal programme management and the co-ordination of effort to ensure geological disposal becomes a reality, and the second group is the Waste Management Steering Group, which is part of the broader hierarchy of groups to oversee NDA's strategy to development and delivery of wider government policy commitments. Both groups are chaired by officials in my Department, they have membership from the Treasury, the NDA and the relevant devolved administrations and they advise,

and interact with, each other, and I understand that they are regularly observed by members of CoRWM.

Q97 Lord Cunningham of Felling: And the public? Does any of this get through to the public?

Lord Hunt of Kings Heath: No, they are not in public.

Q98 Lord Cunningham of Felling: Do they publish any decisions for the public?

Mr Cairns: The minutes and papers of those meetings have already been made publicly available in the past. The minutes are drafted so that they will be accessible for a wide audience and are available on request.

Q99 Lord Cunningham of Felling: Well, I think we all know what that means!

Lord Hunt of Kings Heath: On the substantive point, I am certainly happy to look at what the EA has said, and I clearly take the message about more certainty over timing of the programme.

Q100 Lord Cunningham of Felling: Forgive me for interrupting, but, if the public are really genuinely going to be carried forward and they think there are two working groups going on to which they have no access, that is not helpful.

Lord Hunt of Kings Heath: No. I think clearly there is always though some benefit in having officials working together and making sure that there is open discussion between different departments in the UK Government and the devolved administrations. However, I take the point that in terms of perhaps giving more certainty, in giving people a greater feel about the timetable, there may be something more that we need to be doing, and we are also reflecting this in the light of comments we have received as part of the consultation on the draft National Policy Statements, so I would be very keen to take the view of your Committee on this as well. We have not got a closed door. I think there is clearly more that we need to do in this area and we would be very keen to work with stakeholders.

Q101 Lord Cunningham of Felling: I think that is a very helpful answer if I may flatter you a little. It is a very positive response. Just in the interests of more openness and transparency, and you will not have this figure in your head, I am sure, you probably have not even got it in your brief, could your officials give the Committee a note on just how much the taxpayer from the inception of Nirex, which was effectively public money, and CoRWM, has invested in all of this?

Lord Hunt of Kings Heath: We will have a go. I think the cost of the Committee is about half a million pounds a year at the moment, but subject to the

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overriding issue of cost of finding the information out, I will certainly see if we can find that.

Q102 Lord Tombs: On this issue of general transparency, Minister, the 1998 report drew attention to the fact that the timescales involved are quite unique in our experience and therefore suggested that there should be an annual report to Parliament, statutorily required with a debate to follow, because it is something that can be lost sight of and it is something of great continuing importance?

Lord Hunt of Kings Heath: I am very happy to consider that suggestion alongside the question of whether we need to give more information to the public. Whether an annual debate would be appropriate, I do not know, but alongside my response to Lord Cunningham I am very prepared to have a look at this and see whether there would be some advantage in having some more parliamentary debate and accountability on this matter. Overall my general principle is that the more we are transparent, the more clarity we can give you, the more likely there is to be public confidence. Although we have to separate the waste issue from the nuclear generation programme, the fact is the two also go together in terms of public confidence.

Q103 Lord Tombs: Yes but this is a public duty in response to management of nuclear waste over very, very long periods which are quite inconsonant with the parliamentary timetable.

Lord Hunt of Kings Heath: I agree and you have already heard the evidence this morning about spent fuel potentially being stored for 160 years. I think that is somewhat of a conservative estimate but when you are dealing in those sorts of lengths of years sometimes it may not seem very realistic to people, and I very much take that point.

Q104 Lord Jenkin of Roding: I too was a member of the Select Committee when Lord Tombs produced that report in 1998. Of course you have not followed the main recommendation which was that there should be a body outside government which should be responsible for the whole programme. However, the point that Lord Tombs has just made was echoed by CoRWM this morning where they said they were concerned about the long-term political commitment. It would seem to me that therefore the Government could do very well to look at the idea, perhaps not annually but at least once in every Parliament, when there should be a very clear Government motion calling for parliamentary support for the continuation of the programme and I think that all those engaged in this—and CoRWM would only be one, there are many other

stakeholders—would regard a positive vote regularly taken as a very considerable reassurance. Would you accept that?

Lord Hunt of Kings Heath: No, I do not think I necessarily would, Lord Jenkin. I think that one might read uncertainty into that if there was a sense in which every four years there had to be a vote in Parliament or the programme would not be allowed to continue. I understand exactly the point you are making but I think there might be some perverse incentives in it as well. I have said to the Committee that in terms of looking at the potential for reporting to Parliament I will certainly have a look at that suggestion. On the question of the one body, I think we have got it right now where essentially we have government setting the policy; we have the various regulatory agencies ensuring that implementation is carried out to safe, secure high standards; and then we have the role of the Committee in terms of scrutinising how it is being delivered. I think that is a sensible approach to this.

Q105 Lord Jenkin of Roding: Of course the Nuclear Decommissioning Authority is the main government agency for carrying the programme forward. We are where we are and one always starts from here. I think that is probably what we would accept but we did just have this anxiety as to whether there would be continuing political commitment.

Lord Hunt of Kings Heath: Of course governments can never promise what their successors are going to do.

Q106 Lord Jenkin of Roding: Nor can Parliament bind its successor.

Lord Hunt of Kings Heath: On the other hand, I do think the careful approach to dealing with both nuclear new build and also waste is bearing fruit. I think that there is broad consensus that geological disposal is the right way forward. The fact that we have set out such a careful approach does lend confidence that this is going to be the long-term approach of this country. I take your point about reporting to Parliament. As I have said, I would worry if it were read into this that the policy had to be approved by Parliament every few years; I think that might induce more uncertainty.

Lord Jenkin of Roding: That is something for the future.

Q107 Chairman: Let me continue a minute on the long-term strategy. Minister, you were saying to me earlier before the session that there are 10 sites being considered for new build. Presumably you see CoRWM as having an overview of that situation whereas if we had a single disposal site then we would be transporting nuclear waste all over the country?

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First of all, do you see the Committee as having to develop a view on that? Secondly, do you have a view? Might it be better to have more than one site?

Lord Hunt of Kings Heath: Clearly the issue of one site or more is a matter that will need to be decided upon as we go through the process. Certainly the White Paper allows for more than one site to be considered. On the other hand, there is no reason why both legacy waste and new waste cannot be accommodated within one site. I do not think one can be absolutely definitive about the likely outcome. As far as new nuclear is concerned, in 2006 when we started to develop our policy in relation to new nuclear, we said that given the special circumstances of nuclear power generation that we would undergo a rigorous assessment in terms of which sites we thought would be potentially suitable for nuclear development. We have now done that. The outcome of that work is in the draft National Policy Statement. We have identified 10 sites as being potentially suitable for nuclear power development by 2025, and clearly, as part of that, we have also gone through the question of assuring ourselves that waste can be dealt with satisfactorily. As far as the Committee is concerned, it is not for the Committee to concern itself with whether we should have new nuclear power development or not, but certainly when it comes to the issue of how waste will be dealt with from nuclear power stations then the Committee has a legitimate role to play.

Q108 *Baroness Perry of Southwark:* How do you see CoRWM's wider remit? Do you see it just as giving you technical/scientific advice or do you see it as being broader than that? When commenting on the implementation of Government policy is it expected to comment on the ethical and political aspects as well or would you have it just technical?

Lord Hunt of Kings Heath: Obviously we have the terms of reference of the Committee and we would certainly expect the Committee to keep to them. I do not need to read out the terms of reference again as you have them.

Q109 *Baroness Perry of Southwark:* We have them.

Lord Hunt of Kings Heath: I do think that in the end it plays a very important role in terms of technical advice as to how policy can best be carried out. I do not think it is for the Committee to comment on decisions about whether we embark on new nuclear development or not. That is very much it seems to me for the Government to do. I think it is very important that we do not have grey areas of responsibility here and the Government must take responsibility for making these decisions and it must then be accountable to Parliament for that.

Q110 *Baroness Perry of Southwark:* Presumably you have other technical experts whom you consult? For example, when you feel confident that the new build waste can be dealt with you must have consulted other technical experts and not CoRWM about that?

Lord Hunt of Kings Heath: I will ask Mr Higson to detail that but clearly we have the Nuclear Decommissioning Authority itself; we have the Environment Agency; we have the Health and Safety Executive. This country is not short of both official committees and stakeholders who have an interest and clearly the Government listens to what they have to say.

Mr Higson: In terms of the key questions that I mentioned earlier, we look very much to the NDA to advise us in coming to the preliminary judgment that is in the draft National Policy Statement.

Mr McKirdy: We undertook disposability assessments of the fuel and waste likely to be generated by the new reactors that are being proposed at the moment and we found those to be acceptable against the safety cases which we have developed under scrutiny from the regulatory bodies. Those disposability assessments will go to the requesting parties and form part of the generic design assessment carried out by the joint regulatory body, so we have satisfied ourselves that we can accommodate such wastes in a disposal facility.

Q111 *Baroness Perry of Southwark:* Forgive me for pursuing this, Minister, but, as you said, there are quite a lot of bodies that you rightly consult. Are there too many? Is there a possibility of an embarrassment to government of having received advice from one set of technical experts that in this case the new build waste is taken care of, so to speak, and then you might get from CoRWM a comment several months later when they produce their paper saying that is not case and for a Government that would be embarrassing, would it not?

Lord Hunt of Kings Heath: I think we have to accept that experts do not always agree with each other—

Q112 *Baroness Perry of Southwark:* Just so.

Lord Hunt of Kings Heath: And that part of the testing out, if you like scrutinising, of policy and technical advice is that if experts disagree we had best know about it and that is the way in which things can be tested. I am very comfortable with that, even if it were to mean that some agencies were disagreeing with each other. I have to say that my general impression as we stand at the moment is that there has been a consensual approach not in terms of a woolly compromise but really based on the best evidence available. One has to go back to the original CoRWM report if we are talking about geological disposal, and of course it was the original CoRWM

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report which started the Government down this particular route.

Q113 Lord Methuen: Could we talk briefly about timescales. CoRWM suggested that we are not going to get anything that is useful until about 2040 and the first 10 years of this 30 years is actually doing detailed rock characterisation by drilling boreholes and making tunnels, and it could be that you find that is all totally impracticable. Do you really think 2040 is even achievable?

Lord Hunt of Kings Heath: I am going to ask Mr Higson to comment on that but certainly that is the assumption that we are working on; essentially we think that it is perfectly possible. We have been working on an assumption of two to three decades from the beginning of this site-selection process and about one and a half decades from selection of site to the beginning of underground work. That is the base programme on which we have been working.

Mr Higson: 2040 is the planning assumption. We are of course mindful that we have to work at a speed which can be agreed with the partnership communities so that is why there is necessarily some degree of flexibility. Personally I am convinced that 2040 is a perfectly realistic date. There is a lot of work to do but there is time in which to do it.

Q114 Lord Methuen: What does that demand as an authorisation for “go”?

Mr McKirdy: If I could unpack the 2040 date. It requires about five years of desk-based studies from now, looking at areas that express an interest and then deciding to proceed in the process. It then requires 10 years of detailed site investigations using boreholes to a depth of about a kilometre and then 15 years of construction. The 15 years of construction is using tried and tested construction techniques but in parallel with that we would envisage further confirmatory underground testing to show that the geology is suitable. We would look in particular not to try and speed up the five years. We need to work, as Mark said earlier, at stakeholder’s speed to make sure everybody is comfortable with that. Later in the programme during the construction period there may be some opportunity for compressing the programme but we would not want to assume that at this stage.

Mr Higson: Could I make one additional point as well which is that clearly having a target date is very useful. We need to get on with this project; it is important. However, we also need to be satisfied that there will be interim storage in a safe and robust manner which will last long enough for us to overcome whatever problems arise. If the timetable is delayed, there is no question of having to do something by 2040 otherwise we have a serious problem. 2040 is a good planning date but we must be

satisfied that interim storage can last for very much longer if it is needed.

Chairman: That technology is already in place? We have some interim storage, I have seen some at Sellafield, and that is the type of storage to which you are referring?

Q115 Lord Jenkin of Roding: Some of it.

Mr Higson: Some of it. I hesitated there briefly because it will be spent fuel that will need to be stored from new build as well as the existing legacy waste, so there is experience both in the United Kingdom and elsewhere of the relatively long-term storage of spent fuel but, yes, we do have experience at Sellafield of managing wastes.

Q116 Lord O’Neill of Clackmannan: Would it be right to say that this timescale does not really take account of the possibility of technical and scientific improvements in the period? I make that point because when you have a relaxed timescale—and I am not saying this is relaxed but it is long term—people tend to find work to fill the space rather than reduce the work that technology can afford.

Lord Hunt of Kings Heath: I think that is a very interesting comment. There are two points I would like to make on that. The first is that 100 years’ cooling is a conservative assumption. Clearly because you are working to such long time-lines I agree that one has to guard against complacency and the sense that “Oh, a few years can slip.” I would pray in aid the work of the Nuclear Decommissioning Authority which since it has come into being has really done some quite excellent work in relation to decommissioning. Historically, you have had a sense that decommissioning is going to take decades and therefore there is not an imperative to get on with it, but I think we have seen from the work of the NDA in the last year or two how with a very much more focused approach towards decommissioning you can make better progress. I think that is a very salutary lesson in relation to how we take forward geological disposal.

Q117 Lord O’Neill of Clackmannan: Unfortunately, as a consequence of that, people say, “But you are rushing it.” You are damned if you do and you are damned if you do not, but I kind of feel because things have taken so long so far that people assume that if they were done more quickly it would be at the expense of something. I feel that we ought to keep qualifying that these dates and, regardless of the 100 or 160 years debate, we have a lot of waste that we could be getting on with dealing with right away and if there were a gap in the middle that might be something that we could fill with other activities.

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Lord Hunt of Kings Heath: Again, I would say that in terms of the work of the NDA that I have always been very careful to ensure that I also have the advice of the regulators and that they are very much involved in ensuring that we make the right decisions. I chair the Sellafield Remediation Forum which is very much looking at decommissioning progress in Sellafield where we have the NDA, the private contractors and the regulators round the table who are able to advise me on progress and on priorities. Clearly we need to continue that, with safety being of course the paramount consideration, but also wanting to get on with decommissioning where that is possible.

Q118 *Lord Jenkin of Roding:* Could I move to the question of research and development. You said earlier of course that your response to CoRWM is in the first draft and quite understandably you are not prepared to give a date at which you might be prepared to issue that response and clearly we may need to report before we have it. Of course, they are not the only ones who have been critical in their report of the research effort. There was a report recently in the technical press—*Nuclear Fuel* of 25 January—and perhaps Mr McKirdy might like to answer this one—the UK Nuclear Decommissioning Authority’s Radioactive Waste Management Directorate “does not appear to have a clear picture of the knowledge base needed for development of the safety case for a geological disposal facility”, according to a recent review by key UK regulators. They were the UK’s Health and Safety Executive, which of course includes the Nuclear Installations Inspectorate, the Environment Agency and the Department for Transport. That has come quite recently but does Mr McKirdy have any comments to offer on that?

Lord Hunt of Kings Heath: Can I comment generally first and then ask Mr McKirdy to come in. We are taking this seriously. I particularly take the point that was raised in your earlier session that R&D is important both in terms of the geological disposal process but also of course because the experience that we are going to gain will be relevant to geological disposal in other countries as well, so we need to see this as an opportunity for UK expertise in other countries. We do recognise the need for funding to be made available for research to allow the independent regulators to undertake their functions and we will in our response be seeking to deal with those matters. I would like to reassure you that I do take this seriously.

Mr McKirdy: I think the review in question was a review undertaken by those three regulators—the Environment Agency, NII and the Department for Transport—of the Radioactive Waste Management

Directorate’s route towards becoming a delivery organisation for geological disposal, at which stage it will need to become a site-license company like any of our other site-license companies, able to apply for and hold an authorisation. What the regulators were reviewing was not the technical basis for our work, which they have reviewed before under different fora; they were looking at the organisational capability that we had built up since the decision in 2006 that the NDA would be the implementing body and how we were progressing towards the time at which we may need to make an application, which is still some years off. Their conclusion was that we had made good progress and that we should start operating now as a prospective site-license company under voluntary regulatory scrutiny. We have started acting as of December last year as if we were a site-license company and the regulators submit us to regulatory scrutiny. There is still work to be done; we have recognised it. There were a number of findings. They have a traffic light system in the report. There were one or two reds, a few ambers but mostly greens. We will be working with the regulators towards the conclusion of becoming an appropriate organisation to apply for a site licence before we have to apply for a site licence. The regulators have stated in their conclusions that they think that is achievable.

Q119 *Lord Jenkin of Roding:* Of course the NDA will be a rather different kind of site-license company than a number of the others that have been appointed by the NDA to look at decommissioning in the north, decommissioning in the south and running the Sellafield site and the Magnox reactors and so on. I would like to put it on record that I think the choice of these companies has brought a remarkable breath of fresh air and of new thinking to the whole of this operation. If I may say so, I think it has been well-handled by the NDA and you have some very good people there but, at the same time, as you rightly said, there is a lot of work still to be done. On the question particularly of research, the National Nuclear Laboratory was set up by the Government and exists and I have had discussions with its managing director and it is feeling rather disappointed that it is not yet being made full use of.

Lord Hunt of Kings Heath: Lord Jenkin, can I say that we are in discussion with the National Nuclear Laboratory about the extent to which its facilities can contribute to the required research and that will be part of our response to the Committee. On your general point, I agree with you that having now met some of the companies involved in decommissioning work, I have been impressed with the work that has been done. Also I must say that I am very impressed with the board of the NDA and the work that they are doing to make sure that this is done in the most

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effective way possible. What is interesting visiting Sellafield and other sites is meeting so many people from different countries and realising that what we are seeing is a lot of people with expertise in other countries being brought on to UK sites but, equally, meeting UK people who have gone to other countries as well. There is a sense in which we are very much learning from each other and I think that can only be to the good.

Q120 Lord Jenkin of Roding: Those of us who may have visited Cap de la Hague, which is of course run by Areva, recognise that it has very considerable skills and achievements which are not always matched at Sellafield. I think it is very valuable that there should be the maximum collaboration. Of course Areva is part of one of the site-license companies there.

Lord Hunt of Kings Heath: I agree with that and I am also very keen to ensure that as we take forward new nuclear development that we develop a very strong UK supply chain because this country has taken its decision to go back to nuclear and we need to make sure that not only we get the benefits of generation but that we get the benefit of being able to reenergise the industry.

Q121 Lord Jenkin of Roding: Could I say, Chairman, as President of the Energy Industry Council that there is a lot of catching up to be done.

Lord Hunt of Kings Heath: Yes, but nonetheless I am confident that there are also a lot of opportunities for UK companies and we need to make sure they make the most of it.

Lord Jenkin of Roding: I think our people are aware of it.

Q122 Chairman: In finishing I would also like to say I am highly encouraged by your statement about international interaction because in most areas of engineering and science that is how the world works. In this field over the decades we seem to have almost felt that we had to do everything from scratch ourselves and not interact enough internationally where a lot of the problems have been solved. In science and engineering one does not work on something that somebody else has solved; one swallows one's drive to be innovative oneself and accepts other people's good ideas. I hope that will be something that will spread throughout this whole operation.

Lord Hunt of Kings Heath: Thank you, Lord Chairman. I think there are many lessons to be learned from the first phase of civil nuclear development in this country. The advantage now of coming back afresh is that we can learn those lessons. We have fantastic science and engineering skills in this country. I am confident that we can develop a strong UK supply chain but, equally, we are working in an international industry where we certainly need to learn from others. I think it is worth saying that as far as geological disposal is concerned, we are not alone. Many other countries are going along the same route as we are. That does give us some confidence and just as we can learn from other countries, equally, I am hopeful that the kind of approach that we are taking will also have benefits for other countries as well.

Chairman: Thank you, Minister, for your coming to speak to us today; it has been very useful indeed. As I said to the previous group, I hope that you will keep us informed of any changes or anything that is new in the next few weeks while we are preparing this report, but thank you very much for coming this morning.

Written Evidence

Memorandum by the Environment Agency

1. INTRODUCTION

1.1 The Environment Agency is the organisation that would ultimately regulate the disposal of solid radioactive wastes in a geological disposal facility in England or Wales. We regulate all radioactive discharges and disposals from English and Welsh nuclear sites and from a wide range of non-nuclear premises. We work closely with colleagues in the Health and Safety Executive Nuclear Directorate to provide comprehensive and coherent nuclear regulation, in particular to ensure that the generation of radioactive wastes is minimised, and that any wastes that are produced are managed in ways that protect people and the environment.

1.2 We have a strong interest in the work of the Committee on Radioactive Waste Management (CoRWM). We have always enjoyed a very constructive working relationship with CoRWM, both before and after the Committee was reconstituted in 2007. Our responses below relate to CoRWM in its reconstituted form.

2. CoRWM'S PERFORMANCE

2.1 CoRWM has enthusiastically addressed the scientific and technical aspects of its remit, and its reports have generally been insightful and positive. During the past year, the Committee's work programme may have been rather broad, and we are pleased that the draft programme for 2010–13 appears to be more focused. The Committee will need to focus on matters which are vital to the effective and safe management of the wastes.

2.2 CoRWM has actively sought our views on the subjects it has addressed. The Members have taken account of what we have said to them, for example in the reports on research and development, storage of radioactive wastes, and implementation of geological disposal. We regard the Members of the Committee as experts in their individual fields, and collectively they have a range of capabilities relating to their remit. The makeup of the Committee is largely from the academic community. Because of this, the Committee might benefit from additional membership that has an in-depth practical knowledge of operations and engineering on nuclear sites, along with the cost implications of different management options. It might wish to consider secondments for particular tasks.

3. CoRWM'S REMIT

3.1 We are content with CoRWM's terms of reference, which are broad. Government should keep CoRWM's terms of reference and work programme under review as the implementation programme proceeds, to ensure they complement, and are consistent with, the regulatory process. The Committee should also continue to take care that its activities do not become quasi-regulatory. Since the management and disposal of radioactive wastes has major societal, scientific and technical implications, CoRWM should engage with a wide range of stakeholders on its work, to ensure it is soundly-based. More generally, managing radioactive waste safely (MRWS) stakeholder engagement processes should be led by those organisations that are accountable. For example:

- The relevant local Siting Partnership should engage with communities who have expressed an interest in hosting a geological disposal facility, and CoRWM should be involved as an observer. This is already happening in West Cumbria.
- The Nuclear Decommissioning Authority (NDA) should engage with stakeholders about their technical work on a candidate site and development of a repository concept, design and safety case.

3.2 The 2008 Managing Radioactive Waste Safely White Paper, together with the 2008 White Paper on Nuclear Power, Meeting the Energy Challenge, imply that wastes arising from any new build, or from nuclear materials that may be declared as waste in the future, are within CoRWM's remit. The Committee has included these items in its work programme, and in our view this is appropriate. In future, we believe CoRWM should place an increasing emphasis on constructively critiquing Government's and the NDA's plans, and on encouraging Government to make timely progress with the MRWS programme.

4. CoRWM AND GOVERNMENT

4.1 In our view, geological disposal is the best available approach and a sustainable solution to the long-term management of higher-activity solid radioactive wastes. It is required both to clean up the existing nuclear legacy and to provide a disposal option for any new nuclear build that will be needed as part of the national energy mix. We believe Government and the NDA should clearly demonstrate a credible commitment to develop a geological disposal facility for those wastes. This means they should:

- provide the necessary resources, both now and throughout the development programme;
- build trust with communities through open and honest engagement; and
- ensure that the NDA's research and development will be of sufficiently high quality to support any application for an environmental permit.

4.2 To date, Government has accepted many of CoRWM's recommendations. This acceptance needs to be translated into demonstrable progress. Government's oversight of the MRWS programme could also be made more transparent to stakeholders and the public. It is a positive development that the Department of Energy and Climate Change (DECC) has brought together the nuclear and radioactive waste responsibilities of the Department for Environment, Food and Rural Affairs and the former Department for Business, Enterprise and Regulatory Reform. This provides opportunities for further improvement. Government will need to ensure that DECC's and the NDA's resources are sufficient to deliver the MRWS programme. Whilst public spending will be under severe pressure, we believe this programme should remain a Government priority.

January 2010

Memorandum by the Geological Society of London

1. The Geological Society is grateful for the opportunity to submit evidence to the inquiry. This document has been prepared in consultation with a contact group of Fellows of the Society who are regularly involved in our activities relating to radioactive waste management, and has been agreed by our Council. The scope of the comments below is limited to CoRWM's scrutiny role with regard to geoscience, its capability in this respect, and our relationship and interactions with CoRWM to date. We are not a competent body to comment on CoRWM's relationship with Government.

2. The Geological Society has a friendly and constructive working relationship with CoRWM, and has usefully contributed to its work on several occasions. A January 2006 one-day meeting which was attended by the chairman and several other members of the original CoRWM was influential on its July 2006 report, particularly with regard to the confidence which it felt able to place in the concept of geological disposal. Since CoRWM's reconstitution with a new brief, the Society has organised two meetings bringing together members of the committee's working groups, Fellows of the Geological Society and representatives of other Earth science societies and institutions. The meeting with members of Working Group C, which examined current R&D provision and likely future requirements, at an early stage in its work was particularly constructive. The Society subsequently commented on two drafts of the report of this Working Group, and it is clear that our input shaped it considerably. This was a strong report, and we were pleased to support CoRWM's work in this way.

3. The Society was recently invited by CoRWM to comment on its draft work programme for 2010–13. We expressed the view that the proposed programme is very broad, lacks a clear focus and runs the risk that the committee will be too thinly spread, both in terms of capacity and expertise. Our impression is that to date, the reconstituted CoRWM has been somewhat stretched, and at times has struggled to keep pace with its planned activities, but that by and large it has discharged well those in which the Geological Society has been involved. Since we would be sorry to see these efforts dissipated, we encouraged CoRWM to take stock, assess its own strengths and weaknesses, and agree with Government a realistic and useful work programme which has the potential to add real value in the coming years.

4. CoRWM includes among its members a small number of individuals with considerable geoscientific expertise and experience. The Society in no way questions their fitness to serve on the committee. However, as the MRWS programme develops, there will be a need for detailed independent scrutiny of the geoscience carried out within the programme, primarily by NDA RWMD, and also by the British Geological Survey and others. As currently constituted, CoRWM does not have the range of geoscientific expertise required effectively to scrutinise this element of the programme.

5. The Committee may wish to consider how this deficit might be addressed, and explore possible alternative mechanisms for provision of independent scrutiny of the geoscientific work done in support of the MRWS programme. For example, the Committee might examine:

- Whether there are candidate organisations better placed than CoRWM to provide such scrutiny of the geoscience;
- Whether the membership of CoRWM should be changed to include a much wider range of Earth scientists with a variety of areas of expertise (although we recognise that the management of radioactive waste is not a purely technical, let alone a purely geoscientific, matter—and that to distort the membership of the committee in this way could hamper effective scrutiny of the overall process);
- Whether a subcommittee of CoRWM should be set up specifically to provide geoscientific scrutiny.

6. Irrespective of any changes to the mechanism by which geoscientific work within the MRWS programme is scrutinised, the Geological Society will continue in its endeavours to provide appropriate support, advice and constructive criticism to CoRWM and others involved in the process.

29 January 2010

Memorandum by Greenpeace

Greenpeace is aware that the Lords Science and Technology Committee (STC) has requested information from only one environmental organisation (Greenpeace) on this matter. For the record, we are making a submission but on the understanding that Greenpeace does not approve of such an “exclusive” approach to gathering views.

We understand that the STC has sought a submission from only one NGO, as a matter of urgency, because it needs to report before a general election is called. Exactly why this is the case has not been explained.

We would also like to note that at present many NGOs and others interested in issues around nuclear waste management are engaged in responding to very lengthy and complex consultations on the Justification (of new nuclear reactors) and on the Nuclear National Policy Statement. That the STC is taking evidence on a related matter at the same time as these other consultations—without a general call for evidence—may result in the validity of the Committee’s report on this matter being questioned..

RESPONSES TO QUESTIONS

CORWM’S PERFORMANCE

Has CoRWM effectively scrutinised the implementation of the Government’s MRWS programme?

CoRWM’s efforts to scrutinise implementation of the Government’s MRWS programme are not as effective as they could be. The main reason for this appears to be lack of funding for CoRWM’s work. From discussions we have had with various CoRWM members, and from what has been said at a CoRWM stakeholder meeting, lack of funding means CoRWM is not in a position to undertake stakeholder work, or independent research, to the extent it would like to. The STC should keep this in mind when examining the work of CoRWM. We understand the Committee will be responding to the draft Nuclear National Policy Statement and is seeking to meet NGOs on this. However, it is not planning to respond to the draft decision on Justification (of new reactors). It is extremely remiss of the Committee not to be responding to this—particularly as it may have an impact on many aspects of the MRWS programme. Whether this is because of lack of funding or lack of time (or both) is not clear at present.

Are Government decisions on its MRWS programme evidence-based? What mechanisms are in place to ensure this is the case? How does CoRWM scrutinise this?

Many Government decisions on its MRWS programme simply cannot be “evidence based” eg there is no operating repository for spent fuel and other higher activity wastes anywhere in the world. As a result, much of what the Government says on these matters is based on claims rather than being “evidence based.”

From observation of what Government officials have said at a variety of meetings over a number of years, from reading documents by the Nuclear Decommissioning Authority etc, it would appear that although there are mechanisms in place to examine the evidence for decisions made by government—there are not enough resources for the relevant organisations to undertake engage in the examining claims (this appears to be the case for regulators too).

Remarks made by CoRWM members at stakeholder events make it clear that CoRWM is not in a position to be able to undertake the level of scrutiny it believes it should be doing. We recognise that, conversely, some work cannot be fully scrutinised before it happens. Some work can only be monitoring of progress and examining claims made about progress. It is essential the STC considers the ability of CoRWM—and others—to be able to respond to Government assertions not only in the short term but over the longer term as well.

Does CoRWM have sufficient scientific and technical expertise to meet its remit?

CoRWM appears to have sufficient scientific and technical expertise to meet its remit (whether this is independent enough is another matter). However, it could certainly do with more Committee members with expertise on social, political and ethical matters (as CoRWM 1 had) to examine the social, political and ethical impact of proposals by Government and to examine its own assumptions. It is expected that social and ethical matters will become an increasing part of the discussion on MRWS processes on legacy waste. When this happens CoRWM may also have to look outside for expertise or seek new members (such expertise must be drawn from independent sources and not from within the industry).

On the current level and mix of CoRWM's expertise, we ask the STC consider CoRWM's draft statement¹ on new build where it reiterates the views of CoRWM 1:

“CoRWM's position on the consideration of wastes in the public assessment of proposals for building new nuclear power stations remains as set out in paragraph 21 of its 2006 Recommendations (see paragraph 2 above). It believes that a range of issues, including social, political and ethical issues of a deliberate decision to create new wastes, should be considered in the new build public assessment process.”

The paper serves as a timely reminder that, when considering new build wastes—as CoRWM 1 found when considering with legacy wastes—the current Committee's work must encompass more than just scientific and technical matters.

A further example of how CoRWM's 2 expertise and work may need to be expanded comes from a report in which CoRWM 1 considered the implications of long term storage of new build wastes (in its Implementation Report). In a little remarked paragraph the Report stated:

“It is clear that CoRWM's recommendations on implementation must be applied at least to new central or major regional stores at new locations if CoRWM's recommendations are to inspire public confidence. The extent to which they should be applied to other new stores and existing stores is a matter for further consideration”. (Moving Forward: CoRWM's Proposals for Implementation, February 2007, p 10, Doc 1703).

It has then been considered that the voluntarism process (for a geological disposal facility for legacy wastes) might also apply to long term stores at new locations. This is an issue which CoRWM should examine further, either for legacy wastes and as part of its examination of issues around new reactors. This will require social, political and ethical experts.

CoRWM may also wish to engage the services of appropriately trained economists to comment on the funding arrangements for dealing with legacy wastes, new build wastes or the reuse of nuclear materials.

CoRWM's REMIT

Is CoRWM's remit appropriate? If not, why not? To what extent should CoRWM be responsible for engaging with the public and representing their views within Government?

CoRWM 1 undertook much work on stakeholder engagement, and therefore could do much more to reflect public/stakeholder views, this has not been the case for CoRWM 2. Again, a lack of finance for the Committee's ability to liaise with stakeholders appears to be the main reason for this change. Having said that, CoRWM can never fully represent the public's views to Government or *within* Government. Indeed, we note that in a recent draft document (CoRWM 2748, draft 2 NPS Consultation Response) that it defines the public as:

People who have no particular interest in, and are not affected by, radioactive waste management. [CoRWM distinguishes between “stakeholders” and the public.]

Exactly who is completely untouched by radioactive waste management—given the level of taxpayer funding for both past and current operations—is something that should be explained.

¹ Doc no 2749 DRAFT CoRWM STATEMENT OF ITS POSITION ON NEW BUILD WASTES, 18 January 2010
<http://www.corwm.org.uk/Pages/Plenary%20Meetings/2749%20Draft%20%20CoRWM%20Stnt%20new%20build%20wastes.pdf>

However, it is the case that CoRWM could have a role to play in reflecting of the views of both stakeholders and the public—but only if engages appropriately (given time, money and its own consideration to such engagement). This is not the case at present.

Does CoRWM's remit cover emerging areas of activity, such as new build waste and the UK's plutonium stock pile, or longer term issues and horizon scanning? If not, should it?

CoRWM's remit does not specifically cover “emerging areas of activity”—such as new build waste and the UK plutonium stock pile. It is however inevitable, that (as with CoRWM 1) its work will address these matters if only because of the potential impact these may have on legacy wastes. As noted earlier, CoRWM has recently issued a draft statement on new build wastes. It is planning to do work on new build waste later this year.

It has already commented on issues around plutonium disposition.² In the case of plutonium, an existing nuclear material, CoRWM will have to look at the issues surrounding disposal of this as a waste. If proposals are made to reuse plutonium it will be expected to comment on the potential impacts of waste resulting eg the MOX spent fuel that will be produced will be much more hazardous even than the problematic spent fuel that new build will create. How these might impact on legacy waste disposal, or the disposal of other wastes from new build, is something CoRWM may feel it should comment on.

What is crucial is that CoRWM does not take a position on the desirability of new nuclear and/or the reuse of plutonium. We refer the STC to a letter sent to CoRWM 2 on how it should address new build wastes (received but not printed).

Are there any plans to change the composition or role of CoRWM as the Government's MRWS programme continues? Should there be?

It is not known if there are any plans to change the composition or role of CoRWM. On what additional expertise it might need, see earlier comments on social, political, ethical and financial issues.

CoRWM AND GOVERNMENT

How effective is CoRWM's interaction with different Government departments and agencies?

From what we can gather, even in issues such as the timing of consultations, there is no effective liaison between CoRWM and Government departments and agencies, despite some effort on CoRWM's behalf of make such interaction more effective. Equally important, judging from many conversations and much correspondence on various nuclear events and consultations, we would say that liaison between, and even within Government departments and agencies, is still pretty poor.

Are lines of responsibility and accountability within Government, and between CoRWM and Government, clear?

This presumably concerns responsibility and accountability within Government on matters relating to nuclear waste management? This is a question for CoRWM to answer. However, from an NGO perspective lines of responsibility and accountability seem, at the best blurred and at the worst in conflict. The transferral of the MRWS programme from Defra to the Office of Nuclear Development has created further mistrust within the NGO community and public over the way in which Government is now attempting to “manage” this issue rather than have a full and open dialogue. It is wrong that the department charged with promoting new build is now in control of managing legacy wastes. There is no doubt that claims made about how legacy waste can and will be dealt with are being extended to cover new build wastes—giving the impression that this particular hurdle to new build has been overcome. There are many, many unresolved issues around legacy waste are not being fully discussed. If CoRWM gets sucked into this deceit it will not help its credibility, which is already being undermined (see answer to following question).

Does the Government respond to and use CoRWM's advice effectively? Has the Government taken on board CoRWM's recommendations in its recent reports on geological disposal and interim storage?

No, from when CoRWM 1 reported—and the Government made its initial response to that report—it is quite clear that the Government does not intend to fully respond to, or act on, CoRWM's advice. It has consistently cherry-picked those parts of CoRWM's work it believes are helpful to its case, on legacy wastes and particularly on new build wastes. The Government selectively uses CoRWM's work to give the impression

² Doc No 2523 CoRWM Meeting with NDA on management of spent fuels, plutonium and uranium, 11 December 2008.
<http://www.corwm.org.uk/Pages/Other%20Meetings/2523%20-%20meeting%20with%20NDA%20on%20SF%20Pu%20U%20%2011%20Dec%2008%20final.pdf>

legacy can or will be dealt with in order to justify the creation of more wastes through new reactors and possibly the reuse of nuclear materials from reprocessing.

On this issue in particular we urge the STC to consider the letter published by four former members of CORWM 1, including the chairman, Prof Gordon McKerron.³

For the second part of this question, the STC need look no further for the type of discussion CoRWM has had on the Government's response to its work than the draft report on "*Views on Government's response to CoRWM's 2009 report on geological disposal.*"⁴

We understand that parts of that draft were accepted (eg on monitoring the work CoRWM should undertake), but the substantive comments were not accepted in full. However, the document serves as a good indication of the kind of issues that have been discussed by CoRWM in terms of Government response to its work.

Others have also been critical of CoRWM's own approach to dialogue.⁵ Greenpeace is in no position to substantiate the criticisms made in the document referenced, but offers it as an example of some of the criticisms made of CoRWM's own processes.

January 2010

Memorandum by the Nuclear Industry Association

The Nuclear Industry Association (NIA) welcomes this opportunity to respond to the Committee's inquiry into radioactive waste management.

NIA is the trade association and information and representative body for the civil nuclear industry in the UK. It represents over 180 companies operating in all aspects of the nuclear fuel cycle, including the current and prospective operators of the nuclear power stations, the international designers and vendors of nuclear power stations, and those engaged in decommissioning, waste management and nuclear liabilities management. Members also include nuclear equipment suppliers, engineering and construction firms, nuclear research organisations, and legal, financial and consultancy companies.

We note that the Committee has decided to focus on the role and performance of CORWM and so our response covers this area. We wish, however, to be clear that the issue of key significance to the industry is continued good progress by all those involved with the timely delivery of the Managing Radioactive Waste Safely (MRWS) strategy. The NIA also wishes to place on record the importance we attach to maintaining public confidence in the implementation of the MRWS strategy. CORWM has in the past and should in the future continue to play an important part in achieving this.

CoRWM's PERFORMANCE

CoRWM has scrutinised the Government's MRWS process thoroughly but we have noticed some inconsistencies and are concerned about how efficient its scrutiny has been in some areas. While CoRWM's response to government is in many cases presented with a strong evidence base it contains some statements which are presented with no evidence base to back them up (and often there are inaccuracies). For example in their draft response to the Energy NPSs, CoRWM dismisses the NDA's disposability assessments (which have a strong and documented evidence base) in order to say there is no evidence as to the disposability of new build waste. It does this without providing evidence to support the view that this conservative reference scenario is invalid. In contrast Government would appear to have taken a more consistently evidence based approach to decisions on MRWS.

This may of course relate to resources and the extent to which CoRWM has been able to bring in external technical and scientific expertise. However it seems to us that the main problem is that CoRWM has taken a broad approach to its work, attempting to examine a very wide range of complex issues, and we feel it could be more effective if its work were more focused on specific topics, relevant to the stage the Government has reached with its MRWS programme. On occasions CoRWM also seems to stray beyond its remit which we discuss further below.

³ http://www.nuclearwasteadvisory.co.uk/uploads/6140CoRWM1_Letter_201109.pdf

⁴ CoRWM Doc. 2738 Draft 3 (3 December 2009)

<http://www.corwm.org.uk/Pages/Plenary%20Meetings/2738%20Draft%203%20Views%20on%20Government%27s%20response%20CoRWM%27s%202009%20report%on%20GD.pdf>

⁵ <http://www.nuclearwasteadvisory.co.uk/uploads/6072HoL%20Sci%20-%20CoRWM%20-%20Resp%20-%2024%20Jan%202010.doc>

CoRWM's REMIT

We acknowledge that CoRWM's remit is broadly speaking correct but there have been some examples when it appears to stray beyond its remit. For example, the organisation's remit confines it to the issue of wastes rather than other parts of the fuel cycle. So it is right that it considers the issue of new build waste but plutonium could only come within the remit of CoRWM if it is declared a waste. It should therefore not be investigating the government's policy formation in this area. CoRWM's remit is to scrutinise the implementation of government policy in the area of nuclear waste disposal and provide feedback to government to assist in that implementation. It is not to suggest or formulate new policy or to scrutinise other areas of policy. Scrutiny of government policy in the nuclear sector is carried out by select committees in both houses of Parliament and by competent expert regulators including the Health and Safety Executive, Environment Agency, and Scottish Environment Protection Agency.

CoRWM's remit is also not to re-scrutinise its own policy decisions which were arrived at in a lengthy and open debate as this is not within its remit. Much of the value in the original CoRWM process lay in this fundamental deliberative approach, and there is a danger in reopening issues without any such process. For example, we think that opening the issue of borehole disposal again is neither helpful nor productive. We suggest it would be useful if the sponsoring departments could engage more directly with CoRWM over its work programme in order to get the advice they need at the time they need it, focusing explicitly on the waste disposal process rather than broader issues.

CoRWM rightly operates in an open manner and allows the public to participate in its meetings and have a dialogue with it. However its operating method of producing papers—often written only by one member—for debate in the plenary sessions sometimes leads to preliminary views being interpreted as formal CoRWM positions. It would be better if more complete papers which had been subject to internal debate and review were considered instead with the key options outlined for debate in plenary sessions.

CoRWM AND GOVERNMENT

It is difficult for us to comment on the interaction between CoRWM and government departments. However from what we can see Government clearly takes CoRWM's advice into account in formulating its policies although as we stated above the interaction might be improved if CoRWM's work programme was more closely related to the work being carried out under the MRWS programme.

January 2010
