



document 2515.2

Committee on Radioactive Waste Management

Proposed programme of work, 2009-2012

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Proposed programme of work 2009 - 2012

Introduction by the Chair

I have pleasure in presenting CoRWM's proposed work programme for 2009-2012 to our sponsor Ministers - the Secretary of State for Energy and Climate Change, and Environment Ministers in Scotland, Wales and Northern Ireland.

In sections 1 and 2, we describe our task and what we have done in the first full year (2008-09) since we were reconstituted with revised terms of reference. We have a 3-year rolling programme and section 3 says how we developed our plans for 2009-12. Section 4 describes those plans, focusing mainly on the first year, and section 5 outlines what we might do in the second and third years. Section 6 says how we propose to organise our work, drawing on our experience from 2008-09 including the views of our sponsors and stakeholders.

CoRWM has an important role to play in the UK's **Managing Radioactive Waste Safely** programme, which is the programme for the management of the country's higher activity radioactive wastes. During the next three years we will continue to scrutinise and provide independent advice on all aspects of the programme, including interim storage, geological disposal and research and development. We will do so in a way that enhances public confidence in the programme and our work within it.

Professor Robert Pickard

Summary

1. This is our second full year work programme. The programme has been developed with stakeholder comments and advice from our Sponsors.
2. The 2008-09 programme identified that two major reports based on work in this year would be submitted to Government in June 2009, one on Geological Disposal and one on Research and Development (R&D). These will be delayed and we are now seeking to deliver them to Government in July and October 2009, respectively. This is not expected to have a material impact on new work within the 2009-10 programme. The Annual report will be submitted to Government in June. Our report on Interim Storage was delivered to Government in March 2009.
3. Apart from completing our Geological Disposal and Research and Development reports, our proposed key priorities for this year are:

- Interim storage: continue our 2008-09 work, including scrutiny of the Nuclear Decommissioning Authority's development of its "topic strategies" for higher activity wastes and its work on management options for short-lived intermediate level wastes.
 - Geological disposal – scrutiny of:
 - progress with the voluntarism and partnership approach to disposal facility siting
 - the British Geological Survey's screening out of unsuitable areas
 - approaches to assessing and meeting skills needs for desk-based studies and surface-based investigations of potential sites (stages 4 and 5 of the siting process).
 - New build wastes and spent fuels: advice on interim storage and geological disposal issues.
 - Management of higher activity wastes in Scotland: scrutinise the development of the policy and the associated Strategic Environmental Assessment, advise accordingly.
 - Public and stakeholder engagement: scrutiny of the engagement activities of the organisations involved in the management of radioactive wastes.
 - CoRWM website: carry out major improvements to make it fit for future purposes.
4. It is proposed to produce position papers on the above priority topics during the year.
 5. In addition we will carry out our own programme of public and stakeholder engagement to support our work. We will ensure that our PSE programme is coordinated with those of other organisations.
 6. We will also monitor the actions taken by Government and others in response to our three main reports to Government in 2009 and keep a watching brief on other relevant developments in radioactive waste management.
 7. The scope and timing of our new tasks and outputs will be discussed at meetings with Government and the Nuclear Decommissioning Authority before we begin the tasks.
 8. This proposed work programme is based on the assumption that the level of resources for CoRWM will remain the same in 2009-10 as it was in 2008-09.
 9. The programme is submitted to Government for approval.

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1 Our remit

1. The Committee was set up in 2003 to oversee a review of options for the long-term management of the UK's solid higher activity radioactive waste and to recommend an option (or combination of options) to Government. CoRWM reported in July 2006 ¹ and Government responded in October 2006, ² accepting most of CoRWM's recommendations. The Government then began work on the implementation of a policy of geological disposal, using a voluntarism and partnership approach, preceded by robust interim storage and accompanied by the necessary research.
2. There was a public consultation in 2007 on a framework for implementing geological disposal.³ This consultation did not involve the Scottish Government, which had decided not to endorse geological disposal but to develop a policy of long-term storage, with appropriate research and development (R&D).⁴ The consultation was followed in June 2008 by a White Paper (Cm 7386) and an invitation to local communities to express an interest in hosting a geological disposal facility.⁵
3. On 25 October 2007 Government re-appointed CoRWM with revised Terms of Reference. These say that (see Annex A):

"... The role of the reconstituted Committee on Radioactive Waste Management (CoRWM) will be 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'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."

4. The current membership of CoRWM is given in Annex B.

¹ **Managing our radioactive waste safely - CoRWM's recommendations to Government**, July 2006, document 700. See website <http://www.corwm.org.uk>

² **Response to the report and recommendations from the Committee on Radioactive Waste Management**, on Defra website at <http://www.defra.gov.uk/environment/radioactivity/waste/pdf/corwm-govresponse.pdf>

³ **Managing Radioactive Waste Safely. A framework for implementing geological disposal**. A public consultation by Defra, DTI and the Welsh and Northern Irish devolved administrations. 25 June 2007.

⁴ **Ministers decline to endorse deep storage**: see Scottish Government website at <http://www.scotland.gov.uk/News/Releases/2007/06/25101822>

⁵ White Paper **Managing Radioactive Waste Safely: A Framework for Implementing Geological Disposal** (Cm 7386), Department for Environment, Food and Rural Affairs et al, June 2008, on Defra website at <http://www.defra.gov.uk/environment/radioactivity/mrws/pdf/white-paper-final.pdf>

2 Our work in 2008-09

5. The proposed work programme for 2008-11 (doc.2266) was submitted to Government for approval at the end of March 2008. The programme set out the detailed work for 2008-09 and identified issues for future years. The programme was developed following public and stakeholder engagement. This was the first full work programme as CoRWM was reconstituted in late 2007.
6. The programme identified three key strands of the work of CoRWM, with public and stakeholder engagement (PSE) as a cross cutting issue. The three strands are: geological disposal, interim storage, and R&D. These strands formed the basis for three proposed major reports to Government:
 - a) Interim Storage, due to be submitted to Government in March 2009
 - b) Geological Disposal, due to be submitted in June 2009
 - c) R&D, due to be submitted in June 2009.
7. The work programme for the first year was ambitious. It was based upon estimates of the amount of work required, and assumptions about the availability of information and the ability of third parties to respond to CoRWM requests. It became apparent towards the end of 2008/09 that we had underestimated the complexity of some of the work required in order to deliver comprehensive reports, supported by public and stakeholder engagement, and that the timescales for the Geological Disposal and Research and Development reports would need to be reviewed. **The Geological Disposal report is now due in July 2009 and the R&D report in October 2009.** The implications of these changes for the 2009-12 work programme are dealt with below. This proposed change was discussed with Government sponsors.
8. During the year, seven plenary meetings open to the public were held. There was a major PSE event in October 2008. Other PSE events were held to support reports and position papers. Position papers were produced on a wide range of topics such as: coherence of the regulatory processes (2420), overseas experience (2534), a review of the June 2008 White Paper on implementing geological disposal (2431) and the 2007 UK Radioactive Waste Inventory (2438.1). Responses were also made to the requests from the Nuclear Decommissioning Authority (NDA) for comments on draft documents on R&D Strategy (2408), International R&D (2421), PSE and Communications Strategy for Geological Disposal (2479) and Strategic Environmental Assessment, Sustainability Appraisal and Environmental Impact Assessment (2477). **A fuller description of CoRWM activities, reports and position papers will be given in the CoRWM Annual Report for 2008-09, which will be submitted to Government in June 2009.**
9. As this was the first full work programme year, it has been a learning process for CoRWM. Despite the ambitious nature of the work programme, one major report will be delivered on time and another delayed by only a

month. The completion of the two Geological Disposal and R&D reports will not delay the start of major new tasks in the 2009-10 work programme.

3 Development of our 2009-12 work programme

10. The proposed programme was developed from initial proposals by working groups with debate at four plenary meetings, and two opportunities for public comment during that period. The process involved the following steps.
11. On 4 November 2008, our plenary meeting agreed a process (CoRWM document 2478) for development of the next three year programme. Working groups - responsible for implementing the current programme - drew up proposals for the following year. These were largely based on
 - likely developments that they judged needed to be scrutinised, including some issues continuing from the current year's work,
 - the views of stakeholders, including at CoRWM's public workshop in Reading on 30 October 2008, and
 - experience of the current year's work, what could practically be achieved in the next year, and how it could be better organised.
12. On 18 December 2008, our plenary meeting discussed a detailed draft work plan (CoRWM document 2515, 1st draft) including strategic work areas, proposed tasks, priorities and timescales. The Committee agreed to invite public comments on a modified version of this - a list of proposed work areas and tasks, inviting public comments on proposed tasks, priorities and timescales.
13. On 19 December 2008, via our website and our "e-bulletin" (no.28, document 2521) which goes to over 1,000 subscribers, we invited comments to reach us by 14 January 2009. We received comments and suggestions from Government (whose officials we met on 11 January 2009) and the NDA. Among other things, they stressed the need for CoRWM to prioritise its work and ensure that the programme could be delivered within its available resource; to take account of the impact on organisations of CoRWM's information requests; and to ensure the priorities and the work items reflect - where appropriate - those of other organisations. They suggested areas where advice would be welcomed.
14. On 27 January 2009, our plenary meeting considered a revised proposal (CoRWM document 2515.1) which summarised and took account of these comments. We considered what we could achieve in terms of advice to Government and others, position papers, and monitoring of developments in the UK and abroad. The meeting agreed to publish these further proposals. On this and the previous day (report: document 2545) we also discussed working methods: section 6 says more about this.
15. On 2 February 2009, via the website and e-bulletin (no.29, document 2544), we invited comments to reach us by 2 March 2009. We set out what we

planned to study and, in each case, the reason, the amount of effort needed, and the expected output - e.g. a report to Government, a position paper. We discussed the proposed programme with the NDA at a meeting on 17 February 2009 (doc. no 2551) and have received two sets of comments on the proposed programme from our sponsors.

16. On 18 March 2009, our plenary considered a draft of this document and agreed changes to be made before its submission to Government. We held a meeting with Government officials on 25 March 2009 to inform them of these changes. The proposed programme was then finalised and sent to sponsor Governments on 31st March 2009.
17. In conclusion: the process for drawing up and submitting the proposed programme was conceived and agreed in November, and all the steps were completed as planned. Our experience and feedback received during the development of this programme has highlighted the need to start development of future years' programmes earlier in the year. This would be facilitated by the availability of the forward programmes of the NDA and Government that are relevant to our work.

4 Our proposed 2009-10 work programme

18. The work programme remains as set out in the three main strands of the MRWS programme, namely interim storage, geological disposal and R&D. It is important that the scope of the strands is clear in order to appreciate the work programme.
19. Our work on "**interim storage**" includes:
 - o waste conditioning and packaging
 - o waste storage prior to emplacement in a geological disposal facility
 - o longer term waste storage, pending decisions on final management steps
 - o transport of wastes, between storage sites and between storage sites and disposal facilities
 - o management (including storage) of materials that may be declared to be wastes, namely spent fuels, plutonium and uranium.
20. We take "**geological disposal**" to be the emplacement of wastes in the earth's crust with no intention to retrieve them. This term is often used as a shorthand for "**deep geological disposal**", which we define as being disposal in an underground facility at such a depth that the rock provides substantial protection from disturbances at the surface of the earth (typically 200m to 1,000m deep). We use "**geological disposal facility**" to mean any facility for geological disposal, including mined repositories, natural caverns, disused mines and deep boreholes (over 1,000m deep). Our use of the singular is for convenience only and could include potentially more than one facility.

21. We have adopted a definition of “**research and development**” (R&D). Research is taken to be an investigation directed to the discovery of some fact or principle by a course of study or scientific enquiry and includes fundamental, applied, primary and secondary research. Development is the systematic use of knowledge and understanding gained from research directed towards the production or improvement of materials, devices, systems or methods, including the design and development of processes. Our work on this topic includes reviewing skills and infrastructure requirements for R&D.
22. “**Public and Stakeholder Engagement**” (PSE) is a cross cutting work stream. We scrutinise the PSE arrangements of other organisations and, in accordance with our Terms of Reference, carry out PSE during the development of our position papers and reports.
23. Our proposed tasks for 2009-10 are shown in tabular form in Annex C and are described below.

Interim Storage

24. Our proposed interim storage tasks are:

Task 1 –Scrutinise and advise on interim storage issues for higher activity wastes and materials that may be declared to be wastes including:

- a) monitoring actions taken in response to the recommendations in our March 2009 Interim Storage Report
- b) scrutinising the NDA's development of its “topic strategies” for higher activity wastes, including its work on management options for short-lived intermediate level wastes (ILW)
- c) following NDA progress in the development of its “topic strategies” for spent fuels, plutonium and uranium
- d) keeping a watching brief on waste transport issues (with a view to undertaking a major piece of work in 2010-11).

Task 2 – Scrutinise the development of Scottish Government policy for management of higher activity wastes, including the associated Strategic Environmental Assessment (SEA) and advise accordingly.

25. Task 1 is a continuation of our work in 2008-9 and is central to our remit. The work on alternative management strategies for short-lived ILW has been requested by our sponsors. Task 2 has been requested by the Scottish Government.

Geological Disposal

26. Our tasks on geological disposal will be mainly a continuation of those in 2008/09:

Task 3 – Complete our 2009 Geological Disposal report (which covers: the June 2008 White Paper and invitation to communities, decision making, funding, managing risks, PSE, the regulators and the regulatory framework, land use planning, environmental and sustainability assessments, the inventory

of wastes for disposal, disposal concepts, site screening and desk-based studies). This task will be carried out in the period April to July 2009 and will include two or more PSE events.

Task 4 – Scrutinise and advise on the voluntarism and partnership approach to geological disposal facility siting, including:

- a) scrutinise Government work to increase awareness of the invitation to communities and monitor responses
- b) scrutinise Government and NDA engagement with communities that have expressed an interest.

Task 5 – Scrutinise and advise on site assessment, including:

- a) scrutinise the British Geological Survey's (BGS) screening out of unsuitable areas
- b) scrutinise the NDA's and others' approaches to the assessment of skills and infrastructure requirements for desk-based studies and surface-based investigations (stages 4 and 5 of the siting process).
- c) scrutinise NDA preparations for stage 4 of the siting process (desk-based studies).

Task 6 – Scrutinise and advise on NDA implementation and safety case work, including:

- a) scrutinise NDA's continuing development of its Provisional Implementation Plan
- b) scrutinise NDA's continuing development of its Generic Disposal System Safety Case.

Task 7 – Monitor actions taken in response to the recommendations in our July 2009 Geological Disposal report.

Task 8 – Maintain a watching brief on decision making, funding, risk management and regulatory developments.

Research and Development

27. Our tasks on R&D will be mainly a continuation of those in 2008/09:

Task 9 – Complete our 2009 report on R&D (which covers: establishing R&D requirements, the UK R&D programme in support of the MRWS, infrastructure requirements for R&D, R&D skills required to support the MRWS process, specific UK R&D issues, and international programmes). This task will be carried out in the period April to October 2009 and will include a stakeholder event.

Task 10 – Scrutinise the implementation of the high level NDA RWMD R&D Strategy.

Task 11 - Scrutinise the development of the NDA RWMD R & D work programme.

Task 12 – Monitor actions taken in response to the recommendations in our October 2009 R&D report.

Wastes from New Build Nuclear Power Stations

28. The following task has been requested by the UK Government.

Task 13 – Advise on interim storage and geological disposal issues for ILW and spent fuels from new build nuclear power stations.

Public and Stakeholder Engagement

29. In addition to the events mentioned above, we will:

Task 14 – Engage the public on issues relating to progress with the implementation of geological disposal, for example by convening a Citizens' Panel.

Task 15 – Liaise with other organisations on ways to provide information to the public about the MRWS programme and radioactive waste management in general.

Task 16 – Scrutinise the PSE activities of Government, the NDA and the regulators related to the MRWS programme.

CoRWM web site

30. We aim to significantly improve the website by July 2009 and have identified this as a separate task.

Task 17 – Improve the CoRWM website to make it fit for our future purposes.

Outputs

31. Our major outputs in the first 7 months of the year will be our Geological Disposal and R&D reports, and our 2008-09 Annual Report. In the latter half of the year we expect to produce position papers on:

- progress on interim storage issues
- Scottish Government policy for the management of higher activity wastes, including the associated SEA
- new build ILW and spent fuels
- skills requirements for geological disposal
- BGS screening out of unsuitable areas
- public and stakeholder engagement (maybe a report if PSE activities during the year warrant it).

32. Other outputs will be in the form of letters and papers produced in response to requests for scrutiny and advice. Unless time pressures prevent it, outputs will be first issued as plenary papers and discussed in open meetings before being finalised.

33. Requests to CoRWM for responses to consultation documents will be considered for priority and undertaken if time allows.

34. We recognise that our advice needs to be timely. The timing of our outputs will be discussed with sponsors and the NDA during the scoping meetings we plan to hold before beginning many of our tasks. Progress against the programme will be monitored during the year and the programme reviewed accordingly.

5 Possible topics for 2010-11 and 2011-12

35. The 2009-10 work programme contains some major work topics which are likely to stretch into 2010-11 for completion. In addition the following potential topics have been identified:
- accommodating retrievability in the design of geological disposal facilities
 - issues associated with the transport of radioactive wastes
 - waste package remediation
 - disposal facility concepts
 - planning issues for geological disposal
 - contingency plans in the MRWS programme
 - knowledge management.
36. The 2010-13 work programme will be developed during the current year with early reference to the forward plans of other organisations.

6 How we shall work

37. Most of our working methods were established in 2003. Our 2008-11 programme (CoRWM document 2266, section 5, *How we propose to work*) described these in more detail - for example, how we try to work as openly and transparently as possible.
38. For next year's programme, we have been discussing how we could organise our work better, learning from this year's experience. We are looking to develop in a number of areas, particularly:
- Identifying and measuring success (e.g. how has the UK's management of radioactive waste improved as a result of our advice?), and on the other hand, minimising the risk of failure (e.g. loss of confidence in our work or our outputs).
 - Ensuring the quality of our work and our products. This includes ensuring that our evidence gathering and evaluation are robust.
 - More effective use of individual Members and small teams, as well as larger working groups, to carry out tasks.
 - Better use of plenary meetings. This includes a better focused agenda, more routine reports taken as read, and more time for discussion and deliberation of substantive issues.

- Relevant papers include those on quality control (document 2539), ways of working (document 2545), and success and risk (document 2555).

7 Conclusion

39. This proposed work programme is submitted to Government for approval. The development and implementation of strategies for the management of higher activity radioactive waste is progressing and we believe that our role of scrutiny and advice will be important. The coming year will be challenging and it will be necessary for us to be clearly focussed on the priorities within the proposed work programme. Continuing engagement with stakeholders will be important.

Terms of reference for the Committee on Radioactive Waste Management

Introduction

1. Following the announcements by UK Government and the devolved administrations (Government), on 25 October 2006, a new Committee on Radioactive Waste Management (CoRWM) will be appointed under these revised terms of reference designed to meet the future needs of the Government's Managing Radioactive Waste Safely (MRWS) programme. The Committee will be jointly appointed by UK Government and relevant devolved administration Ministers. Details of its roles, responsibilities and membership are outlined below.

CoRWM's Role and Responsibilities

2. The role of the reconstituted Committee on Radioactive Waste Management (CoRWM) will be 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 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. Sponsoring Ministers (from Defra, DTI and the devolved administrations) will agree a three-year rolling programme and budget for CoRWM's work on an annual basis. Any in-year changes will be the subject of agreement by sponsoring Ministers.

4. CoRWM will provide appropriate and timely evidence-based advice on Government and Nuclear Decommissioning Authority (NDA) plans for the delivery of a geological disposal facility for higher activity wastes under the Managing Radioactive Waste Safety programme. The work programme may include review of activities including waste packaging options, geological disposal facility delivery programmes and plans, site selection processes and criteria, and the approach to public and stakeholder engagement. Testing the evidence base of the plans for the delivery of a geological disposal facility will be a key component of the work. As well as ongoing dialogue with Government, the implementing body, local authorities and stakeholders, CoRWM will provide an annual report of its work to Government.

5. CoRWM shall undertake its work in an open and consultative manner. It will engage with stakeholders and it will publish advice (and the underpinning evidence) in a way that is meaningful to the non-expert. It will comply, as will sponsoring departments, with Guidelines on Scientific Analysis in Policy Making (<http://www.dti.gov.uk/files/file9767.pdf>) as well as other relevant Government advice and guidelines. Government will respond to all substantive advice. Published advice and reports will be

made available in respective Parliaments/Assemblies, as will any Government response. CoRWM's Chair will attend Parliamentary / Assembly evidence sessions as and when required.

6. With the agreement of CoRWM's sponsoring Ministers, other parts of Government, the NDA and the regulatory bodies may request independent advice from CoRWM. Relevant Parliamentary / Assembly Committees may also propose work to sponsoring Ministers, for consideration in the work programme. CoRWM's priority role is set out in paragraph 2 although sponsoring Ministers may also ask the Committee to provide advice on other radioactive waste management issues as necessary.

7. In delivering its annual work programme, and where there is a common interest, the Committee will liaise with appropriate advisory bodies including Health and Safety Commission advisory bodies, and any advisory bodies established by the environment agencies.

8. CoRWM shall consist of a Chair and up to fourteen members, one of whom will be appointed by Ministers as Deputy Chair on the recommendation of the Chair. Seats will not be representative of organisation or sectoral interests and the skills and expertise which will need to be available to the Committee will vary depending on the programme of work. For example, the relevant skills may include: radioactive waste management, nuclear science, radiation protection, environmental law, environment issues, social science (including public and stakeholder engagement), geology / geochemistry / hydrogeology, finance / economics, civil engineering / underground construction technology, geological disposal facility performance / safety issues, materials science, environmental impact assessment, local Government, planning, regulatory processes and ethics. Sponsoring Ministers may review the membership of the Committee, and the skills and expertise required.

9. Appointments will be made following the Office of the Commissioner for Public Appointments (OCPA) code of practice. Initial appointments will be for three years and sponsoring Ministers retain the right to terminate appointments at any time in light of individual members' performance, changes in CoRWM's work requirements, or completion of the work required of CoRWM.

10. The Committee, as agreed in the annual plans, may co-opt additional expertise to form or support temporary sub-groups set up to examine specific and defined problems.

Programme of work

11. To support its work, CoRWM will need to familiarise itself with Government policy in this area, including ongoing meetings with relevant Government departments and the NDA. The outline framework within which CoRWM is then expected to work is:

(i) *recognising the policy framework within which it will operate including the roles and responsibilities of Government and the NDA in relation to CoRWM's own advisory role;*

(ii) *scrutinising Government and NDA proposals, plans and programmes to implement geological disposal and other radioactive waste management issues on which Government might seek advice as agreed in CoRWM's work plan;*

(iii) *formulation of advice and reporting to Government based on the best available evidence and informed by the views of stakeholders and the public.*

12. CoRWM will prepare its draft work programme, within this outline framework, in conjunction with Government, the NDA and regulators, taking account of work by other advisory bodies (see paragraph 7 above). The programme will include details of specific areas of work, reports which it intends to produce, the proposed use of sub-groups and any other activities or events, including proposals for public and stakeholder engagement. CoRWM will submit its first draft three-year work programme proposal to its sponsoring Ministers for discussion and agreement at an appropriate early stage following appointment of the full Committee. Subsequent three-year work programmes will be agreed annually on a rolling basis.

13. In familiarising themselves with the relevant background and issues, Members will make themselves aware, and take account, of previous engagement and reports in the Managing Radioactive Waste Safely programme, the UK Radioactive Waste Inventory and the nature of current and expected future UK holdings of plutonium, uranium and spent nuclear fuel. CoRWM will take account of existing technical assessments and research into radioactive waste management in the UK and elsewhere. In particular, it is recognised that CoRWM will need to engage with the NDA given that the Committee's advice will directly impinge on the long-term responsibilities of the NDA. CoRWM will also take account of other relevant policy developments.

14. The Chair will submit a report to Ministers by 30 June each year on the delivery of the agreed work programme. This will be made available in the UK and Scottish Parliament, the National Assembly for Wales and the Northern Ireland Assembly.

Access to other sources of expertise

15. Members of CoRWM itself will not have all the skills and expertise necessary to advise Government. The Committee will need to decide how best to secure access to other appropriate sources of expert input during the course of its work. Within this, it will have the option of setting up expert sub-groups containing both Members of CoRWM itself and other appropriate co-opted persons. A member of CoRWM will chair any sub-group of this nature and ensure its effective operation, as well as provide a clear line of responsibility and accountability to the main Committee, and hence to Ministers. This approach will enable the Committee to draw on a broad range of expertise in the UK and elsewhere.

16. The number of such sub-groups will be kept to the minimum necessary. Their role will be that of providing advice for the main Committee to consider and assess as it sees fit, and managing any activity which CoRWM delegates to them. It will be for the main Committee to assess and decide upon the advice it receives from such sub-groups. CoRWM may also utilise other appropriate means of securing expert input, such as sponsored meetings and seminars. The Chair will ensure that sub-group work and all other activities are closely integrated.

Public and stakeholder engagement

17. CoRWM must continue to inspire public confidence in the way in which it works. In order to secure such confidence in its advice it will work in an open and transparent manner. Hence, its work should be characterised by:

- a published reporting and transparency policy;
- relevant public and stakeholder engagement as required;
- clear communications including the use of plain English, publishing its advice (and the underpinning evidence) in a way that is meaningful to the non-expert;
- making information accessible;
- encouraging people to ask questions or make their views known and listening to their concerns;
- providing opportunities for people to challenge information, for example by making clear the sources of information and points of view on which the Committee's advice is based;
- holding a number of its meetings in public.

Responsibilities of the committee and its members

18. CoRWM will have a corporate responsibility to deliver its advice to sponsoring Ministers in accordance with agreed work plans. It will be for Ministers, with appropriate reference to their respective Parliaments and Assembly, to take decisions on the advice it receives and to give directions to the NDA as necessary on any subsequent changes required in the delivery of geological disposal of the UK's solid radioactive waste.

19. All members will need to be effective team workers, with good analytical skills and good judgement besides a strong interest in the process of decision-making on difficult issues. A number of them will need experience of project management, advising on scientific and technical issues directly relating to radioactive waste management, public and stakeholder engagement, excellent drafting and communication skills, or business experience and knowledge of economics.

20. The Chair, in addition, will be capable of successfully and objectively leading committee-based projects, grasping complex technical issues, and managing a diverse group effectively and delivering substantial results, presenting progress and outcomes in public. He or she will be a person with appropriate stature and credibility.

Role of the Chair

21. The Chair will be responsible for supervising the CoRWM work programme and ensuring that the Committee's objectives are achieved. The Chair will be responsible for advising Ministers promptly if he or she anticipates that the Committee will not complete its agreed work programme indicating what remedial action might be taken. He or she will be the main point of contact with the public and the media, in presenting progress and answering questions. The Chair will meet Ministers on appointment, and then at least annually along with other members as appropriate. Notes of these meetings will be published. The Chair will ensure CoRWM submits its annual written report to Ministers, by 30 June of each year. The Chair may be required to present the position of CoRWM to Parliament or Assembly committees and representatives as appropriate. The report will set out, among other things, CoRWM's progress with the agreed work programme, advice deriving from it and costs incurred. Ministers will also appoint a Deputy Chair who can assist the Chair as the latter sees fit.

Role of Members

22. Members will work, under the Chair's supervision, to the programme agreed with sponsoring Ministers, so as to ensure its satisfactory delivery. Members will have a collective responsibility to ensure achievement of CoRWM's objectives and delivery of its work programme. Individual Members may be appointed by the Chair to undertake specific, active roles, for example chairing sub-groups or in representing CoRWM in meetings with the public, organisations who are contributing to the work, or the media. All members will abide by CoRWM's Code of Practice and will be subject to individual performance appraisal as laid down by the Cabinet Office guide (see next paragraph).

Standards

23. CoRWM is set up by, and answerable to Ministers and is funded by the taxpayer. It must therefore comply with the Cabinet Office guide "Public Bodies: a Guide for Departments" (http://www.civilservice.gov.uk/other/agencies/publications/pdf/public_bodies_2006/1_case_assessment.pdf).

24. These and other relevant procedural requirements will be set out in CoRWM's Code of Practice which Members will agree to, prior to appointment.

Resources

25. Sponsoring Ministers will provide CoRWM with resources – both staff and financial – to enable it to carry out its agreed programme of work. These will include a secretariat which will help CoRWM carry out its work programme including, at the outset, providing reading material and arranging for any further briefings and visits. The Chair and Members will have a collective responsibility for delivering the work programme within

the agreed budget, although the Chair may request sponsoring Ministers for adjustment to this budget should this be considered necessary.

Payments

26. The Chair and Members will be paid for their work for CoRWM at agreed daily rates. They will also be fully reimbursed for all reasonable travel and subsistence costs incurred during the course of their work.

Annex B

Who we are

Professor Robert Pickard (Chair) - Chairman of the Consumers' Association Which?, former Director-General of the British Nutrition Foundation, Emeritus Professor of Neurobiology at the University of Cardiff, Visiting Professor at the Royal Agricultural College, Cirencester, and Fellow of the Institute of Biology and the Royal Society of Medicine. For the Department of Health and the Royal Society for the Promotion of Health, Professor Pickard is also Chairman of the national NGO Forum, which facilitates the interface between government policymakers and 94 NGOs working for health improvements. He is an international authority on the biology of honeybees and pioneered the development of solid-state, neural micro biosensors in the UK.

Professor William Lee (Deputy Chair) - Head of Materials at Imperial College London. He has a Physical Metallurgy BSc from Aston, a DPhil in Radiation Damage Studies from Oxford and has held academic positions in the USA (Case Western Reserve University, Cleveland and Ohio State University) and UK notably at Sheffield University where he was Director of BNFLs University Research Alliance on Waste Immobilisation. He has over 300 publications including *An Introduction to Nuclear Waste Immobilisation* (Elsevier, 2005). He is a member of the International Commission on Glass Technical Committee on Nuclear and Hazardous Waste Vitrification and Chair of the International Ceramic Federation Technical Committee on Ceramics in Nuclear Applications. He is a Fellow of the American Ceramic Society and of the Institute of Materials.

David Broughton - a Chartered Engineer and a Member of the Institution of Mechanical Engineers. Recently retired from UKAEA he worked at Dounreay, Caithness from 1981. He has 26 years experience in professional engineering and management of complex nuclear projects. He was responsible for Dounreay's major radioactive waste management projects. These included new low level waste disposal facilities, new intermediate level waste encapsulation and storage facilities, the future retrieval of waste from the Dounreay shaft and the current shaft isolation project. He is experienced in both engaging stakeholders in projects that have many options and technical issues to consider, and guiding projects through the regulatory and planning processes.

Margaret Burns - a part-time teaching fellow in the Law Department of the University of Aberdeen. She was a member of the Health and Safety Commission for nine years, representing the public interest and the devolved administrations. As a Commissioner she chaired HSC's Rail Industry Advisory Committee and the Partnership for Health and Safety in Scotland and had particular responsibility for the offshore oil industry and the nuclear industry. In 2003 she was awarded the CBE for services to health and safety. She has extensive experience of working with consumer organisations, such as the Scottish Consumer Council and Consumers' Association, and is presently a member of the National Consumer Council's Advisory Group.

Professor Brian D Clark - Professor of Environmental Management and Planning at Aberdeen University. He is a Board Member of the Scottish Environment Protection Agency (SEPA), Chairman of the North Region Board

and the Planning & Finance Committee of SEPA and served on the Committee for Radioactive Waste Management from 2003 to 2007. With forty years experience, he is a specialist in environmental impact assessment (EIA), strategic environmental assessment (SEA) and urban and rural planning. Honoured in 1987 by being made a founder member of UNEP's Global 500 Award. He is a governor of The Macaulay Land Use Research Institute and was a founder member of the Institute of Environmental Assessment (IEA), now the Institute of Environmental Management and Assessment (IEMA) and chairs its Technical Committee.

Dr Mark Dutton - served on the Committee for Radioactive Waste Management from 2003-2007. He has a doctorate in high energy physics and a 38 year career based at the National Nuclear Corporation. Specialising in design and safety case issues associated with radiological protection, nuclear safety and radioactive waste management he continues to work as a nuclear consultant. He is a Fellow of the Institution of Nuclear Engineers, co-author to two Safety Guides published by the International Atomic Energy Agency of the UN and has reviewed the safety of reactors in Iran and Pakistan on behalf of the Agency. He is a member of the Defence Nuclear Safety Committee of the Ministry of Defence and a member of the Presidential Nuclear Safety Committee of Armenia.

Professor Fergus Gibb - Emeritus Professor of Petrology & Geochemistry in the Department of Engineering Materials, University of Sheffield with over 40 years teaching and research experience in mineralogy, petrology, geochemistry and other areas of geosciences. A specialist in igneous intrusions, he is a former Vice-President of the Mineralogical Society and an elected Fellow of the Mineralogical Society of America. A long-standing research interest in the geological disposal of nuclear wastes has led to over 25 papers on the subject and national and international recognition as an authority on deep borehole disposal. On the strength of the potential strategic importance of this research work, Professor Gibb's post at the University of Sheffield was part-funded for a period by the Nuclear Decommissioning Authority but the conduct of the work was, and remains, independent of the NDA and the nuclear industry.

Professor Simon Harley - Professor of Lower Crustal Processes in the School of Geosciences at the University of Edinburgh. An international expert on the evolution of continental crust, his research integrates geological mapping with experimental and micro analytical studies of the stabilities of minerals and their behaviour at high temperatures and pressures. He has conducted geological mapping projects in diverse and complex basement areas in Australia, India, Norway, Greenland, Scotland and Antarctica. Professor Harley is a Fellow of the Royal Society of Edinburgh and in 2002 was awarded the Imperial Polar Medal in recognition of his contributions to Antarctic Earth Science.

Marion Hill - her early career was at the National Radiological Protection Board (now part of the Health Protection Agency) and most recently a background in consultancy. She has over 30 years' experience in standards for and assessments of the radiological impact of the nuclear industry on the public and the environment. She specialises in policies, strategies and

standards for the management of radioactive wastes and radioactively contaminated land. Her experience includes national and international work on policy and regulatory topics, and environmental impact assessments for nuclear installations in the UK and overseas. She was a member of the Health and Safety Commission's Nuclear Safety Advisory Committee (NuSAC), which was disbanded in October 2008.

Professor Francis Livens – has held a radiochemistry position at the University of Manchester since 1991. He has worked for over 25 years in environmental radioactivity and actinide chemistry, starting his career with the Natural Environment Research Council, where he was involved in the response to the Chernobyl accident. At the University of Manchester, he has worked in many aspects of nuclear fuel cycle research, including effluent treatment, waste immobilisation and actinide chemistry. He was the founding director of the Centre for Radiochemistry Research, established in Manchester in 1999 and is now Academic Director of the Dalton Nuclear Institute and Director of the EPSRC-funded, Manchester/Sheffield Nuclear Fission Doctoral Training Centre. He has acted as an advisor to the nuclear industry both in the UK and overseas.

Dr Rebecca Lunn - a Reader in Civil Engineering at the University of Strathclyde. She has over 15 years of research experience in hydrogeology, with a particular focus on deep flow systems, hydromechanics and the spatial and temporal evolution of rock permeability. Her research experience is highly multi-disciplinary, and she currently collaborates closely with structural geologists, seismologists, mathematicians and more recently, microbiologists, psychologists and statisticians. Current research interests include: development of computer models to simulate changes in rock permeability over time surrounding geological faults, with a view to improving flow predictions for deep radioactive waste disposal and carbon dioxide sequestration; understanding the relationship between subsurface groundwater flow and earthquakes; and exploring public understanding of uncertain science, such as flood prediction, to inform the regulators approach to public information and decision-making.

Leslie Netherton - with over 30 years local government experience, specialised in health and safety, food safety, environmental protection and emergency planning. As Head of Service with Plymouth City Council from 1998-2007 he had responsibility for civil protection, waste management, cemeteries, building control, consumer protection, sustainability and environmental health. As lead Authority officer for the nuclear submarine refitting facility at Devonport Royal Dockyard, he was involved with major planning applications, Discharge Consent consultations, offsite emergency planning and extensive stakeholder engagement. He is Chair of Interim Storage of Laid Up Submarines (ISOLUS) project Advisory Group and sits on the Ministry of Defence ISOLUS Steering Group. He currently runs an environmental health consultancy company and has been an active member of the Chartered Institute of Environmental Health.

John Rennison - with over 37 years experience in local government planning, as Chartered Town Planner and Chartered Surveyor. He retired in January 2008 as Director of Planning & Development for the Highland Council and

previously he was the County Planning Officer for North Yorkshire County Council. He has extensive experience of planning issues at a strategic level and of balancing development needs with public concerns. An Executive Committee Member of the Scottish Society of Directors of Planning he also chaired the Society from 2000 to 2001.

Professor Andrew Sloan - Andrew Sloan is a chartered engineer, a Fellow of the Institution of Civil Engineers and a Visiting Professor in the Department of Civil Engineering of the University of Strathclyde. He is a director of the specialist consulting engineering firm Donaldson Associates Ltd. He graduated in geology from the University of Edinburgh and has an MSc in Engineering Geology from the University of Leeds. With over 20 years of experience, he is a specialist in geotechnical engineering with particular emphasis on the development of underground space. He has experience in the management and delivery of technically challenging and complex ground engineering projects in a range of regulated industries. He led the independent technical check of the grouting aspects of the Shaft Isolation Project at Dounreay and has worked on underground engineering projects in North America, Europe, Africa and South East Asia.

Professor Lynda Warren - Emeritus Professor of Environmental Law at Aberystwyth University and a member of the Royal Commission on Environmental Pollution. She has postgraduate degrees in marine biology and law and has pursued an academic career first in biology and latterly in environmental law. She has over 100 academic publications, including a number on radioactive waste management law and policy. Lynda has 15 years experience of radioactive waste management policy. She was a member of CoRWM from 2003 - 2007 and, before that, a member of RWMAC chairing its working group on Dounreay. She is currently a member of SEPA's Dounreay Particles Advisory Group and an associate of IDM, a consultancy engaged in environmental policy advisor, mainly in the nuclear sector.

TASK	ESTIMATED RESOURCE	POTENTIAL OUTPUT
<p><u>RESEARCH AND DEVELOPMENT</u></p> <p>Task 9 Complete our 2009 report on R&D (which covers: establishing R&D requirements, the current work of UK R&D programme providers and facilitators, R&D skills, infrastructure for R&D, specific UK R&D issues, and international programmes). This task will be carried out in the period April to October 2009 and will include a stakeholder event.</p> <p>Task 10 Scrutinise the implementation of the high level NDA RWMD R&D Strategy.</p> <p>Task 11 Scrutinise the development of the NDA RWMD R & D work programme.</p> <p>Task 12 Monitor actions taken in response to the recommendations in our October 2009 R&D report.</p>	<p>High Resource</p> <p>Medium resource</p> <p>Medium resource</p> <p>Low resource</p>	<p>Report to Government. October 2009</p> <p>Comment as required</p> <p>Comment as required</p>

TASK	ESTIMATED RESOURCE	POTENTIAL OUTPUT
<p><u>WASTES FROM NEW BUILD NUCLEAR POWER STATIONS</u></p> <p>Task 13 Advise on interim storage and geological disposal issues for ILW and spent fuels from new build nuclear power stations.</p>	<p>High Resource</p>	<p>Position paper. (timing to be discussed with Government)</p>
<p><u>PUBLIC AND STAKEHOLDER ENGAGEMENT</u></p> <p>Task 14 Engage the public on issues relating to progress with the implementation of geological disposal, for example by convening a Citizens' Panel.</p> <p>Task 15 Liaise with other organisations on ways to provide information to the public about the MRWS programme and radioactive waste management in general.</p> <p>Task 16 Scrutinise the PSE activities of Government, the NDA and the regulators related to the MRWS programme.</p>	<p>Medium Resource</p> <p>Medium resource</p> <p>Medium resource</p>	<p>Report or position paper according to the extent of PSE activities in 2009/10. March/ April 2010.</p>

TASK	ESTIMATED RESOURCE	POTENTIAL OUTPUT
<p><u>CoRWM WEB SITE</u></p> <p>Task 17 Improve the CoRWM website to make it fit for our future purposes.</p>	<p>Medium resource</p>	<p>Improved web site. July 2009</p>

NOTES:

- I. The scope and timing of tasks and outputs will be developed in more detail through meetings with Government and the NDA.
- II. It is proposed to commence work on new build issues early in the new financial year
- III. Requests for responses to consultations will be considered for priority and undertaken if time allows.