

# **Committee on Radioactive Waste Management**

## **Fifth Annual Report 2009**

30 June 2009

# **Committee on Radioactive Waste Management Fifth Annual Report 2009**

## **Introduction by the Chair**

This is a report on the Committee's activity during 2008-9. Our Terms of Reference, attached at Annex A of the Report, require us to report by the end of June each year, but they do not specify what 12-month period the report should cover. So, with the agreement of sponsor Governments, we have decided from now on to report on a financial-year basis, so that readers can better compare what we have spent with what we have achieved during the period.

This report therefore covers the period from 1 July (when our last Report ended) to 31 March. But we have added a brief "forward look" which summarises our activity between April and June.

Next year's report will cover the full 12 month period from 1 April 2009 to 31 March 2010.

Robert Pickard  
30 June 2009

**Would you like this in bigger print? please call 020 7238 1721**

# Committee on Radioactive Waste Management Fifth Annual Report 2009

## Contents

	<b>Page</b>
Introduction by the Chair	2
1 The Committee's work in 2008-9 - main tasks	4
2 The Committee's work in 2008-9 - month by month	10
3 The Committee's programme for 2009-12	14
4 2008-9: How we spent your money	14
5 Further information	15
6 References	16
Annexes:	
A Our Terms of Reference	21
B Who we are	26
C Summary of our Report to Government on interim storage of higher activity wastes and the management of spent fuels, plutonium and uranium	30
D Summary of our draft programme for 2008-11	32

## 1 The Committee's work in 2008-9 - main tasks

1. The Committee's work in 2008 - 9 was focused on five main tasks: drawing up a work programme; preparing the three main outputs in the programme - reports to Government on interim storage, deep geological disposal, and research and development - and engaging the public and stakeholders in this and other CoRWM activities.
2. Annex B describes the Members of the Committee.

### The 2008-11 work programme

3. The proposed work programme for 2008-11 (doc. 2266) was submitted to Government in March 2008 and approved during June and July. 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.
4. The programme identified three key strands of the work of CoRWM, with public and stakeholder engagement as a cross-cutting issue. The three strands were: deep geological disposal, interim storage, and research and development. 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) Deep geological disposal, due to be submitted in June 2009, and
  - c) Research and development, due to be submitted in June 2009.
5. A summary of the programme is at Annex D.

### Interim storage of radioactive waste

6. In March 2009, CoRWM submitted to Government its report on **Interim storage of higher activity wastes and the management of spent fuels, plutonium and uranium.**
7. The report covered:
  - the conditioning, packaging, interim storage and transport of higher activity radioactive wastes
  - the management of nuclear materials that may be declared to be wastes in the future; that is, spent nuclear fuels, plutonium and uranium
  - public and stakeholder engagement on those topics.It summarised the current position and advised on future work.

8. We gathered information from the waste producers and holders of spent fuels, plutonium and uranium, from regulators and others. We sought the views of stakeholders and the public. We sent an outline and then a full draft of this report to key stakeholders for comment then published it for comment.
9. Our conclusions and recommendations are set out in Annex C. They include
  - the need for better strategic co-ordination across all the UK nuclear industry organisations, civil and defence; and
  - the importance of better co-ordinated public and stakeholder engagement and the need for more, and more appropriate, public information including security, transport and other issues.

### **Report to Government on progress towards deep geological disposal**

10. This Report covers:
  - Government's invitation to local communities to take part in a siting process for deep geological disposal;
  - the inventory of radioactive waste that may eventually need disposal;
  - the development of geological disposal concepts and facility designs;
  - screening out of unsuitable areas;
  - regulation and permitting, including land-use planning, appraisals and assessments such as Strategic Environmental Assessment; and
  - funding, risk management, decision-making, international experience and other aspects of implementing deep geological disposal.
11. During the period of this Annual Report (July 2008 - March 2009) CoRWM agreed with Government the scope of its proposed report, gathered information and began to draw up some conclusions. Some of the main events and activities during this period are set out in Section 2 of the report (**month by month**).
12. 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 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 reports on deep geological disposal and research and development would need to be reviewed. On 25 February (doc. 2573) we drew up a revised timetable which was agreed by our plenary on 18 March (doc. 2582) and discussed with our sponsors. As a result of this, the deep geological disposal report is now due in July 2009.
13. By the end of March 2009 we had drawn up a draft and invited factual comments from Government and a number of other organisations. We also drew up a number of "position papers" on issues such as regulatory coherence (doc. 2420), the **MRWS** White Paper (doc. 2431), the UK

radioactive waste inventory (doc. 2438.1), learning from overseas experience (doc. 2534) and decision making (doc. 2558).

14. Here is a summary of progress in the most recent period from April 2009 to the end of June 2009.

- April: Our 21 April plenary (doc. 2598) approved the publication of a draft (doc. 2550), which was issued on 27 April (doc. 2591) for public and stakeholder comment by 22 May.
- May: comments were received directly from stakeholders (doc. 2592) and in a stakeholder event in Workington (doc. 2593).
- June: comments were analysed by Members and discussed at our 9 June plenary meeting (doc. 2608).

### **Report to Government on research and development**

15. During the period from July 2008 to March 2009, we agreed with Government the scope of our proposed report covering the development of a UK R&D programme, and provision of the skills and infrastructure required for R&D. We gathered information and began to draw up some conclusions. We also drew up some position papers or responses to NDA invitations to comment on its R&D strategy (doc. 2408), its international R&D (doc. 2421), and UK R&D in relation to interim storage (doc. 2389). Some of the other main events and activities during this period are set out in Section 2 of the report (**month by month**).

16. As described above, we realised that we would need more time to deliver a comprehensive report on R&D. On 26 February (doc. 2573), we drew up a revised timetable which was agreed by our plenary on 18 March (doc. 2582) and discussed with our sponsors. As a result of this, the deep geological disposal report is now due in October 2009.

17. By the end of March 2009, we had drawn up an initial draft. Here is a summary of progress in the most recent period from April 2009 to the end of June 2009.

- April: we invited factual comments from Government and a number of other organisations.
- May: we reviewed the draft in the light of comments.
- June: we discussed the draft.

### **Other advice produced during the year**

18. Our Terms of Reference say that, while our main task is to advise Government, we may also be asked for advice by the NDA, regulators and others. During the year, we have advised or commented in a number of

areas. Much of this related to the production of our three main reports, for example by helping us to gather information and test our understanding of other organisations' plans before we drew up our scrutiny reports.

19. Our advice took a number of forms, including informal (e.g. individual Members attending workshops or sending written comments) and formal, where comments were sent on behalf of the Committee.

20. Our advice included:

- to the NDA, on
  - its Strategic Environmental Assessment, Sustainability Appraisal and Environmental Impact (doc. 2477.1), and
  - its PSE and Communications Strategy for Geological Disposal (doc. 2479);
- to the regulators, on
  - the conclusions in our paper on regulatory coherence and co-ordination (doc. 2420) including our proposal of a joint office for geological disposal (doc. 2462), and
  - the need for independent advice on nuclear safety after the disbanding of the Nuclear Safety Advisory Committee (doc. 2485); and
- to Government, informal advice in meetings with sponsor Ministers (including Ed Miliband) and officials, including issues emerging from our work programme and emerging conclusions likely to feature in our eventual reports.

## Public and stakeholder engagement

21. The Committee's Terms of Reference (Annex A, in particular paragraph 17) say that it "must continue to inspire public confidence in the way in which it works" by working "in an open and transparent manner". The requirements are set out below together with some examples of how CoRWM tries to achieve them. They include

- "a published reporting and transparency policy"
  - we have one, and a copy is on our website; our policy on transparency is that "we aim to make as clear as possible how, and why, we have formulated our advice. We want people to know about the information we have reviewed, the processes of engagement and discussion we have used with others, the nature of our internal deliberations, and, at the end of the process, the reasons why we have formulated our advice in the way we have. Transparency also means that we want people to have good access to information in order that they are able to participate effectively in any engagement that we carry out."

- "relevant public and stakeholder engagement as required"
  - this is described below;
- "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"
  - we aim to do this, and your comments on this or other reports will help us to improve;
- "making information accessible"
  - we publish regular "e-bulletins", together with detailed reports of our meetings and our progress on key tasks in our programme;
- "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";
  - we provide opportunities to comment on our draft reports and draft work programme, and during our plenary meetings; further details are set out below

and

- "holding a number of its meetings in public".
  - we make all our substantive decisions in plenary meetings which are held in public; we have some working meetings in private after which we publish reports.

22. CoRWM's public and stakeholder objectives are to build public confidence by ensuring that our advice to Government and others is relevant, objective, and evidence-based, taking account of the knowledge, values and views of stakeholders and citizens.

23. Our work programme for 2008 - 9 contained two main public and stakeholder engagement tasks. The first (see Annex D, task 8) was to engage people in our own programme; the second was to scrutinise the engagement activity of other organisations including Government and the NDA.

24. Our own engagement activities included:

- an early invitation to comment on our work, including the three main issues we were reporting on (doc. 2403)
- a stakeholder workshop in Reading on 30 October 2008, for the same purpose (doc. 2488)
- on interim storage:

- an invitation (doc.2521) , in December 2008, to comment on the outline draft report
- a further invitation (doc.2544), in February 2009, to comment on the full draft report
- a stakeholder workshop (doc. 2563), held in Reading on 19 February 2009 to discuss the full draft;
- on deep geological disposal:
  - our invitation (doc. 2591) to comment on the draft report, and
  - the Workington meeting (doc. 2593) mentioned above.

25. Our scrutiny of other organisations' public and stakeholder engagement included:

- commenting on the Government's draft White Paper and associated package of information for communities through its new **MRWS** website. We provided informal advice at draft stage, then reviewed the White Paper once published (doc. 2431). We also examined the impact of the associated information in the context of Government's approach to local communities (doc. 2446.1);
- scrutinising NDA's engagement strategy, for example in direct discussions with them (doc. 2410) and by observing their twice-yearly National Stakeholder Group meetings (doc. 2483); and
- Attendance at workshops and stakeholder events organised by regulators, Government, NDA and others. These serve two purposes, of gathering information on the substantive issue (such as management of plutonium) including the views of stakeholders; and gathering information on the effectiveness of the organisers' engagement process. Details of such events are listed in the next, **month by month** section.

26. Other activities included:

- We have also had correspondence, for example from Hugh Richards (doc. 2422) and from Pete Wilkinson (docs. 2306, 2546) on issues including nuclear new-build, the management of high-burnup fuel, disposal facility concepts, and research and development.
- We have maintained and improved our website, which is our main facility for making our reports and other information publicly accessible, sending information bulletins and receiving comments on our work and draft reports.

## 2 The Committee's work in 2008-9 - month by month

27. We had submitted our draft work programme for 2008-11 (doc. 2266) at the end of March and sponsor Governments wrote to us during June and July to approve it.
28. In July 2008, we continued our process of information gathering for the reports which we had agreed to produce.
- On interim storage, we met the Nuclear Decommissioning Authority (NDA: doc. 2397), the Department for Transport (doc.2406) and the Office of Civil Nuclear Security (doc.2414) to learn about current and planned storage arrangements and issues.
  - On deep geological disposal, we attended two workshops to develop regulatory guidance on near-surface (doc. 2447) and geological (doc. 2448) disposal facilities, and met the NDA (doc. 2412) to learn about its process for identifying and managing risk.
  - On research and development, we met the Technology Strategy Board (doc. 2405).
  - We also met the NDA to discuss their public and stakeholder engagement (doc. 2410) and how they and CoRWM could best work together (doc. 2413), for example so that we could obtain the information we needed, and time our advice, to optimum effect.
29. In August 2008, we held meetings with the NDA (doc. 2418) and BE (doc. 2419) on interim storage, and attended a meeting of the NDA-Government Waste Management Steering Group (doc. 2417). We met the Chairs of the Criteria Proposals Group and Criteria Review Panel (doc. 2427) on sub-surface screening criteria for deep geological disposal. On R&D, we attended a meeting between the Department for Business, Enterprise and Regulatory Reform and others on nuclear capability (doc. 2463).
30. In September 2008, we met the Health and Safety Executive Nuclear Installations Inspectorate (doc. 2436) in relation to interim storage, held a meeting with Ynys Môn County Council (doc. 2432), and met with the National Skills Academy (docs. 2444, 2445) in relation to R&D.
31. At our September plenary meeting (doc. 2461), we discussed
- the UK inventory of wastes, including the need for more clarity about how future changes would be built into plans for deep geological disposal including discussions with local communities;
  - interim storage, including the need for a more strategic approach to waste storage, and the management of spent fuels, plutonium and uranium;

- the Government *Managing Radioactive Waste Safely* programme, including the June 2008 White Paper and invitation to local communities to discuss siting of a deep geological disposal facility; whether new arrangements are needed to help regulators to work more effectively together on geological disposal; and whether there is a mechanism for adequate and secure long-term funding for robust storage and disposal; and
  - research and development, including the NDA's draft R&D strategy.
32. In October 2008, we met the Environment Agency and Scottish Environment Protection Agency on interim storage (doc. 2464) and attended an NDA stakeholder workshop on plutonium (doc. 2481). On deep geological disposal, the Chair wrote to regulators with CoRWM's proposals on regulatory coherence including a new joint office for geological disposal (doc. 2462). On R&D, we met the Nuclear Safety Advisory Committee (doc. 2460) and attended a Radioactive Waste Immobilisation Network technical meeting on radioactive waste storage R&D (doc. 2480). We met Allerdale Borough Council (doc. 2468), and the Local Government Association's Nuclear Legacy Advisory Forum (NuLeAF: doc. 2511).
33. We paid a visit to Sizewell B (2489) and, as mentioned above, met local stakeholders (doc. 2503) as well as holding our public & stakeholder workshop in Reading (doc. 2488).
34. In November 2008, we wrote to the Chair of HSE about NuSAC and the need for independent advice on nuclear safety (doc. 2485). We attended a meeting at the Geological Society to discuss scientific issues involved in site selection & characterisation including the application of exclusion criteria and the views of the geoscience community (doc. 2484) and held a meeting with Gwynedd County Council (doc. 2504). We held R&D discussions with NDA (doc. 2590) and the Institute of Physics (doc. 2519). We observed the NDA National Stakeholder Group meeting (doc. 2483).
35. At our November plenary meeting (doc. 2492), we discussed
- interim storage, including NDA's plans for putting options for plutonium management - including sale, immobilisation, etc - to Government; NDA work to develop criteria to judge whether waste packages are at risk of failure; and progress on NDA's review of UK waste storage;
  - deep geological disposal, including the limited response from local communities to the Government invitation to express an interest in discussing the possibility of hosting a geological disposal facility; Government plans, once any communities enter into siting partnerships, for identifying potential sites including its proposed sub-surface exclusion criteria; local public engagement, the role of district and county councils, and community benefits packages; and NDA's consultation on Strategic Environmental Assessment;

R&D, including the need to draw on overseas experience of (among other things) regularly publishing research programmes for review by a wide range of stakeholders;  
and

- public and stakeholder engagement, including issues raised by participants at our 30 October workshop.

36. In December 2008, we met Energy and Climate Change Secretary, Ed Miliband, to discuss our work including some of the issues we had identified so far. On interim storage, and particularly on the management of spent fuels, uranium and plutonium, we held meetings with the Environment Agency and the Nuclear Installations Inspectorate (doc. 2520) and with the NDA (doc. 2523). On the geoscientific aspects of implementing deep geological disposal, we met with Ground Forum (doc. 2525), NDA and the Department for Energy and Climate Change (DECC) (doc. 2526). We also met Research Councils UK (doc. 2524).

37. At our December plenary meeting (doc. 2528), we discussed

- interim storage: we agreed to publish our outline report for comment;
- geological disposal: we discussed issues including siting and had a discussion with the NDA about its geological disposal system safety case;
- R&D, including some concerns over organisation and funding;
- public and stakeholder engagement, including events planned for 2009; and
- our proposed 2009-12 rolling work programme: we agreed to publish proposals for 2009-10 for comment.

38. In January 2009, we met Government sponsors to discuss our proposed future work programme (doc. 2529), held a meeting to discuss future ways of working (doc. 2545) and met with CoWAM In Practice (doc. 2530).

39. At our January plenary meeting (doc. 2552), we discussed

- interim storage: we agreed that a full draft of the report should be published for comment;
- research and development: we agreed to invite comments on a draft paper on R&D in relation to interim storage;
- geological disposal: we discussed areas in which we might make recommendations to Government in June, including: wider engagement with local communities; joint working between local authorities; community packages; screening out unsuitable areas; Government commitment to volunteerism; and funding; and
- Our proposed 2009-12 work programme including likely priority areas, likely outcomes including reports to Government, and areas which would need significant effort in order to deliver solid results.

40. In February 2009, we met NDA to discuss our proposed 2009-10 programme (doc. 2565). We attended an NDA workshop to discuss its own interim storage report (doc. 2575) and met with Nuclear Free Local

Authorities (NFLA: doc. 2564). We attended meetings of the Copeland MRWS Shadow Partnership (doc. 2566) and the West Cumbrian Partnership Meeting (doc. 2556).

41. In March 2009, we met to discuss our 2009-10 programme (doc. 2568). We met NDA to discuss its plans for Strategic Environmental Assessment and for geological disposal-related public and stakeholder engagement (doc. 2559). The Chair attended a Policy Board arranged by Welsh Environment Minister, Jane Davidson.
42. At our March plenary meeting (doc. 2582), we discussed
- a final draft of our report to Government on **interim storage** which reflected comments made by stakeholders on the version we published in February;
  - changes to our programme for completing reports on deep geological disposal (which we decided to complete by the end of July, rather than June) and R&D (October, rather than June);
  - proposals for public and stakeholder events including (on geological disposal) plans for meetings with Cumbrians, NGOs, and local government around April-May; and (on R&D) a stakeholder workshop in September, besides web-based opportunities to comment; and
  - a final draft of our 2009-12 work programme taking account of stakeholder comments, including key tasks, likely outputs, timing, and resources needed to deliver the outputs. As part of this we discussed proposals for measuring success, managing risk, and ensuring quality.
43. We held many other meetings, either as a Committee or in smaller groups, to plan our programme, projects, events and resources in more detail. Notes of these meetings are listed on our documents list which is published on our website. See also **Further information** on page 15.

## Work since the end of March 2009

44. Other main developments, since the end of the period covered by this report, include:
- in April 2009: a plenary meeting (doc. 2598), meetings with NFLA (doc. 2597), NuLeAF (doc. 2596) and with Government (doc. 2594) and NDA (doc. 2595) to discuss our draft report on deep geological disposal;
  - in May 2009: a meeting with NDA to discuss our draft deep geological disposal report and geological-disposal aspects of our future work programme (doc. 2599); our Workington stakeholder event (doc. 2593); and a meeting with Richard Waite to discuss our working relationship with NDA including current issues and developments (doc. 2600); and

- in June 2009: a plenary meeting (doc. 2608), and submission of this Annual Report.

### 3 The Committee’s programme for 2009-12

45. Our plenary meeting in November 2008 (doc. 2492) agreed a process (doc. 2515) for development of the next three-year programme. Working groups drew up proposals for the following year’s work. Our December plenary (doc. 2528) discussed a detailed draft work plan (doc. 2515.1) and we invited (doc. 2521) public comments on proposed tasks, priorities and timescales.
46. Our January 2009 plenary (doc. 2552) considered a revised proposal reflecting comments received. In February (doc. 2544), we invited further comments and our March plenary (doc. 2582) agreed a final draft taking account of these. This was sent to Government on 30 March (doc. 2515.2) and has since been agreed by the Scottish Government (doc. 2617) in relation to the elements of our programme that are relevant to its policy.

### 4 2008-9: How we spent your money

47. Here is our past and future budget, broken down by main spending areas.

Budget item	2008/9 (budget)	2008/9 (out-turn)
	£ '000	£ '000
Members' fees & expenses	315	398
Plenary meetings	60	50
Public & stakeholder engagement	50	5
Website	35	34
Specialist / technical support	30	4
Visits	10	4
Special projects	0	(transferred to website budget)
<b>Total</b>	<b>500</b>	<b>495</b>
Plus additional Atkins support		<b><u>514*</u></b>

**\*See para 51 below**

48. We are not required to report what individual Members were paid. But we publish this information in the interests of transparency. The fees paid to individual Members were:

<b>Member</b>	<b>Period to which claims relate</b>	<b>Fees £ '000</b>
David Broughton	April 08-March 09	15.6
Margaret Burns	April 08-March 09	14.2
Brian Clark	February 06-March 09	71.0
Mark Dutton	April 08-March 09	15.6
Fergus Gibb	April 08-March 09	15.6
Simon Harley	April 08-March 09	15.1
Marion Hill	April 08-March 09	15.6
Bill Lee	March 08-March 09	19.1
Francis Livens	April 08-March 09	14.4
Rebecca Lunn	May 08-March 09	15.6
Les Netherton	April 08-March 09	15.6
Robert Pickard	April 08-March 09	34.7
John Rennilson	April 08-March 09	15.6
Andrew Sloan	May 08-March 09	11.3
Lynda Warren	April 08-March 09	15.3

49. The budget is provided by DECC (previously by the Department for Environment, Food and Rural Affairs, Defra), managed by the secretariat - also provided by DECC - and subject to the Department's financial management system. For example, we have to provide regular reports on what we have spent and what we expect to spend for the rest of the financial year. Individual payments have to be checked and approved to ensure that each project has been approved, that the goods or services were delivered to the necessary standard, that the cost is reasonable and that there are adequate funds in the budget.

50. This budget does not include the running cost of the secretariat, such as the pay and office costs of the secretariat staff.

51. DECC employs Atkins Ltd to provide technical support to the Department itself. As part of this contract, Atkins manages CoRWM's website under instruction from the secretariat, and has provided temporary staff support to the secretariat. CoRWM was given permission by DECC to overspend its budget in respect of Atkins secretariat support (£18.5k),

which increased CoRWM's end of year outturn to £514k. CoRWM has no other plans to use Atkins, and both are aware of the need to avoid any actual or perceived conflict of interest arising from its work for CoRWM on the one hand and DECC on the other.

## 5 Further information

52. If you would like more details of our activities, you can read more about us on our website at <http://www.corwm.org.uk/>, telephone us on 0300 068 6109, or write to us at CoRWM, 3rd floor, 3 Whitehall Place, London SW1A 2HH.
53. You can read our reports and other documents; follow links to other organisations ranging from environmental groups to the nuclear industry; ask for the documents that support our decision making process; and send us your comments or questions.
54. We can also tell you how to find more information about Government and other agencies, including the NDA and regulators.
55. Thank you for reading this report.

## 6 References

### CoRWM Documents

Number	Title
700	CoRWM's Recommendations to Government, July 2006
2266	Programme of work, 2008-2011, March 2008
2306	Letter from Pete Wilkinson, March 2008
2389	Position Paper on Research and Development for Conditioning, Packaging and Interim Storage of Higher Activity Wastes and the Management of Spent Fuels, Plutonium and Uranium, June 2009
2397	Interim storage: Meeting with NDA, 15 July 2008
2403	Your invitation to comment on our work, July-October 2008
2405	Meeting with Derek Allen, Technology Strategy Board, 21 July 2008
2406	Interim storage: Meeting with Department for Transport, 18 July 2008
2408	Comments on NDA RWMD R&D Strategy, October 2008
2410	Meeting with NDA Radioactive Waste Management Directorate PSE representatives, 11 July 2008

Number	Title
2412	Note of meeting with Nuclear Decommissioning Authority on risk management, 30 July 2008
2413	CoRWM Meeting with NDA Board, 30 July 200
2414	Interim storage: Meeting with Office for Civil Nuclear Security, 23 July 2008
2417	Note of the Waste Management Steering Group, 6 August 2008
2418	Management of plutonium, uranium & spent fuels: meeting with Nuclear Decommissioning Authority, 8 August 2008
2419	Storage of intermediate-level waste & spent fuels: meeting with British Energy, 11 August 2008
2420	Coherence and Coordination of Regulatory Processes, September 2008
2421	Comment on the document NDA - International R&D Strategy, July 2008
2422	Questions raised by High Richards, 21 July 2008, and responses, 9 September and 14 November 2008
2427	Meeting with Professor Peter Styles and Professor Howard Wheeler on subsurface site exclusion criteria, 26 August 2008
2431	Review of MRWS White Paper, September 2008
2432	Meeting with Ynys Mon County Council, 5 <sup>th</sup> September, 2008
2436	Storage of Radioactive Wastes: Meeting with Health & Safety Executive Nuclear Directorate, 3 September 2008
2438.1	CoRWM Comments on the UK Radioactive Waste Inventory 2007 and Proposal for an NDA 'Future Scenarios' Publication, October 2008
2444	Meeting with Adrian Bull, Chair of Northwest/Northeast Employer Steering Group for the National Skills Academy, Nuclear, August 2008
2445	Meeting with Jean Llewellyn, Chief Executive of National Skills Academy, Nuclear, September 2008
2446.1	Local government responses to Chair's letter, October 2008
2447	Report of Workshop on the Consultation Draft Document, <i>Near-Surface Disposal Facilities on Land for Solid Radioactive Wastes: Guidance on Requirements for Authorisation</i> , 3 July 2008
2448	Report of Workshop on the Consultation Draft Document, <i>Deep Geological Disposal Facilities on Land for Solid Radioactive Wastes: Guidance on Requirements for Authorisation</i> , 10 July 2008
2460	Meeting with the Nuclear Safety Advisory Committee on R&D Issues, 8 October 2008
2461	Minutes of 48th plenary meeting, Birmingham, 16-17 September 2008
2462	Coherence and Co-ordination of Regulatory Processes for Geological Disposal - letter from the Chair to Joe McHugh and others, 22 October 2008
2463	Meeting to discuss UK nuclear capability reviews and associated studies, 28 August 2008, at Dept. of Business, Enterprise & Regulatory Reform

Number	Title
2464	Meeting with Environment Agency & Scottish Environment Protection Agency, 17 October 2008 - waste conditioning, storage and disposal, and R&D
2477.1	CoRWM Response to NDA Sustainability Appraisal / Strategic Environmental Assessment Consultation, 11 <sup>th</sup> November 2008
2478	Development of the work plan 2009/12, November 2008
2479	CoRWM's Response to the NDA Consultation on a Public and Stakeholder Engagement and Communications Framework for Geological Disposal October 2008
2480	RWIN Technical Meeting on Radwaste Storage R&D: Current Status and Future Needs, October 16 <sup>th</sup> 2008
2481	NDA Plutonium Stakeholder Workshop, 15 October 2008, Manchester
2483	NDA National Stakeholder Group meeting, 5-6 November 2008, Manchester
2484	Scientific issues involved in site selection and characterisation including application of exclusion criteria and views of geoscience community: meeting at Geological Society, 13 November 2008
2485	Nuclear Safety Advisory Committee - letter from the Chair to Judith Hackitt, 29 January 2009
2488	CoRWM Public and Stakeholder Engagement Workshop, Reading, 30 October 2008
2489	Visit to Sizewell B, 23 October 2008
2492	Minutes of 49th plenary meeting, London, 4 November 2008
2500	CoRWM Report to Government: interim storage of higher activity wastes and the management of spent fuels, uranium and plutonium, March 2009
2503	Meeting with public and stakeholders living near Sizewell, 22 October 2008
2504	Meeting with Gwynedd County Council, 17th November, 2008
2511	Note of Meeting with NuLeAF on Wednesday 29 October 2008
2515	includes <ul style="list-style-type: none"> <li>• Development of the work plan 2009/12, December 2008 (doc. 2515)</li> <li>• Development of the work plan 2009/12, January 2009 (doc. 2515.1) and the final draft submitted to Government: <ul style="list-style-type: none"> <li>• Committee on Radioactive Waste Management: Proposed programme of work, 2009-2012, March 2009 (doc.2515.2)</li> </ul> </li> </ul>
2519	Note of Institute of Physics /CoRWM Interim Storage Meeting, 26 <sup>th</sup> November 2008
2520	CoRWM Meeting with HSE and the Environment Agency on management of spent fuels, plutonium and uranium, December 2008
2521	CoRWM e-bulletin 28, December 2008
2523	CoRWM Meeting with NDA on management of spent fuels, plutonium and uranium, 11 December 2008

Number	Title
2524	CoRWM-RCUK Meeting 3rd Dec 2008
2525	CoRWM Meeting with Ground Forum, London, 9 December 2008
2526	Implementing geological disposal - meeting with DECC & NDA, 8 December 2008
2528	Minutes of 50th plenary meeting, London, 18 December 2008
2529	CoRWM proposed work programme 2009/10: meeting with sponsor officials, 12 January 2009
2530	Meeting with CoWAM In Practice, London, 13 January 2009
2534	Report on overseas experience: a progress report, January 2009
2544	CoRWM e-bulletin 29, February 2009
2545	Meeting to discuss future ways of working, Manchester, 26 January 2009
2550	CoRWM Report to Government: Geological disposal of higher activity radioactive wastes
2552	Minutes of 51st plenary meeting, Manchester, 27 January 2009
2556	Copeland MRWS Shadow Partnership, 19th February, 2009
2558	Decision Making and Responsibilities in the Implementation of Geological Disposal, March 2009
2559	Meeting with NDA to Discuss their PSE and SEA Strategies, 10 March 2009
2563	Report of CoRWM Stakeholder Workshop on the Draft Report on Interim Storage of Higher Activity Wastes and Management of Spent Fuels, Plutonium and Uranium - 19 February 2009
2564	6 February 2009, Manchester Town Hall, Nuclear Free Local Authorities
2565	Note of meeting: Discussion of the proposed CoRWM work programme 2009-2010 with the NDA, Harwell, 17 February 2009
2566	Note of West Cumbrian Partnership Meeting 19 February 2009
2568	Meeting to discuss work programme, 17 March 2009
2573	R&D and MRWS Report Review Meeting, London 25/26 February 2009
2575	Note on NDA Interim Storage Report Workshop held on 11th February 2009 in Manchester
2582	Minutes of 52nd plenary meeting, Cardiff, 18 March 2009
2590	Meeting with NDA on communication of R&D Issues and State of UK R&D into Storage and Geological Disposal
2591	CoRWM e-bulletin 32, 27 April 2009
2592	Log of responses to consultation on full draft of CoRWM's geological disposal report, April - May 2009
2593	Report of CoRWM Stakeholder Workshop on the Consultation Draft Report on Deep Geological Disposal of Higher Activity Wastes - 15 <sup>th</sup> May, Workington, Cumbria

Number	Title
2594	R&D: meeting with sponsors, 27 April 2009
2595	R&D: meeting with NDA, 29 April 2009
2596	28th April, 2009, The Wave, Maryport - Meeting of the Steering Group of NuLeAF
2597	24th April, 2009, Lancashire County Council Offices, Preston - Nuclear Free Local Authorities Spring Seminar - 'Is the North West the right location for radioactive waste?'
2598	Minutes of 53rd plenary meeting, Edinburgh, 21 April 2009
2599	11 <sup>th</sup> May 2009, Harwell, NDA meeting - Deep Geological Disposal of Higher Activity Waste report and CoRWM Work Programme 2009/2010
2600	Meeting with Richard Waite, NDA, 20 May 2009
2608	Minutes of 54th plenary meeting, London, 9 June 2009
2617	Letter from Cabinet Secretary Richard Lochhead, Scottish Government, 11 June 2009

## Annex A

## Our Terms of Reference

### 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 Safely 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 / hydro-geology, 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”.

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.

**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 104 NGOs working for health improvements. He is an international authority on the biology of honeybees and pioneered the development of solid-state, neural microbiosensors in the UK.

**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 BNFL's 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 (Chair of Health Scotland)** - 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.

**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.

**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.

**Fergus Gibb** - Emeritus Professor of Petrology & Geochemistry in the Department of Engineering Materials, University of Sheffield with over 40 years teaching & research experience in mineralogy, petrology and geochemistry and other areas of geoscience. A specialist on 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.

**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 microanalytical 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 is a member of the Health and Safety Commission's Nuclear Safety Advisory Committee (NuSAC) and is leader of its regulatory framework task force.

**Francis Livens** - has held a radiochemistry position at the University of Manchester since 1991. He 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.

**Rebecca Lunn** - Dr Becky Lunn is 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 Rennilson** - with over 37 years experience in local government planning, is a former Director of Planning & Development at the Highland Council. He was County Planning Officer of North Yorkshire County Council (1984-1996) and 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.

**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.

**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.

## **Annex C Executive Summary of our Report to Government on interim storage of higher activity wastes and the management of spent fuels, plutonium and uranium**

The Report (doc. 2500) was sent to Government on 31 March 2009.

1. CoRWM's remit is to provide independent scrutiny and advice to Government on the long-term management, including storage and disposal, of radioactive wastes and materials that may be declared to be wastes. This is the first of three reports to be produced in 2009 that describes the results of the Committee's scrutiny work in 2008 and the first part of 2009 and provides advice to Government.

### **Scope of Report**

2. This report is about CoRWM's work during 2008/09 on:
  - the conditioning, packaging, interim storage and transport of higher activity radioactive wastes
  - the management of nuclear materials that may be declared to be wastes in the future, that is spent nuclear fuels, plutonium and uranium
  - public and stakeholder engagement (PSE) on the above topics.
3. For each topic we summarise the current position and provide advice for use in making plans for the work to be carried out over the next few years. We intend to monitor whether and how this advice has been acted on by Government and others.

### **How We Worked**

4. We worked by gathering information from the waste producers and holders of spent fuels, plutonium and uranium; from all the regulators and from other organisations. We held meetings with all the major organisations, the notes of which are available on our website, and we attended stakeholder workshops held by the Nuclear Decommissioning Authority (NDA). We also sought the views of stakeholders and the public via our website and at CoRWM stakeholder events in October 2008 and February 2009. An outline and then a full draft of this report were sent to key stakeholders for comment and placed on the CoRWM website for public comment. Responses to all the requests for comments were taken into account in preparing the final version of the report.

### **Overall Conclusions and Recommendations**

5. This report sets out the information we gathered on each topic, referencing other CoRWM documents for more details, and gives our conclusions on each topic. Our overall conclusions and recommendations are as follows.

#### **Strategic Co-ordination**

6. In all the areas considered in this report (waste conditioning and packaging, waste storage, waste transport, the management of spent fuels, plutonium and uranium) there is a need for better strategic co-ordination across all the UK nuclear industry organisations, civil and defence. Recent NDA work on its "strategy management system" goes some way towards achieving this but the NDA can only develop strategies that cover the sites for which it has responsibility.
7. At all nuclear sites the current plans for storage of higher activity wastes are adequate to meet the CoRWM 2006 recommendation, and Government

commitment, that there should be arrangements for safe and secure storage for at least 100 years. However, the present UK approach to storage lacks robustness: it is fragmented and too few sites have contingency plans. A more strategic approach is required.

8. Through various discussion fora, the NDA involves other waste producers and holders of nuclear materials in the development of its strategies for the management of higher activity wastes, spent fuels and uranium. However, none of these fora has a remit to provide the required degree of strategic co-ordination between the NDA and other organisations. An additional co-ordination mechanism is needed, initially for strategy development and in due course for strategy implementation.
9. The NDA strategy for plutonium management is UK-wide in the sense that it is for all separated civil plutonium and all this is held on NDA sites. However, some of this plutonium is owned by British Energy, which may choose its own strategy. There is also other plutonium owned by the Ministry of Defence. Thus co-ordination is also required on strategies for managing UK plutonium.
10. The type of overall co-ordination mechanism needed for all the wastes and materials that may be declared to be wastes is one that has strong regulatory involvement. It is the regulators who enforce most of the legislation that implements Government policy and who require nuclear site licensees to have strategies in place for the management of radioactive wastes and nuclear materials. Ideally, the degree of co-ordination would be such that it would be possible to describe overall UK strategies for the management of higher activity wastes, spent fuels, plutonium and uranium, made up of the strategies of the various waste producers and holders of nuclear materials.
11. The co-ordination should include priorities for managing the various types of higher activity wastes and nuclear materials. Priorities should be agreed between the various nuclear industry organisations, the regulators and, where policy matters are involved, the Government. The priorities need not necessarily be the same for all waste producers and holders of nuclear materials but the reasons for differences should be made clear.

**Recommendation 1**

*CoRWM recommends to Government that there should be greater UK-wide strategic co-ordination of:*

- *the conditioning, packaging and storage of higher activity wastes*
- *the management of all spent fuels*
- *the management of plutonium*
- *the management of uranic materials*
- *future transport arrangements for radioactive wastes and nuclear materials.*

*The co-ordination should include agreement on priorities.*

**Public and Stakeholder Engagement**

12. CoRWM has found that the issues covered in this report are not well-understood outside the technical community that deals with them on a day-to-day basis. Both lay people and technical people who are not expert in these areas have

difficulties in finding information in forms that are useful to them. As a result, they are not well-equipped to become involved in consultations and decision-making processes, and they lack confidence in the organisations that are managing radioactive wastes and nuclear materials.

13. Through the compilation of the UK Radioactive Waste Inventory, a great deal of information is available about the quantities and characteristics of radioactive wastes, and this is published in formats suitable for experts and non-experts. There is a need for complementary information about how wastes, and materials that may be declared to be wastes in future, are managed now and the management options under consideration for the future. There is also a need for more information to be made available to the public about how the security of storage facilities and transport arrangements is assured.
14. CoRWM will be reporting at a later date on the outcome of its overall scrutiny of PSE approaches for the management of higher activity wastes but it would like to emphasise two points here. One is the continuing importance of public and stakeholder engagement. The other is the need for more co-ordination between the NDA and the other waste producers on PSE, so as to address our recommendations on strategic co-ordination (see above) and to avoid “stakeholder fatigue”. Increased co-ordination on PSE is required at national, regional and local levels. Some of this might be achieved by changes to existing mechanisms (for example, Site Stakeholder Groups and their equivalents at non-NDA sites). In other cases, particularly waste transport, new mechanisms will almost certainly be needed.

**Recommendation 2**

*CoRWM recommends to Government that appropriate information be made publicly available on the management of higher activity wastes, spent fuels, plutonium and uranium. There is a need to summarise, for a variety of readerships, the progress to date, the management options under consideration for the future, and the issues involved in choosing between alternative options. The information should complement that on waste quantities and characteristics given in the various documents about the UK Radioactive Waste Inventory.*

**Recommendation 3**

*CoRWM recommends to Government that more information be made available to the public about how the security of the storage and transport of radioactive wastes, spent fuels, plutonium and uranium is assured. The objective should be to give the public more insights into security issues, without compromising security in any way. In deciding what information should be made available, account should be taken of existing and proposed practices in countries with similar security needs to the UK and a strong freedom of information culture (for example, the USA).*

**Recommendation 4**

*CoRWM recommends to Government that there be more co-ordination of PSE between the NDA and other UK nuclear industry organisations, at national, regional and local levels. The objective should be to ensure that there is sufficient stakeholder participation in decision-making processes for the conditioning, packaging, storage and transport of higher activity wastes, and the management of spent fuels, plutonium and uranium, without incurring “stakeholder fatigue”.*

## Annex D Summary of our work programme for 2008-2011: work areas, topics and tasks

Work Area	Specific Topic	Tasks
1. The waste inventory	Inventory	1.1 Use 2007 UK inventory to establish inventory for geological disposal*
	Conditioning and packaging standards	1.2 Scrutinise proposals for review of standards, operation of 'letters of compliance' process*
	Waste properties	1.3 Evaluate development of disposal facility concepts for heat-generating and non-heat generating wastes*
2. Storage, handling and transport	Storage, handling and transport of wastes (existing and planned)	2.1 Scrutinise existing and planned storage programme; plans for retrieval of untreated wastes, safety, security, capacity, longevity; assess impact of NDA's competition methodology on storage; scrutinise plans for handling and transport*
	Storage, handling and transport of materials that may be declared wastes	2.2 Scrutinise management plans for materials that may be declared waste: spent fuel*
		2.3 Scrutinise management plans for materials that may be declared waste: plutonium and uranium*
3. Implementation of geological disposal	Invitation to communities to begin discussions with government and NDA	3.1 Scrutinise provision of information and communication of MRWS process to a wide range of communities
		3.2 Assess whether substantive issues have been dealt with in the White Paper
		3.3 Assess whether stakeholder concerns have been identified and addressed
		3.4 Scrutinise local government awareness of and reactions to the invitation*
	Support to and rights of communities	3.5 Evaluate and advise on principles of engagement and benefits packages, partnership agreements, rights of withdrawal*
		3.6 Scrutinise the support given to local communities to respond to the invitation*
		3.7 Scrutinise the ways in which concerns of affected areas are addressed*
	Site assessment	3.8 Scrutinise process for screening out unsuitable areas*
		3.9 Scrutinise process and criteria for short-listing sites from desk-based studies
	Disposal facility concepts	3.10 Scrutinise NDA's Lifetime Plan for geological disposal*
		3.11 Evaluate whether disposal facility concepts are optimised for range of potential host geology*

Work Area	Specific Topic	Tasks
	Decision making and responsibilities	3.12 Evaluate and advise on appropriateness of decision-making processes and responsibilities* 3.13 Evaluate whether decision-makers are learning from international experience
4. Waste management R&D	Development of R&D programme	4.1 Advise on mechanism for developing UK R&D programme on geological disposal and interim storage (includes holistic overview of UK R&D relevant to storage and disposal including variants such as deep borehole disposal, and ensuring awareness of and collaboration in international R&D programmes)*
		4.2 Scrutinise impact of NDA and others' plans for R&D infrastructure (National Nuclear Laboratory, opening direct research portfolio to competition etc.)*
	Oversight, review and peer review	4.3 Examine proposed NDA arrangements for oversight and peer review*
	Technical topics	4.4 Establish rolling programme of review for relevant research topics- e.g. disposal facility design, waste form performance, geology and hydrogeology, near-field behaviour.*
5. Resources	Funding	5.1 Scrutinise funding arrangements for geological disposal (NDA, regulators, potential host communities, government departments, CoRWM itself) and evaluate suitability (magnitude, security)*
	Skills	5.2 Scrutinise proposals for acquiring and maintaining skills needed for geological disposal, over decades*
	Capabilities	5.3 Evaluate capabilities for site investigations (drilling boreholes etc), and eventually for constructing disposal facility*
6. Regulatory framework	Individual regulators	6.1 Scrutinise effectiveness of HSE (nuclear and radiological safety, security, safeguards), environment agencies, transport regulators with respect to MRWS programme*
	Planning	6.2 Assess whether effects of forthcoming planning reforms are being taken into account for geological disposal facility and new stores*
		6.3 Scrutinise applications of strategic environmental assessment (SEA), environmental impact assessment (EIA) and sustainability assessment (SA)*
		6.4 Scrutinise NDA's process for making a planning application for a geological disposal facility*
	Overall framework	6.5 Assess the coherence of regulatory processes and coordination between regulators*

Work Area	Specific Topic	Tasks
7. Policy developments	Impact of policy changes	7.1 Keep track of all relevant policy developments and assess their implications for UK programme and our work*
	New build	7.2 Consider implications of the new build decision for the MRWS programme*
	Contingency planning	7.3 Scrutinise development of policy options, contingency plans and scenarios, for example if geological disposal is significantly delayed or cannot be delivered*
8 Public and stakeholder engagement (PSE)	CoRWM's PSE activities	8.1 Establish and oversee CoRWM's programme of engagement with public and stakeholders*
	Scrutiny of others' PSE activities	8.2 Scrutinise and advise on plans for PSE and their implementation (Government, NDA, regulators etc)*
9. Other activities	Relevant developments	9.1 Keep track of other relevant developments and assess their implications for UK programme and our work (eg progress in decommissioning)*
	Risks to whole MRWS programme	9.2 Scrutinise how key organisations are managing strategic risks, including examination of risk registers*
	Use of best practice	9.3 Assess whether implementers are monitoring and learning from international programmes*
	LLW management	9.4 Monitor impact of UK low level waste plans and activities on storage and geological disposal programmes, ensure relevant LLW experience is taken into account in MRWS*
	CoRWM's risk register	9.5 Establish and maintain CoRWM's risk register*
	CoRWM's website	9.6 Major improvements to website (2008)
		9.7 On-going management of website*
	CoRWM work programme	9.8 Ensure three year programme implemented*
		9.9 Review three year programme in 2009 and 2010*
		9.10 Compile Annual Report each year*