



**Committee on Radioactive Waste Management**

**COMMITTEE ON RADIOACTIVE WASTE MANAGEMENT**

**PROPOSED PROGRAMME OF WORK 2012-2015**

**31 March 2012**

## **INTRODUCTION BY THE CHAIR**

I am pleased to present CoRWM's proposed work programme for 2012-15 to sponsor Ministers, the Secretary of State for Energy and Climate Change and Environment Ministers in Scotland, Wales and Northern Ireland.

CoRWM's proposed programme is outlined in the Executive Summary of this document. Further details of our proposed programme for 2012-15 are given in paragraphs 10-23 and the detailed breakdown is in Table 1 of the document, after a statement of our remit and a description of how we developed our proposed programme.

2012-13 will be a particularly challenging year for the Committee owing to the appointment of a new Chair and potentially seven new members half way through the year. The Cabinet Office Triennial Review, which is in progress at the time of submitting this work programme, may also bring further changes.



Robert Pickard

## EXECUTIVE SUMMARY

1. CoRWM's work programme for 2012-13 will need to be flexible in order to deliver timely and responsive advice on developments in the management of higher activity wastes. The need to allow for a new Chair and potentially seven new members of the Committee in the second half of the year presents a particular challenge. The Committee is also subject to a Cabinet Office Triennial Review in March - June 2012, which could result in significant changes to the Committee and its remit.
2. CoRWM's proposed priorities for scrutiny and advice in 2012-13 are:
  - Treatment, Packaging, Storage and Transport*
    - The Nuclear Decommissioning Authority's (NDA) further development of its strategy for the management of higher activity wastes.
  - Geological Disposal*
    - The current stage of the process for siting a geological disposal facility (the Managing Radioactive Waste Safely (MRWS) process), with potential decisions in West Cumbria on whether to participate further in the process.
    - Government and NDA preparations for Stage 4 of the MRWS process
    - Proposals for acceleration of the geological disposal programme.
  - Implementation of Scottish Government Policy for Higher Activity Waste*
    - Development of a strategy to implement the Scottish Government higher activity waste policy (of near-surface, near-site storage and disposal).
  - Research and Development*
    - Monitoring developments following the Government response to the House of Lords Select Committee on Science and Technology report on nuclear research and development capabilities.
3. The proposed deliverables for 2012-13 will be sections in the CoRWM 2012-13 Annual Report. It is anticipated that informal advice will be given during the year on key developments in the management of higher activity waste.
4. CoRWM will carry out its own public and stakeholder engagement to support its work.
5. In formulating its programme for 2012-13, CoRWM has assumed that its budget and secretariat resources will be similar to those in 2011-12.
6. This document also outlines topics that CoRWM may address in 2013-15.

## INTRODUCTION

1. This is the fifth CoRWM work programme since the Committee was reconstituted in 2007. It covers the proposed programme for 2012-13 in detail and identifies the topics that could be addressed in the following two years.
2. The document summarises CoRWM's remit, describes the development of the proposed programme and outlines priorities for 2012-13 with the deliverables. Paragraphs 20-21 set out potential topics for 2013-15.
3. The proposed work programme has to be submitted to Government by the end of March each year. Once the programme has been approved, CoRWM's Task Groups then prepare more detailed work plans, which are regularly updated and are available on the CoRWM website.

## CORWM'S REMIT

4. The Committee was set up in 2003 as part of Government's Managing Radioactive Waste Safely (MRWS) programme. Its initial remit was to oversee a review of the options for the long-term management of the UK's solid higher activity radioactive waste (HAW) and to recommend an option (or combination of options) to Government. CoRWM reported in July 2006 (CoRWM doc. 700) and Government responded in October 2006 (Defra *et al.*, 2006), accepting most of CoRWM's recommendations. The Government then began work on the implementation of the policy for geological disposal, using a voluntarism and partnership approach, preceded by robust interim storage and accompanied by the necessary research.
5. There was a public consultation in 2007 on a framework for implementing geological disposal (Defra *et al.*, 2007). 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 (Defra *et al.*, 2008). In 2007, the Scottish Government decided not to endorse geological disposal (Lochhead, 2007); it subsequently developed its own policy for the management of its HAW, which consists of near-surface, near-site storage and disposal (Scottish Government, 2011).
6. In October 2007, Government reappointed CoRWM with revised Terms of Reference. These state (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 long term management options for the UK's higher activity wastes."*
7. The current membership of CoRWM is given in Annex B.

## **DEVELOPMENT OF THE PROPOSED WORK PROGRAMME FOR 2012-15**

8. The programme was developed over the period from November 2011 to March 2012. There was an initial discussion at the November plenary meeting, based on a draft table of potential tasks (CoRWM doc. 2986); this was followed by a meeting with Government sponsors in December 2011. Further discussion took place at the January plenary meeting (CoRWM doc. 3009) and it was agreed that a revised table of potential tasks (CoRWM doc. 2998) would be circulated for comment via the website and the CoRWM e-bulletin.
9. Comments on the proposed table of tasks were received from the Nuclear Decommissioning Authority (NDA), Office for Nuclear Regulation (ONR), Environment Agency (EA) and AWE. A further meeting was held with Government sponsors in February 2012. A revised table with Government and stakeholder comments (CoRWM doc. 3011) was discussed at the March 2012 plenary meeting. The final version of the proposed 2012-15 work programme was agreed at the March 2012 plenary meeting.

## **PRIORITIES AND APPROACH FOR 2012-15**

10. The first six months of the year will involve the preparation of the 2011-12 CoRWM Annual Report and continuation of some of the topics from the 2011-12 work programme. The work programme for 2012-13 will need to be flexible in the second half of the year to allow for a new Chair and potentially seven new members of the Committee. They will need to undertake familiarisation and may also wish to take stock before developing their 2013-14 work programme. The CoRWM budget for 2012-13 is not yet known and the outcome of the Cabinet Office Triennial Review of CoRWM may also have implications.
11. It is essential that CoRWM is able to take a view on the whole field of the management of HAW as all components are integrated and the complete picture needs to be seen. CoRWM keeps itself well informed and up to date by collecting evidence and information for its scrutiny and advice through regular programmed meetings with organisations such as NDA, the Department of Energy and Climate Change (DECC), Scottish Government, regulators and the Ministry of Defence. Specific and topic-based meetings are also held, particularly when preparing recommendations or position papers. CoRWM attends some meetings as observers *e.g.* those of the West Cumbria Managing Radioactive Waste Safely Partnership.

### ***Priorities***

12. CoRWM's proposed priorities for scrutiny and advice in 2012-13 are:

#### *Treatment, Packaging, Storage and Transport*

- NDA's development of its strategy for the management of HAW, including strategic co-ordination of its work with that of other organisations that own or produce HAW.

#### *Geological Disposal*

- The current stage of the process for siting a geological disposal facility (the MRWS process). This will be influenced by any decisions made in West Cumbria on further participation in the MRWS process and whether any new communities express an interest in participation.
- Government and NDA preparations for Stage 4 of the MRWS process (site identification and assessment).
- Proposals for the acceleration of geological disposal.

*Implementation of Scottish Government Policy for Higher Activity Waste*

- Development of a strategy to implement the Scottish Government HAW policy.

*Research and Development*

- Monitoring developments following the Government response (HoLSTC, 2012) to the House of Lords Select Committee on Science and Technology report on nuclear research and development (R&D) capabilities (HoLSTC, 2011)

13. These priorities are based on discussions with sponsors, stakeholder comments and CoRWM's own views.
14. The programme does not contain a separate task on new-build wastes. Instead, these wastes will be considered under all other tasks except those related to Scottish Government policy.
15. CoRWM doc. 2806 sets out the procedures that CoRWM will use to gather and test evidence for its various forms of advice and the public and stakeholder engagement (PSE) processes that it will apply in each case.

**CoRWM's Own PSE**

16. CoRWM will undertake PSE to support its programme. This will include consultation on draft documents, via the e-bulletin, and meetings with various groups of stakeholders.

**Reporting and Deliverables**

17. The CoRWM Annual Report 2012-13 will contain sections on each of the work programme topics as well as information on activities and expenditure. The report will also contain any statements that the Committee wishes to make on UK progress with managing its HAW. The report for 2012-13 will be prepared in the period April to June 2013 and published by the end of June 2013.
18. Owing to the speed of developments in the management of higher activity wastes, in order to be most effective CoRWM needs to be responsive and timely with advice. Therefore it is anticipated that mainly informal advice will be given during the year. This will be published as soon as possible or reported in the CoRWM Annual Report.

**Resources**

19. In developing the 2012-15 work programme, CoRWM has assumed that its budget and secretariat resources will be similar to 2011-12.

**PROPOSED TASKS FOR 2012-13**

20. Table 1 shows the proposed tasks for 2012-13 with priorities, resources and the corresponding deliverables. The table also outlines the work to be undertaken in each topic area.
21. In Table 1, the following is a guidance to the definition of high, medium and low resource for tasks:
  - High resource: intense pieces of work, usually involving all members of the Committee and debate at plenary.
  - Medium resource: high input from a small number of members.

- Low resource: routine monitoring through programmed meetings *etc.*, usually involving a small number of members.

### **POSSIBLE TOPICS FOR 2013-15**

22. Key tasks in the 2012-13 work programme will extend into future years and will be reviewed in the preparation of future work programmes.

23. The following are the main work areas for scrutiny and advice in 2013-15. Note that, as in 2011-12, each work area will cover existing, committed and new-build wastes.

- Developments and progress in the Government's MRWS programme. This will be influenced by decisions made in West Cumbria and whether any new communities express an interest.
- Acceleration of geological disposal.
- RWMD work on implementation of geological disposal, including R&D.
- Development and implementation of NDA HAW strategy (part of its Integrated Waste Management Strategy).
- Implementation of Scottish Government HAW policy.
- Coordination of R&D on the long-term management of HAW.

## REFERENCES

### **CoRWM Documents**

- 700 CoRWM Recommendations to Government. 2006.
- 2806 CoRWM Procedures for Formulating Advice.
- 2986 Minutes of CoRWM Plenary. November 2011.
- 2998 Draft Outline Work Programme 2012-15.
- 3009 Minutes of Plenary Meeting. January 2012.
- 3011 CoRWM Proposed Work Programme 2012-15.

### **Other Documents**

Defra *et al.*, 2006. *Response by the UK Government and the Devolved Administrations to the Report and Recommendations from the Committee on Radioactive Waste Management (CoRWM)*.

Defra *et al.*, 2007. *Managing Radioactive Waste Safely. A Framework for Implementing Geological Disposal*. A public consultation by Defra, DTI and the Welsh and Northern Ireland devolved administrations.

Defra *et al.*, 2008. *Managing Radioactive Waste Safely. A Framework for Implementing Geological Disposal*. Cm 7386.

Lochhead, R. Response to a question in the Scottish Parliament, 25 June 2007.

Scottish Government, 2011. *Scotland's Higher Activity Radioactive Waste Policy*.

HoLSTC, 2011. *Nuclear Research and Development Capabilities*. House of Lords Select Committee on Science and Technology, Report of session 2010-12, HL Paper 221.

HoLSTC, 2012. *Government Response to the House of Lords Select Committee on Science and Technology Committee Report: "Nuclear Research and Development Capabilities"*. February 2012.



**Table 1. Work programme topics, priorities, resources and outputs for 2012-13**

Topic	Potential sub-topic	Priority	Resource <sup>1</sup>	Outline of work
<b>A. Treatment, packaging, storage and transport of higher activity wastes (HAW), spent fuels (SFs) and nuclear materials (NMs)</b>	<b>A.1</b> Nuclear Decommissioning Authority (NDA) HAW strategy (part of NDA's Integrated Waste Management strategy development programme)	High	Medium	CoRWM will scrutinise developments in these topics and keep itself up to date by the collation of information through regular programmed meetings with NDA, regulators and other parties. Outputs will be in the 2012-13 CoRWM Annual Report unless advice to Government is required.
	<b>A.2</b> Consolidation of treatment and storage of HAW on fewer nuclear sites	High	Medium	
	<b>A.3</b> HAW and SFs in the Sellafield Legacy Ponds and Silos	High	Low	
	<b>A.4</b> Co-ordination of work on long-term management of legacy and new build HAW, SFs and NMs	High	Medium	
	<b>A.5</b> Version 2 of the Industry Guidance on interim storage	Medium	Low	
	<b>A.6</b> NDA Radioactive Waste Management Directorate (RWMD) work on waste package specifications	Medium	Low	

<sup>1</sup> High resource: intense pieces of work, usually involving all members of the Committee and debate at plenary.  
 Medium resource: high input from a small number of members.  
 Low resource: routine monitoring through programmed meetings *etc.*, usually involving a small number of members.

<b>Topic</b>	<b>Potential sub-topic</b>	<b>Priority</b>	<b>Resource<sup>1</sup></b>	<b>Outline of work</b>
<b>B. Geological disposal</b>	<b>B.1</b> Managing Radioactive Waste Safely (MRWS) programme in general	High	Low	Twice yearly meetings with DECC to discuss promotion of MRWS.
	<b>B.2</b> MRWS in West Cumbria	High	High	Attendance as observers at the West Cumbria MRWS Partnership meetings. Review position after Local Authorities' decision on whether to participate further in MRWS process. Advice to Government as required. Output in 2012-13 Annual Report
	<b>B.3</b> Proposals for acceleration of the geological disposal programme, including changes to RWMD's Provisional Implementation Plan	High	Medium	Scrutiny of proposals for acceleration. Advice to Government as required.
	<b>B.4</b> Preparations for MRWS Stage 4 (site identification and assessment)	High	High	Scrutiny of preparations through meetings and review of documentation with advice to Government as required. Overview in 2012-13 Annual Report.
	<b>B.5</b> RWMD Technical Plan	Medium	Medium	Scrutiny through regular meetings and review of documents. Advice to Government as necessary.
	<b>B.6</b> RWMD safety case development for a geological disposal system	Medium	Low	
	<b>B.7</b> RWMD geological disposal concept selection	Medium	Low	

<b>Topic</b>	<b>Potential sub-topic</b>	<b>Priority</b>	<b>Resource<sup>1</sup></b>	<b>Outline of work</b>
<b>B. Geological disposal continued</b>	<b>B.8</b> RWMD development of a Strategic Environmental Assessment (SEA) for a geological disposal facility	Low	Low	Outputs in 2012-13 Annual Report.
	<b>B.9</b> RWMD Issues Management Process	Low	Low	
	<b>B.10</b> Near-surface disposal of some types of HAW (as an alternative to geological disposal)	Low	Low	
<b>C. Scottish Government Policy</b>	<b>C.1</b> Development of a strategy to implement Scottish Government HAW policy (of near-surface, near-site storage and disposal)	High	Low	Meetings with Scottish Government and attendance at its Project Board and Technical Advisory Group. Summary in 2012-13 Annual Report.
<b>D. Research and development (R&amp;D)</b>	<b>D.1</b> Expansion of geological disposal R&D beyond needs-driven and co-ordination of expanded programme	High	Low	Discussion of R&D at regular meetings with NDA and regulators. Attendance at NDA Research Board and the Nuclear Waste Research Forum. Input to work of the <i>ad hoc</i> Nuclear R&D Advisory Board. Summary in Annual Report.
	<b>D.2</b> Co-ordination of R&D on treatment, packaging, storage and transport of legacy and new build HAW, SFs and NMs	High	Low	
<b>E. Public and stakeholder engagement (PSE)</b>	<b>E.1</b> Scrutiny of Government and NDA PSE	Medium	Low	General scrutiny of PSE undertaken with output in section of 2012-13 Annual Report.
	<b>E.2</b> CoRWM's own PSE	Medium	Low	Maintenance of CoRWM website and stakeholder consultation (e.g. on next work programme). Meetings with specific stakeholders as necessary (e.g. NGOs)

## **ANNEX A CoRWM TERMS OF REFERENCE**

### **Introduction**

A1. 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**

A2. 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.

A3. 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.

A4. 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.

A5. 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 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.

A6. 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.

- A7. 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.
- A8. 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.
- A9. 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.
- A10. 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**

- A11. 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.*
- A12. 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.
- A13. 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.

A14. 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**

A15. 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.

A16. 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.

A17. 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**

A18. 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.

- A19. 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.
- A20. 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**

- A21. 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**

- A22. 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**

- A23. 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](http://www.civilservice.gov.uk/other/agencies/publications/pdf/public_bodies_2006/1_case_assessment.pdf)).
- A24. 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**

- A25. 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**

A26. 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 CoRWM MEMBERS

**Robert Pickard (Chair)** – is Emeritus Professor of Neurobiology at the University of Cardiff, Visiting Professor at the Royal Agricultural College, Cirencester, and Fellow of the Society of Biology and the Royal Society of Medicine. Formerly, he was Chairman of the Consumers' Association, *Which?*, and Director-General of the British Nutrition Foundation. For the Department of Health and the Royal Society for the Promotion of Health, Professor Pickard was also Chairman of the national NGO Forum, which facilitated 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)** – is Director of the Centre for Advanced Structural Ceramics and Deputy Director of the Centre for Nuclear Engineering 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 in the UK, notably at Sheffield University where he was Director of BNFL's University Research Alliance on Waste Immobilisation. 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, the City and Guilds Institute and the Institute of Materials, Minerals and Mining.

**David Broughton** – is a Chartered Engineer and a Fellow of the Institution of Mechanical Engineers. He has 26 years experience in professional engineering and management of complex nuclear projects. Now retired, he worked at UKAEA Dounreay, Caithness from 1981 until 2007, where 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 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** – is Chair of NHS Health Scotland. 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. She is a trustee of the Institute of Occupational Medicine.

**Brian D Clark** – is Professor of Environmental Management and Planning at Aberdeen University. He was a Board Member of the Scottish Environment Protection Agency (SEPA) and Chairman of the North Region Board and the Planning & Finance Committee of SEPA from 2000 to 2008. He has served on CoRWM since 2003. With forty years experience, he is a specialist in environmental impact assessment (EIA), strategic environmental assessment (SEA) and urban and rural planning. He was 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, a member of the Scottish Government Local Boundary Commission and 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** – 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 has served on CoRWM since 2003. He is a Fellow of the Institution of Nuclear Engineers, co-author of two Safety Guides published by the International Atomic Energy Agency 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** – is Emeritus Professor of Petrology & Geochemistry in the Department of Materials Science and Engineering, University of Sheffield. He has over 40 years' teaching and research experience in mineralogy, petrology, 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** – is 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** – is an independent consultant with 35 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 early career was at the National Radiological Protection Board (now part of the Health Protection Agency), from where she moved into consultancy. 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) from 2006 to 2008, when it was suspended.

**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 Research 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** – is a Professor in Civil Engineering at the University of Strathclyde. She has over 20 years of research experience in hydrogeology, with a particular focus on deep flow systems, hydromechanics and the spatial and temporal evolution of rock permeability. In 2011, she was awarded the Geological Society Aberconway Medal for research of particular relevance within industry. Her research experience is multi-disciplinary and she currently collaborates closely with structural geologists, seismologists, mathematicians,, microbiologists, psychologists and statisticians. She leads the multi-partner EPSRC research consortium, 'Biogeochemical Applications in Nuclear Decommissioning and Disposal' (BANDD). 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** – has over 30 years local government experience, where he 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 the Ministry of Defence Advisory Group for its Submarine Dismantling Project and sits on the project Steering Group. He currently runs an environmental health consultancy company and has been an active member of the Chartered Institute of Environmental Health.

**Stephen Newson** – a Chartered Engineer and Fellow of the Institute of Materials, Minerals and Mining and is currently Principal Mining Consultant for Parsons Brinckerhoff, an engineering and project management consultancy. He has over 38 years of mining experience including operational management, research and development and the design and construction of large underground excavations. He spent 16 years with British Coal, latterly responsible for the specification and approval of underground tunnel and coalface support systems on a national basis. During this time his was also a UK representative on the European Experts' Committee on tunnelling systems. He has worked for major companies, such as Shell and BHP Billiton, on new mine construction and expansion projects in Australia and Africa. He has also, as a consultant, previously worked on underground design and planning projects for UK Nirex and the NDA.

**John Rennilson** – is a Chartered Town Planner and a Chartered Surveyor with over 37 years' experience in local government. He served as County Planning Officer of North Yorkshire County Council (1984-1996) and as Director of Planning & Development for Highland Council (1996-2008). His career has involved balancing development needs and environmental issues at a strategic, as well as at a local, level. He has had considerable experience of the energy industry, including development of the Selby Coalfield, coal-fired electricity generation at Drax and Eggborough, and decommissioning Dounreay, as well as renewable electricity generation and transmission issues across the Highlands.

**Lynda Warren** – is Emeritus Professor of Environmental Law at Aberystwyth University and visiting Professor at Birmingham City University. She was a member of the Royal Commission on Environmental Pollution until it's closure in March 2011. 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 over 15 years

experience of radioactive waste management policy. She has been a member of CoRWM since 2003 and, before that, was a member of the Radioactive Waste Management Advisory Committee (RWMAC), chairing its working group on Dounreay. She was a member of the Board of the British Geological Survey until it was disbanded in April 2011 and is an associate of IDM, a consultancy engaged in environmental policy advisory work, mainly in the nuclear sector.