



Committee on Radioactive Waste Management

COMMITTEE ON RADIOACTIVE WASTE MANAGEMENT

PROPOSED PROGRAMME OF WORK 2015-2018

April 2015

MESSAGE FROM THE CHAIR

I am pleased to present CoRWM's proposed work programme for 2015-18 to the Secretary of State for Energy and Climate Change and Environment Ministers in Scottish and Welsh, Governments and Northern Ireland Executive.

CoRWM's proposed programme for 2015-18 is outlined in paragraphs 10-16 and the detailed breakdown of activities is given in Tables 1, 2 and 3 of this document.

The proposed programme consists of a 3-year rolling plan and as such, the greatest detail on what we propose to do is given for the first year (2015-16). The plan for 2015-16 shows that CoRWM will, given the current priorities, focus most of its time on the scrutiny of the work carried out by DECC and Radioactive Waste Management Limited (RWM) on the delivery of the work packages outlined in the July 2014 White Paper "Implementing Geological Disposal". Other priority areas are support to the Welsh Government on its radioactive waste policy development; support to the Scottish Government on the development of its strategy for the management of radioactive waste in Scotland; monitoring the storage of Higher Activity Waste in the UK; RWM's safety case development programme and CoRWM's outreach programme.

Priorities for the later parts of the plan are less well developed and therefore the activities are only indicative and could change depending upon future developments, however in 2016/17 CoRWM intends to scrutinise the development of RWM and its plans to transition from its current organisation and capability, to become an effective GDA "delivery organisation".

This proposed programme of work has been developed on the assumption that CoRWM will continue in its current form and with an appropriate budget. However, the future of the Committee is far from certain. In the past 18 months the Committee has lost posts as a result of budget constraints. The CoRWM Triennial Review has been brought forward to 2015 and hence the Committee's future size and remit is uncertain at this time. When the Triennial Review is completed it may be necessary to revise this proposed programme of work.

Progress on the delivery of the 2014-15 plan can be seen in CoRWM's Annual Report for 2014-15.

Professor Laurence G Williams FREng
Chair Committee on Radioactive Waste Management

INTRODUCTION

1. This is the third CoRWM work programme since the Committee was re-constituted in November 2012. It is a 3-year rolling programme with the proposed programme for 2015-16 covered in detail and it identifies the topics that could be addressed in the following two years.
2. This document summarises CoRWM's remit, describes the development of the proposed programme and outlines priorities for 2015-16 with the deliverables.
3. Once the programme has been approved, CoRWM's sub-groups will prepare more detailed work-plans, which will be regularly updated and will be 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 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 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 under new terms 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 of 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. In November 2012, Government refreshed the membership of the committee, with a new Chair and six new members. Since then the Committee's budget has been reduced with the resultant loss of two posts. The CoRWM Triennial Review has

been brought forward to 2015 and hence the Committee's future size and remit is uncertain at this time.

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

9. CoRWM's proposed 2015-18 work programme was developed by the Committee in the period January – February 2015. Comments were received from the Nuclear Decommissioning Authority (NDA), Radioactive Waste Management Limited, Natural Resources Wales and the Scottish Environment Protection Agency (SEPA). After considering the comments received the Committee agreed the final version of its proposed work programme at its March meeting.

PRIORITIES FOR 2015-16

10. CoRWM's proposed priorities for scrutiny and advice in 2015-16 are:

- ***To provide advice to DECC on the Work Packages arising from the White Paper "Implementing Geological Disposal" (56%)***

CoRWM will plan its work to provide timely advice to DECC in relation to the work packages arising from the White Paper:

- WP1 National Geological Screening;
- WP2 Working with Communities;
- WP3 National Land Use Planning;
- WP4 Developer Led Communications and Engagement; and
- WP5 Regulation - Providing ONR with legal vires to licence a GDF.

CoRWM will scrutinise the work done by DECC and RWM in all 5 work packages

- ***To provide advice to the Welsh Government on its Review of Radioactive Waste Policy in respect of HAW (15%)***

CoRWM will plan its work to provide timely advice to the Welsh Government on its review of radioactive waste policy. CoRWM will scrutinise the work done by the Welsh Government.

- ***To provide advice to the Scottish Government on its Radioactive Waste Management Strategy (10%)***

CoRWM will plan its work to provide timely advice to the Scottish Government on its developing HAW radioactive waste management strategy to support the implementation of the Scottish Government Policy for managing higher activity radioactive waste. This work will include providing advice on specific issues

identified by the Scottish Government, gathering information on the NDA's plans for Scotland and scrutinising the implementation of the Strategy.

- ***Interim Surface Storage of HAW Radioactive Wastes, Spent Fuel and Nuclear Materials (10%)***

CoRWM will plan its work to provide timely advice to DECC, the Scottish Government and the Welsh Government on the current status of interim surface storage of HAW radioactive waste, spent fuel and nuclear materials. This work will include scrutiny of current arrangements at NDA, EDF and other nuclear sites. It will also include a review and scrutiny of NDA's future plans and any necessary R&D that will be necessary to underpin these plans. Nuclear safety and security implications will be discussed with NDA and the regulators.

- ***To provide advice to DECC and other Sponsors on RWM's development of the GDF Safety Case (4%)***

CoRWM will plan its work to provide timely advice to DECC on RWM's development of the three generic safety cases. CoRWM will also look at RWM's plans for developing site-specific safety cases.

- ***CoRWM Outreach (5%)***

CoRWM will plan its work to provide effective engagement with the public and other stakeholders to raise the profiles of CoRWM and help inspire confidence in its work.

PRIORITIES FOR 2016-17

11. CoRWM's proposed priorities for scrutiny and advice in 2016-17 are outlined below with indicative time allocations given in Table 2.

- To provide advice to DECC on the GDF siting process
 - Volunteer Communities
 - Communication and Engagement
 - Generic Safety Cases
- To provide advice to the Welsh Government on the management of HAW in Wales.
- To provide advice to the Scottish Government on the management of HAW in Scotland.
- To scrutinise RWM's development of the three generic safety cases and provide advice to DECC, NDA and RWM as necessary.

- To scrutinise the management of Interim surface storage of HAW, spent fuel and nuclear materials in England and provide advice as necessary.
- To provide advice to DECC and other Sponsors on the transition of the RWM to an effective GDF "Delivery Organisation."

PRIORITIES FOR 2017-18

12. CoRWM's proposed priorities for scrutiny and advice in 2017-18 are listed below. Again these are indicative at this stage.

- To provide advice to DECC on the GDF siting process
 - Volunteer Communities
 - Communication and Engagement
 - Generic Safety Cases
 - Regulatory Framework
- To provide advice to the Welsh Government on the management of HAW in Wales.
- To provide advice to the Scottish Government on the management of HAW in Scotland.
- To scrutinise the management of Interim Surface Storage of HAW, spent fuel and nuclear materials in England and provide advice as necessary.

CoRWM's ENGAGEMENT STRATEGY

13. CoRWM will continue to engage widely to gather evidence to progress CoRWM's various work streams, and to communicate CoRWM's output to stakeholders via e-bulletins, the CoRWM website, at conferences, and via face-to-face meetings.

TASKS AND DELIVERABLES FOR 2015-18

14. Table 1 shows the description of each proposed task for 2015/16, together with the output, expected delivery dates, method of carrying out the task, task priority and the planned resource allocation. Tables 2 and 3 provide the outline proposals for 2016/17 and 2017/18.

15. The tasks for 2016-2018 are based upon current understanding of the radioactive waste issues that are likely to require scrutiny and advice. These are naturally estimates and will be reviewed and may change in future year's work programmes.

16. CoRWM will produce a number of deliverables in the form of formal and informal advice to Government. Currently, informal advice is the preferred option due to the need for timely and flexible advice. Unless circumstances do not permit,

CoRWM will endeavour to publish all its advice. CoRWM will also produce an Annual Report for 2014-15 for publication in June 2015.

RESOURCES

17. CoRWM's budget for 2014/15 was £292,500 (22% reduction on 2013/14). This has been assumed to be the provisional* budget for 2015-16. This does not include the cost of the secretariat provided by DECC. CoRWM Members each have an allocation of 52 days per year. As a result of budget constraints two Members have agreed to 26 days per year and the Chair is allocated 76 days per year. The total number of days per year that the Committee can allocate to its work is 596.

*The exact budget will be finalised after the completion of the Triennial Review.

Table 1. Work programme topics, priorities, time allocation and outputs for 2015/16

Ref.	Source	Task Description	Task output	Method	Sub-group	Target date	Priority	Time Allocation 2015/16
1	CoRWM + DECC	GDF Siting Policy: To provide advice to DECC on the Work Packages arising from the White Paper “Implementing Geological Disposal”	Advice on the progress and delivery of the 5 work packages Informal Advice / Scrutiny	Discussions with Officials, stakeholders, attending meetings, analysis by CoRWM		On or before 03/16	High	56% 334 days
1a		Task 1a: Provide advice to DECC on Work Package1 – National Geological Screening	Advice to DECC on CoRWM views on progress with and effectiveness of the RWM National Screening Programme Formal Advice / Scrutiny	Member observations and discussions with RWM	SG 1	On or before 03/16	High	16% 95 days
1b		Task 1b: Provide advice to DECC on Work Package 2 – Working with Communities	Advice to DECC on CoRWM views on progress with and effectiveness of DECC's programme Formal Advice / Scrutiny	Discussions with DECC officials and members of the Communities Working Group	SG 2	On or before 03/16	High	15% 89 days
1c		Task 1c: Provide advice to DECC on Work Package 3 – Developing Land Use Planning Processes	Advice to DECC on CoRWM's views on the progress with and effectiveness of the Land Use Planning Processes for a GDF Formal Advice / Scrutiny	Discussions with DECC Officials	SG 3	On or before 03/16	High	5% 30 days
1d		Task 1d: Provide advice to DECC on Work Package 4 – Developer Lead Communications and Engagement	Advice to DECC on CoRWM's views on the progress and effectiveness of the RWM process Formal advice / Scrutiny	Discussions with DECC, RWM and other Stakeholders	SG 4	On or before 03/16	Hig	10% 60 days

1e		Task 1e: Provide Advice to DECC on Work Package 5 – Regulation (Providing ONR with the legal vires to Licence a GDF)	Advice to DECC on CoRWM's views on progress with and effectiveness of the provision of legal vires to ONR. Formal Advice / Scrutiny	Discussions with DECC and ONR Officials	SG 5	On or before 03/16	High	10% 60 days
2	Welsh Govern't and CoRWM	Welsh Policy To provide advice to the Welsh Government on its Review of Radioactive Waste Policy in respect of HAW	Advice to the Welsh Government on Radioactive Waste Policy for Wales. Informal and formal advice on policy developments. Formal / Informal Advice	Discussions with Officials, stakeholders, meetings, analysis by CoRWM		On or before 03/16	High	(2015/16) 15% 89 days
2a		Task 2a: Provide advice to Welsh Government on its proposals	Advice to Welsh Government Informal / Formal Advice	Discussions with Welsh Officials	SG 6	On or before 03/16		10% 59 days
2b		Task 2b: Scrutinise Welsh Government Consultation and its analysis to inform changes to policy	Advice to Welsh Government Informal / Formal Advice	Observations and discussions	SG 6	On or before 03/16		5% 30 days
3	Sponsor for Scotland	Scottish Government: Review the arrangements for implementing the Scottish Government Policy for managing higher activity radioactive waste	Advice to Scottish Government on the progress with the implementation of the SG policy. Formal / Informal Advice / Scrutiny	Discussions with SG Officials / NDA / EDF		On or before 03/16	Med	(2015/16) 10% 60 days
3a		Task 3a Input to and review the process for developing a Strategy for implementing the Scottish Government Policy for managing higher activity radioactive waste	Advice to the SG on the adequacy of the proposed strategy and the process undertaken to develop it. Formal and Informal Advice	Discussions / meetings with SG, waste producers / licensees	SG 7	On or before 03/16	Med	5% 30 days
3b		Task 3b Monitor the management of	Advice as required by the SG	Meetings	SG 7	On or	Med	5%

		higher activity radioactive waste in Scotland	and to the SG on issues raised by CoRWM's scrutiny activities Scrutiny / Informal Advice	with SG / licensees / waste producers		before 03/16		30 days
4	CoRWM	Interim Surface Storage: Review of the current status of interim storage of radioactive waste, spent fuel and other nuclear materials in the UK and the implications for the GDF.	Advice on the implications of recent decisions on current and future plans for the retrieval, treatment, and storage of radioactive waste; the status of current storage and implications for GDF design/decisions. Informal Advice / Scrutiny	Discussions with NDA / EDF / MOD, Review of international experience and analysis by CoRWM		On or before 03/16	Med	(2015/16) 10% 60 days
4a		Task 4a: Review the current status of interim storage of radioactive waste, spent fuel and nuclear materials in the UK	Advice on the status of current situation in relation to conditioned and unconditioned waste / passive safety / retrievability Informal Advice / Scrutiny	Review of NDA / EDF documents and discussions	SG 8	On or before 03/16	Med	5% 30 days
4b		Task 4b: Review plans for retrieval of wastes from legacy ponds and silos at Sellafied	Advice on the adequacy of plans and implications for future surface storage requirements. Informal Advice / Scrutiny	Review of NDA documents and discussions with NDA / SL	SG 8	On or before 03/16	Med	5% 30 days
5	CoRWM	Safety Case Development: Review the RWM programme for the development of the 3 generic safety case and their plans for the transition to site specific safety cases.	Advice to DECC on the status of the 3 Generic Safety Cases and the plans to develop them in to site specific Safety Case Informal Advice / Scrutiny	Review of RWM documents and discussions with RWM		On or before 03/16	Med	2015/16) 4% 24 Days

5a		Task 5a: Provide advice to DECC on the RWM Generic GDF Safety Case approach	Advice to DECC and RWM on the development of the content and application of the generic safety case approach to a GDF Formal/Informal Advice / Scrutiny	Discussions with RWM, EA and ONR	SG 9	On or before 03/16	Med	3% 18 days
5b		Task 5b: Produce a clear and consistent understanding of the terminology used for safety cases	Advice on the fundamental concepts of a GDF safety case throughout the lifecycle from design, construction, commissioning, operation, decommissioning, closure and post-closure Formal / Informal Advice	Discussions with ONR, and EA and review of IAEA and other documents	SG 9	On or before 03/16	Med	1% 6 days
6	CoRWM	CoRWM Outreach: Provide effective engagement with the public and other stakeholders to raise the profiles of CoRWM and help inspire confidence in its work.	Development and delivery of a communication strategy to cover CoRWM interactions with the public and key stakeholders	Secretariat proposal and monitoring, Member contributions			Low	(2015/16) 5% 29 days
6a		Task 6a: Representation of CoRWM at external events and conferences, issue e-bulletin, maintain website	Delivery of lectures / attend meetings / publish articles		All	On or before 03/16	Low	5% 29 days

Table 2 Outline Work Programme for 2016/17

Ref.	Source	Task Description	Task output	Method	Sub-group	Target date	Priority	Time Allocation 2016/17
1	CoRWM	GDF Siting Policy: To provide advice to DECC on the GDF siting process	Advice on the progress and delivery of the siting process Formal Advice / Scrutiny	Discussions with Officials, stakeholders, attending meetings, analysis by CoRWM		On or before 03/17	High	45% 268 days
1a		Task 1a: To scrutinise the identification of volunteer communities and provide advice to DECC	Advice to DECC on CoRWM's views on progress with and effectiveness of DECC's programme Formal Advice / Scrutiny	Discussions with DECC officials and members of the Communities Working Group		On or before 03/17	High	30% 179 days
1b		Task 1b: To scrutinise the RWM activities relating to communication and engagement and provide advice to DECC	Advice to DECC on CoRWM's views on progress with and effectiveness of RWM programme Formal Advice / Scrutiny	Discussions with DECC officials and members of RWM		On or before 03/17	High	15% 89 days
2	CoRWM	Welsh Government: To provide advice to the Welsh Government on the management of Higher Activity Radioactive Waste (HAW) in Wales	Advice to the Welsh Government on Radioactive Waste Management for Wales. Informal and formal advice on policy developments. Formal / Informal Advice and Scrutiny	Discussions with Officials, stakeholders, meetings, analysis by CoRWM		On or before 03/17	High	(2016/17) 10% 60 days

3	CoRWM	Scottish Government: To provide advice to the Scottish Government on the management of Higher Activity Radioactive Waste (HAW) in Scotland	Advice to the Scottish Government on Radioactive Waste Management in Scotland. Formal / Informal Advice and Scrutiny	Discussions with SG Officials / NDA / EDF		On or before 03/17	High	(2016/17) 10% 60 days
4	CoRWM	Safety Case: To scrutinise the RWM activities relating the development of the generic safety case and to review the New 2016 Generic Safety Case and provide advice to DECC	Advice to DECC on CoRWM's views on progress with and effectiveness of RWM's programme and on the New 2016 Generic Safety Case Formal Advice / Scrutiny	Discussions with DECC officials and members of RWM		On or before 03/17	High	10 60 days
5	CoRWM	Interim Surface Storage: Review of the current status of interim storage of radioactive waste, spent fuel and other nuclear materials in the UK and the implications for the GDF.	Advice on the implications of recent decisions on current and future plans for the retrieval, treatment, and storage of radioactive waste; the status of current storage and implications for GDF design/decisions. Informal Advice / Scrutiny	Discussions with NDA / EDF / MOD, Review of international experience and analysis by CoRWM		On or before 03/17	Med	(2016/17) 10% 60 days
6	CoRWM	RWMD Transition: To provide advice to DECC and other Sponsors on the transition of the NDA (RWM) to an effective GDF "Delivery Organisation"	Advice to DECC and other Sponsors on the effectiveness of the transition from the NDA's RWM to a separate delivery organisation Formal / Informal Advice / Scrutiny	Observations discussions with DECC, NDA. RWM		On or before 03/17	Med	(2016/17) 10% 60 days
7	CoRWM	CoRWM Outreach: Provide	Development and delivery of a	Secretariat			Low	(2015/16)

		effective engagement with the public and other stakeholders to raise the profiles of CoRWM and help inspire confidence in its work.	communication strategy to cover CoRWM interactions with the public and key stakeholders	proposal and monitoring plus Member contribution				5% 28 days
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Table 3 Outline Work Programme for 2017/18

Ref.	Source	Task Description	Task output	Method	Sub-group	Target date	Priority	Time Allocation 2017/18
1	CoRWM	GDF Siting Policy: To provide advice to DECC on the GDF siting process	Advice on the progress and delivery of the siting process Informal Advice / Scrutiny	Discussions with Officials, stakeholders, attending meetings, analysis by CoRWM		On or before 03/18	High	45% 268 days
1a		Task 1a: To scrutinise the identification of volunteer communities and provide advice to DECC	Advice to DECC on CoRWM's views on progress with and effectiveness of DECC's programme Formal Advice / Scrutiny	Discussions with DECC officials and members of the Communities Working Group		03/18	High	20% 119 days
1b		Task 1b: To scrutinise the RWM activities relating to communication and engagement and provide advice	Advice to DECC on CoRWM's views on progress with and effectiveness of RWM	Discussions with DECC officials and		On or before	High	15% 89 days

		to DECC	programme	members of RWM		03/18		
			Formal Advice / Scrutiny					
1c		Task 1c: To scrutinise the development and implementation of an effective regulatory framework for the licensing and environmental permitting of a GDF activities and provide advice to DECC	Advice to DECC on CoRWM's views on the development and implementation of the regulatory framework	Discussions with DECC officials, ONR and EA		On or before 03/18	High	10% 60 days
			Formal Advice / Scrutiny					
2	CoRWM	Welsh Government: To provide advice to the Welsh Government on the management of Higher Activity Radioactive Waste (HAW) in Wales.	Advice to the Welsh Government on Radioactive Waste Management for Wales. Informal and formal advice on policy developments.	Discussions with Officials, stakeholders, meetings, analysis by CoRWM		On or before 03/18	High	(2017/18) 10% 60 days
			Formal / Informal Advice and Scrutiny					
3	CoRWM	Scottish Government: To provide advice to the Scottish Government on the management of Higher Activity Radioactive Waste (HAW) in Scotland.	Reports to the Scottish Government on Radioactive Waste Management in Scotland.	Discussions with SG Officials / NDA / EDF		03/18	High	(2017/18) 10% 60 days
			Formal / Informal Advice and Scrutiny					
4	CoRWM	Generic Safety Case: To scrutinise the RWM activities relating the development of the generic safety case and provide advice to DECC.	Advice to DECC on CoRWM's views on progress with and effectiveness of RWM's programme.	Discussions with DECC officials and members of RWM		On or before 03/18	High	10% 60 days

			Formal Advice / Scrutiny					
5	CoRWM	Interim Surface Storage: Review of the current status of interim storage of radioactive waste, spent fuel and other nuclear materials in the UK and the implications for the GDF.	Advice on the implications of recent decisions on current and future plans for the retrieval, treatment, and storage of radioactive waste; the status of current storage and implications for GDF design/decisions. Informal Advice / Scrutiny	Discussions with NDA / EDF / MOD, Review of international experience and analysis by CoRWM		On or before 03/18	Med	(2017/18) 10% 60 days
6	CoRWM	RWMD Transition: To provide advice to DECC and other Sponsors on the transition of the NDA (RWM) to an effective GDF "Delivery Organisation.	Advice to DECC and other Sponsors on the effectiveness of the transition from the NDA's RWM to a separate delivery organisation. Formal / Informal Advice / Scrutiny	Observations discussions with DECC, NDA. RWM		On or before 03/18	Med	(2017/18) 10% 60 days
7	CoRWM	CoRWM Outreach: Provide effective engagement with the public and other stakeholders to raise the profiles of CoRWM and help inspire confidence in its work.	Development and delivery of a communication strategy to cover CoRWM interactions with the public and key stakeholders.	Secretariat proposal and monitoring plus Member contribution		On or before 03/18	Low	(2017/18) 5% 28 days

ANNEX B CoRWM MEMBERS

Laurence Williams FEng (Chair) is an Emeritus Professor of Nuclear Safety and Regulation. He is a Senior Research Fellow at Imperial College London; a Visiting Professor at King's College London, a Visiting Senior Fellow at the National Nuclear Laboratory, Chair of the Defence Nuclear Safety Committee, the UK Member of the Higher Scientific Council of the European Nuclear Society, Chair of the Nuclear Institute Editorial Board for Nuclear Future, and the UK Member of the European Bank for Reconstruction and Development's International Advisory Group on Chernobyl. Prior to entering academia Laurence was the Chief Engineer and Director for Nuclear Safety, Security and Environment at the Nuclear Decommissioning Authority, he was a Member of the Board of the Health and Safety Executive and Her Majesty's Chief Inspector of Nuclear Installations. As Chairman of the IAEA Commission on Safety Standards he was responsible for overseeing the development of international standards in the areas of nuclear safety, radiation protection, radioactive waste management and the transport of nuclear materials. Laurence is an international authority on nuclear safety and security regulation. He is a Fellow of the Royal Academy of Engineering, a Fellow of the Institution of Mechanical Engineering and a Fellow of the Nuclear Institute.

Current term of office ends: **31 October 2016**

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 Director of the University's Dalton Nuclear Institute and Director of the EPSRC-funded, Next Generation Nuclear Doctoral Training Centre. He has acted as an advisor to the nuclear industry both in the UK and overseas.

Current term of office ends: **31 October 2015**

Gregg Butler is Co-Director of Integrated Decision Management Ltd and a Professor of Science in Sustainable Development at the University of Manchester, attached to the Dalton Nuclear Institute. He has a BSc and PhD in metallurgy from Swansea University, and has over 45 years' experience in the nuclear industry, having worked in most parts of the fuel cycle in R&D, planning, commercial, plant operations, plant and site management and director roles. He was a member of the Radioactive Waste management Advisory Committee from 1994 – 2004. Current research interests include the sustainability of nuclear power and its regulation, and effectiveness of decision making methodologies in bringing economics, regulatory outcomes, stakeholder views and values to a robust conclusion.

Current term of office ends: **25 November 2016**

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 of 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 James Hutton 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).

Current term of office ends: **31 October 2015**

Paul Davis is the owner of EnviroLogic Inc., an environmental and water resources consulting company in Durango, Colorado, USA. He has over 30 years of experience in the geologic disposal of radioactive waste, starting with site characterization of the Waste Isolation Pilot Project (WIPP) for the United States Geological Survey. At Sandia National Laboratories, he participated in and led the development of performance assessment methodologies for geologic repositories in bedded salt, basalt, and volcanic tuff for the US Nuclear Regulatory Commission, specializing in groundwater flow and transport modelling and the quantification and propagation of uncertainty. He also provided technical support for the development of safety standards for high-level waste disposal for the U.S. Environmental Protection Agency and led the WIPP team responsible for the integration of site characterization, research, performance assessment and regulatory compliance. He is currently collaborating with Los Alamos National Laboratories in the quantification of uncertainty in stable isotope analyses and with Moscow State University, Russia in the development of regional groundwater flow models.

Current term of office ends: **25 November 2016**

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. In 2002 was awarded the Imperial Polar Medal in recognition of his contributions to Antarctic Earth Science, and in 2014 the Schlumberger Medal of the Mineralogical Society in recognition of his contributions to mineralogy and petrology related to the deep continental crust.

Current term of office ends: **31 October 2015**

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.

Current term of office ends: **31 October 2015**

Stephen Newson is a Chartered Engineer and Fellow of the Institute of Materials, Minerals and Mining and is currently working as a Mining Consultant on a range of underground projects in the UK and overseas. He has over 40 years of mining experience including operational management, research and development, business planning 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 a number of major companies on new mine construction and expansion projects in Australia, Asia, North America and Africa. He has also, as a consultant, previously worked on underground design and planning projects related to the potential disposal of radioactive waste underground.

Current term of office ends: **25 November 2016**

Helen Peters is a Legal Director at Pinsent Masons LLP. She is a solicitor specialising in all aspects of UK, EU and international environmental law and policy with significant experience in nuclear regulation and waste management. Helen is recognised as a leading UK environmental lawyer by Chambers Legal Directory and Legal 500. She is a member of the WNA Licensing and Permitting Task Force and a corporate member of the Nuclear Industries Association. She is also an active member of the UK Environmental Law Association. Helen has been engaged in many of the leading nuclear transactions in the UK in recent years and advises owners, operators, contractors and public bodies on environmental and nuclear regulatory matters.

Current term of office ends: **25 November 2016**

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.

Current term of office ends: **31 October 2015**

Lynda Warren is Emeritus Professor of Environmental Law at Aberystwyth University and Honorary Professor at Bangor University. She is a member of the Board of Natural Resources Wales and sits on Defra's Science Advisory Council. She was a member of the Royal Commission on Environmental Pollution until its 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 on the Board of British Geological Survey until the Board was disbanded in April 2011 and is an associate of IDM, a consultancy engaged in environmental policy advisory work, mainly in the nuclear sector.

Current term of office ends: **25 November 2016**

Janet Wilson is a Chartered Engineer, a Fellow of the Institution of Mechanical Engineers, a Liveryman of the Worshipful Company of Engineers and has a PhD associated with nuclear reactor safety.

She has had a long and varied career in the nuclear industry starting with reactor design, safety case and commissioning in the early '80s before spending 17 years in various senior regulatory roles for ONR both in the UK and internationally across all sectors both civil and defence. Janet was part of the team that established the Nuclear Decommissioning Authority which she joined in 2005 to develop their first Strategy. Janet became the NDA's Director of Nuclear Assurance and was a non-Executive Director of the Civil Nuclear Police Authority.

In 2011 Janet moved to the private sector as an expert Consultant in a variety of roles including working in South Africa driving forward the licensing of their ambitious new build programme. In 2012 she was appointed to the Government's Committee on Radioactive Waste Management. She joined Horizon Nuclear Power in October 2013 as Director of Licensing and Permissions.

Current term of office ends: **25 November 2016**

Annex C Sub Groups

SG 1: National Geological Screening

Rebecca Lunn (Lead)

Simon Harley
Paul Davis
Gregg Butler
Francis Livens

SG 2: Working with the Community

John Rennilson (Lead)

Brian Clark
Lynda Warren
Janet Wilson
Rebecca Lunn

SG 3: National Land Use Planning

Lynda Warren (Lead)

Helen Peters
John Rennilson
Brian Clark

SG 4: Developer Lead Communications & Engagement

Brian Clark (Lead)

John Rennilson
Gregg Butler
Rebecca Lunn

SG 5 GDF Regulation

Helen Peters (Lead)

Janet Wilson
Gregg Butler
Lynda Warren
Stephen Newson

SG 6 Welsh Policy Review

Lynda Warren (Lead)

Helen Peters
Gregg Butler

Francis Livens

SG 7: Scottish Policy Implementation

John Rennilson (Lead)

Simon Harley
Brian Clark
Stephen Newson

SG 8: Interim Storage, Radioactive Waste, Spent Fuel and Nuclear Materials

Gregg Butler (Lead)

Francis Livens
Janet Wilson
Helen Peters
Lynda Warren

SG 9: Safety Case Development

Paul Davis (Lead)

Janet Wilson
Gregg Butler
Laurence Williams
Rebecca Lunn
Simon Harley

SG 10: RWM Development

Stephen Newson (Lead)

Janet Wilson
Paul Davis
Simon Harley