



CoRWM Doc 3312

Committee on Radioactive Waste Management

PROPOSED PROGRAMME OF WORK 2017-2020

March 2017

MESSAGE FROM THE CHAIR

I am pleased to present CoRWM's proposed work programme for 2017-20 to the Secretary of State for Business, Energy and Industrial Strategy and Environment Ministers in Scottish and Welsh Governments and Northern Ireland Executive. The Committee plays a vital role in providing Ministers with independent advice based upon evidence obtained from its scrutiny activities. This proposed work programme outlines what the Committee believes to be the key activities that are planned to deliver the objectives of the Implementing Geological Disposal programme in England and Wales and the delivery of the Scottish Government's policy on radioactive waste management.

The work programme has been tailored to deliver what the Committee believes is necessary to meet the expected challenges in year 2017-18, including examining the implications for radioactive waste management as a result of the UK's withdrawal from the Euratom Treaty.

The proposed programme consists of a 3-year rolling plan and, as such, the greatest detail is given for the first year (2017-18). Broadly, the programme for 2017-18 shows that CoRWM will focus most of its time on the scrutiny of the work carried out by BEIS and Radioactive Waste Management Limited (RWM) on the delivery of the work packages outlined in the July 2014 White Paper "Implementing Geological Disposal" (IGD), and the effectiveness of the launch of the IGD programme in 2017 in England and Wales. Other activities included in the work programme are: the scrutiny of radioactive waste management in Scotland, Wales and Northern Ireland; the development of the GDF safety case; the organisational development of RWM, storage of radioactive waste, spent fuel and nuclear materials that may be destined for disposal in a GDF and the implications of the UK withdrawal from the Euratom Treaty.

Priorities for the later parts of the programme are less well developed and the activities are therefore only indicative and could change depending upon future developments. Nevertheless in 2018-19 and 2019-20 CoRWM intends to focus on the interactions between RWM and the communities that are engaged in the IGD programme.

Progress on the delivery of the 2016-17 programme can be seen in CoRWM's Annual Report for 2016-17 which will be submitted to Ministers by 30th June 2017.

[Laurence G Williams](#)

Professor Laurence G Williams FEng
Chair Committee on Radioactive Waste Management

INTRODUCTION

1. This is the first CoRWM work programme prepared since the Committee was restructured in 2016. It is a 3-year rolling programme with the proposed programme for 2017-18 covered in detail. The topics that could be addressed in the following two years are less detailed.

2. This document summarises CoRWM's remit, describes the development of the proposed programme and outlines priorities for 2017-18 with the deliverables.

CORWM'S REMIT

3. CoRWM was set up in 2003 as part of Government's Managing Radioactive Waste Safely (MRWS) programme. This Committee is commonly referred to as "CoRWM 1". 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, 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.

4. There was a public consultation in 2007 on a framework for implementing geological disposal. 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. In 2007, the Scottish Government decided not to endorse deep geological disposal and it subsequently developed its own policy for the management of its HAW, which consists of near-surface, near-site storage and disposal.

5. In October 2007, Government changed the focus of CoRWM and gave it 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. This Committee, known as "CoRWM 2", had the primary task of providing independent scrutiny of the UK Government's, the Nuclear Decommissioning Authority's and Radioactive Waste Management Limited'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.

6. In November 2012, Government refreshed the membership of the committee, with a new Chair and six new members. The 2012 Committee (CoRWM 3) had a chair and 12 Members, this was reduced to a Chair and 11 Members in 2014. In

2016 the Committee was again refreshed and, following an open competition, a new Committee (CoRWM 4) was appointed comprising a Chair and 13 Members. The current membership of CoRWM is given in Annex B.

WAYS OF WORKING

7. The work will be carried out mainly by subgroups of the Committee. Each Member will generally serve on three subgroups. Each subgroup will focus on a particular part of the programme. The Chairs of the subgroups are responsible for preparing the work plans to meet the requirements set out in the 2017-18 work programme, and for ensuring the output of the work of the subgroup is reported to the Committee in order for the Committee to formulate its advice. The Committee will formulate its advice in plenary session and hence 6 plenary meetings that will be open to the public have been planned. A further 6 closed plenary meetings are planned to enable the Committee to take evidence and have discussions with officials. The membership and focus of these subgroups is given in Annex B. The outputs from the Committee's work will be in a variety of forms: "Advice Notes" to BEIS, Scottish Government, Welsh Government and where appropriate the Northern Ireland Executive in response to requests for advice; Advice Notes to Ministers on issues that the Committee believes are important: CoRWM's responses to the Government's Consultations; notes of meetings for the record and the formal Committee Annual report.

CoRWM's FUNDING and INDICATIVE TIME ALLOCATION

8. The Committee believes that 2017/18 will be a busy year. CoRWM will be scrutinising and providing advice on the English, Welsh and Northern Ireland Consultations on Communities, the readiness of RWM and BEIS to undertake the launch of the IGD policy, and the safety case development for a GDF in the 3 UK geological settings following the publication of the National Geological Screening information. It will also undertake a review of the implications of the withdrawal from the Euratom Treaty and provide advice to the UK Government on radioactive waste management post exit from the EU. The Committee has been allocated a budget of £275k. This will enable the Committee to deliver this work programme. However, this sum will not allow any contingency to cover unexpected requests; recruitment costs or the planned Committee visit to the Finnish GDF.

9. In 2018-19, CoRWM expects to scrutinise and provide advice on the engagement of RWM with a number of interested parties; continue to scrutinise RWM's DGF design and safety case development and the Regulatory Framework for the licensing and environmental permitting of a GDF in England and Wales. CoRWM also expects to scrutinise and provide advice to the Scottish Government on the implementation of the near surface disposal strategy in Scotland. Finally CoRWM may be expected to undertake further work in relation to Euratom. To undertake these

activities CoRWM believes its budget in 2018-19 will need to be of the order of £322k which includes recruitment of up to 6 new members and the visit to Finland.

10. In 2019-20 CoRWM will scrutinise and provide advice to Government on the RWM siting engagement process, the site selection process and RWM’s community engagement activities, the effectiveness of the access to independent expert advice process. CoRWM will also provide scrutiny of RWM’s organisational development as it transitions from its current research based focus to that of a major project delivery organization. To deliver this programme, the Committee believes it will require a budget in the region of £300k as there will be no recruitment in this year.

11. The following table gives the background to the above budget estimates.

Year	2017/18	2018/19	2019/20
Fees + T&S	£275k	£282k	£285k
International		£20k	£20k
Recruitment		£20k	-
Total	£275k	£322k	£305k

Table 1 CoRWM Budget Estimates for Next 3 Years

12. The allocation of time to Committee Members in 2017-18 is given below. The Chair may if required work up to 78 days and individual Members up to 52. Each Committee Member will sit on three subgroups with a nominal 6 days per subgroup.

Overall Indicative Time Allocations (days)

Chair	65
Deputy Chair	48
Subgroup Chairs	43
Members	40

Specific Time Allocations (days)

Plenary meetings - all	18
Management - Chair	47
Management - Deputy Chair	5
Management - subgroup Chairs	3
Members subgroup work (3x6)	18
Members (annual report)	4

CONSULTATION

13. The Committee consulted the Civil Nuclear and Resilience Directorate in BEIS, the Scottish Government, the Welsh Government, the Northern Ireland Executive, the Nuclear Decommissioning Authority (NDA), Radioactive Waste

Management Limited (RWM), the Office for Nuclear Regulation (ONR), the Environment Agency (EA), Natural Resources Wales (NRW), Northern Ireland Environment Agency (NIEA) and the Scottish Environment Protection Agency (SEPA). The proposed 2017-20 work programme reflects the comments that were received.

ALLOCATION OF CORWM'S RESOURCES FOR 2017-18

14. CoRWM's proposed activities are set out below.

- Task 1: Scrutiny and provision of advice to BEIS and RWM on activities related to the Implementing Geological Disposal (IGD) workstream on working with communities and communications.
- Task 2: Scrutiny and provision of advice to BEIS and RWM on activities relating to the IGD workstream on National Geological Screening.
- Task 3: Scrutiny and provision of advice to BEIS and RWM on activities relating to the development of a GDF safety case; the role played by geology. CoRWM will also investigate the timescale for and cost of site characterisation.
- Task 4: Scrutiny and provision of advice to BEIS and RWM on activities related to the IGD workstream on planning and the NPS.
- Task 5: Scrutiny and provision of advice to BEIS and RWM on activities related to the IGD workstream on the licensing and regulation of a GDF.
- Task 6: Scrutiny and provision of advice to BEIS, other CoRWM Sponsors and RWM on RWM's organisational development.
- Task 7: Scrutiny and provision of advice on RWM's Letter of Compliance Process.
- Task 8: Scrutiny and provision of advice to the Scottish Government on the management of radioactive waste in Scotland.
- Task 9: Scrutiny and provision of advice to the Welsh Government on the management of radioactive waste in Wales, including the possibility of a review of the radioactive waste infrastructure in Wales.
- Task 10: Scrutiny and provision of advice to BEIS, and NDA and the storage of radioactive waste, spent fuel and nuclear materials that may be destined for disposal in a GDF.

Task 11 Review of the radioactive waste management implications of the UK withdrawal from the Euratom Treaty and provide advice to the UK Government, the Scottish Government, the Welsh Government and the Northern Ireland Executive.

Task 12: Formulation of advice at plenary meetings.

Task 13: Work on the annual report and work programme.

Task 14: Management and administration of the Committee.

The Committee does not at this stage see the need to allocate a specific task relating to Northern Ireland, however, should there be a need to respond to requests from the Northern Ireland, the Contingency would be used to fund Members' activities.

Tasks	subgroup	Allocation days
1	1	39
2 & 3	2	39
4 & 5	3	27
6 & 7	4	45
8	5	27
9	6	27
10	7	12
11	8	42
SG Total		258
12	All	252
13	Members	52
14	Chair & Deputy Chair	46
Total		608

Table 2 Indicative Time Allocations for 2017-18

ALLOCATION OF CORWM'S RESOURCES FOR 2018-19

15. CoRWM proposes to allocate its resources as follows:

Task 1: Scrutiny and provision of advice to BEIS and RWM on activities related to community engagement and communications.

Task 2: Scrutiny and provision of advice to BEIS and RWM on activities relating to the development of a GDF safety case.

- Task 3: Scrutiny and provision of advice to BEIS and RWM on GDF siting activities.
- Task 4: Scrutiny and provision of advice to BEIS and RWM on activities related to GDF planning and regulation.
- Task 5: Scrutiny and provision of advice to BEIS, other CoRWM Sponsors and RWM on RWM's organisational development as it transitions to a GDF delivery organisation.
- Task 6: Scrutiny and provision of advice to the Scottish Government on the management of radioactive waste in Scotland, including the implementation of the near surface – near site disposal strategy.
- Task 7: Scrutiny and provision of advice to the Welsh Government on the management of radioactive waste in Wales.
- Task 8: Scrutiny and provision of advice to BEIS and NDA on the storage of radioactive waste, spent fuel and nuclear materials that may be destined for disposal in a GDF.
- Task 9: CoRWM outreach activities including engagement with Communities that are active in the GDF siting process, and engagement with international organisations to benchmark UK progress with the management of HAWs.
- Task 10: Formulation of advice at plenary meetings.
- Task 11: Work on the annual report and work programme.
- Task 12: Management and administration of the Committee.

ALLOCATION OF CORWM'S RESOURCES FOR 2019-20

16. CoRWM proposes to allocate its resources as follows:

- Task 1: Scrutiny and provision of advice to BEIS and RWM on activities related to community engagement and communications.
- Task 2: Scrutiny and provision of advice to BEIS and RWM on activities relating to the development of a GDF safety case.
- Task 3: Scrutiny and provision of advice to BEIS and RWM on GDF siting activities, including development of the Site Evaluation Framework (SEF) and application of the SEF in the down-selection of potential sites.
- Task 4: Scrutiny and provision of advice to BEIS and RWM on the timescale for and cost of carrying out site selection in each of the 3 rock types.
- Task 5: Scrutiny and provision of advice to BEIS and RWM on activities related to GDF planning and regulation in the siting process.

- Task 6: Scrutiny and provision of advice to BEIS, other CoRWM Sponsors and RWM on RWM's organisational development as it transitions to a GDF delivery organisation.
- Task 7: Scrutiny and provision of advice to the Scottish Government on the management of radioactive waste in Scotland, including the implementation of the near surface – near site disposal strategy.
- Task 8: Scrutiny and provision of advice to the Welsh Government on the management of radioactive waste in Wales.
- Task 9: Scrutiny and provision of advice to BEIS and NDA on the storage of radioactive waste, spent fuel and nuclear materials that may be destined for disposal in a GDF.
- Task 10: CoRWM outreach activities including engagement with Communities that are active in the GDF siting process, and engagement with international organisations to benchmark UK progress with the management of HAWs.
- Task 11: Formulation of advice at plenary meetings.
- Task 12: Work on the annual report and work programme.
- Task 13: Management and administration of the Committee.

OUTLINE PROGRAMME FOR 2017-20

TASKS AND DELIVERABLES FOR 2017-18

17. Table 3 provides a description of each proposed task for 2017-18, together with the output and date due, the task priority and the planned resource allocation.

18. CoRWM will produce a number of deliverables in the form of informal reports for 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 of its advice. The dates given in table 3 below are indicative as the actual dates will depend upon the progress made by RWM, BEIS and the Welsh Government and the availability of information. CoRWM will also produce an Annual Report for 2016-17 for publication in June 2017.

Task	Source	Task Description	Task Output	Date	SG	P	AT
1	C+B	To scrutinise and provide advice to BEIS and RWM on activities related to working with communities and communications	a) CoRWM Response to BEIS Consultation. b) Advice (Note) to BEIS on its Communities	06/17 09/17	1		39

			<p>Consultation</p> <p>c) Advice (Note) to BEIS on RWM'S implementation of BEIS policy for providing communities with access to independent support / access to experts to set up and run community partnerships.</p> <p>d) Informal advice to WG on draft Consultation.</p> <p>e) CoRWM Response to WG consultation.</p> <p>f) Advice (Note) to BEIS and RWM on RWM's communication strategy, plans and implementation of those plans in the run-up to the GDF siting launch.</p> <p>g) Advice (Note) to BEIS and RWM on RWM's stakeholder engagement planning</p> <p>h) Advice (Note) to BEIS and Welsh Government on pre-launch and post-launch communication strategy.</p>	<p>07/17</p> <p>04/17</p> <p>06/17</p> <p>09/17</p> <p>09/17</p> <p>09/17</p>			
2 & 3	C+B	2 To scrutinise and provide advice to BEIS and RWM on activities relating to the IGD workstream on National Geological Screening	a) Advice (Note) to BEIS and RWM on the use of RWM's National Geological Screening outputs in the run up to the launch of the GDF	06/17	2		39

		3 To scrutinise and provide advice to BEIS and RWM on activities relating to the development of a GDF safety case and the role played by geology	<p>siting process.</p> <p>b) Advice (Note) to BEIS, WG and RWM on RWM's development and use of the public facing documents that will describe the indicative designs and associated safety characteristics for the three rock types.</p> <p>c) Advice (Note) to BEIS, WG and RWM on the development of the GDF prospectus.</p> <p>d) Advice (Note) to RWM on its safety case related activities in the run-up to the launch of the GDF siting process.</p> <p>e) Advice (Note) to BEIS on the development of RWM's Site Selection Framework.</p> <p>f) Advice (Note) to BEIS on the development of RWM's GDF siting process in the run-up to the launch.</p> <p>g) Advice (Note) to BEIS on RWM's preparations for surface based investigations.</p> <p>h) Review of the timescale for and cost of site characterisation (CoRWM Paper)</p>	06/17			
				09/17			
				11/17			
				03/18			
				03/18			
				03/18			
				03/18			
4&5	C+B	4 To scrutinise and provide advice to BEIS and RWM on	a) CoRWM Response to NPS Consultation.	06/17	3		27

		<p>activities related to the planning and regulation of a GDF</p> <p>5 Scrutiny and provision of advice to BEIS and RWM on activities related to the IGD workstream on the licensing and regulation of a GDF.</p>	<p>b) Advice (Note) to BEIS on response to Consultation & Response to Parliamentary Recommendations.</p> <p>c) Advice (Note) to BEIS and ONR on prescribing the disposal of radioactive waste as a licensable activity under the Nuclear Installations Act.</p> <p>d) Advice (Note) to BEIS on the scrutiny of the development of the GDF regulatory framework both during the run-up to the launch of the GDF siting process and during the initial engagement between RWM and interested communities.</p>	<p>12/17</p> <p>05/17</p> <p>09/17</p>			
6 & 7	C + B	<p>6 To scrutinise and provide advice to BEIS, other CoRWM Sponsors and RWM on RWM's organisational development.</p> <p>7 To scrutinise and provide advice to BEIS, RWM and other sponsors on RWM's letter of Compliance process</p>	<p>a) Advice (Note) to BEIS and RWM on RWM's readiness review activities and the key deliverables planned prior to the launch of the GDF siting process.</p> <p>b) Advice (Report) to BEIS and RWM on the development of RWM's reorganisation and business model in the run-up to the launch of the GDF siting process.</p> <p>c) Advice (Note) to BEIS and RWM on the organisational development of RWM as it transitions from its current research and development focus into a GDF delivery</p>	<p>07/17</p> <p>09/17</p> <p>03/18</p>	4		45

			<p>organisation.</p> <p>d) Advice (Note) to SG and RWM on RWM's organisational development in order to deliver the demands of the Scottish Government's near surface disposal strategy.</p> <p>e) Advice (Note) to BEIS, WG and SG RWM's on RWM's "Letter of Compliance" process.</p>	12/17			
8	C+S	To scrutinise and provide advice to the Scottish Government on the management of radioactive waste in Scotland	<p>Two Meetings with Scottish Government Officials.</p> <p>Advice (Note) to SG on early actions arising from Scottish Government's Higher Activity Waste Implementation Strategy".</p> <p>Meeting with CSA for Scotland to discuss provision of advice.</p>	03/18	5		27
9	C+W	To scrutinise and provide advice to the Welsh Government on the management of radioactive waste in Wales	<p>a) Advice (Note) WG on its activities in relation to the delivery of the IGD policy in Wales.</p> <p>b) CoRWM Response to WG Consultation.</p> <p>c) With SG1 provide advice (Note) to the WG on its consultation on working with communities in Wales.</p>	03/18	6		27
10	C	To scrutinise and	a) Advice (Note) to	03/18	7		12

		provide advice to BEIS, and NDA and the storage of radioactive waste, spent fuel and nuclear materials that may be destined for disposal in a GDF	BEIS on the storage of higher activity radioactive waste, spent fuel and nuclear materials in England. b) Advice (Note) to BEIS on spent fuel and HAW storage in UK.	03/18			
11	B, S & W	Review of the radioactive waste management implications of the UK withdrawal from the Euratom Treaty and provide advice to the UK Government, the Scottish Government, the Welsh Government and the Northern Ireland Executive.	a) Advice (Note) on where the Euratom Treaty impacts on radioactive waste management in the UK b) Advice (Note) on the Impact of withdrawal from Euratom c) Advice (Note) to BEIS, SG, WG, and NI Exec on changes needed to current UK arrangements for managing radioactive waste	05/17 06/17 12/17	8		42

Table 3. Work Programme for 2017-18

Key

Source C - CoRWM, B – BEIS, S – Scottish Gov, W – Welsh Gov
 SG Sub – group responsible for delivery
 P Priority Red – high,
 Yellow – medium
 Green - low
 AT Allocated time to task in days

TASKS AND DELIVERABLES FOR 2018-19

19. The tasks for 2018-2019 (Table 4) are based upon current understanding of the radioactive waste issues that are likely to require scrutiny and advice. These are estimates and will be reviewed and may change in future year's work programmes. Time allocations assume CoRWM's budget remains at £250,000.

Task	Source	Task Description	Task Output	Date	SG	P	AT
1	C+B	To provide advice to BEIS and RWM on community					27

		engagement activities					
2	C+B	To scrutinise and provide advice BEIS and RWM on activities relating to the development of a GDF safety case.					27
3	C	To scrutinise and provide advice to BEIS and RWM on RWM's siting activities					27
4	C+B	To scrutinise and provide advice to BEIS and RWM on activities related to the planning and regulation of a GDF					15
5	C	To scrutinise and provide advice to BEIS, other CoRWM Sponsors and RWM on RWM's organisational development as it transitions to a GDF delivery organisation.					15
6	C+S	To scrutinise and provide advice to the Scottish Government on the management of radioactive waste in Scotland					15
7	C+W	To scrutinise and provide advice to the Welsh Government on the management of radioactive waste in Wales.					15
8	C	To scrutinise and provide advice to BEIS, and NDA and the storage of radioactive waste, spent fuel and nuclear materials that may be destined for disposal in a GDF					15
9	C	CoRWM outreach					18

Table 4. Outline Work Programme for 2018-19

Key

Source C - CoRWM, B – BEIS, S – Scottish Gov, W – Welsh Gov
 SG Sub – group responsible for delivery
 P Priority Red – high
 Yellow – medium
 Green - low

AT Allocated time to task in days

TASKS AND DELIVERABLES FOR 2019-20

20. The tasks for 2019-2020 (Table 5) are based upon current understanding of the radioactive waste issues that are likely to require scrutiny and advice. These are estimates and will be reviewed and may change in future year's work programmes. Time allocations assume CoRWM's budget remains at £250,000.

Task	Source	Task Description	Task Output	Date	SG	P	AT
1	C+B	To provide advice to BEIS and RWM on community engagement activities					27
2	C+B	To scrutinise and provide advice BEIS and RWM on activities relating to the development of a GDF safety case.					27
3	C+B	To scrutinise and provide advice to BEIS and RWM on RWM's siting activities, including down-selection					27
4	C+B	To scrutinise and provide advice to BEIS and RWM on activities related to GDF planning and regulation					15
5	C+B	To scrutinise and provide advice to BEIS, other CoRWM Sponsors and RWM on RWM's organisational development as it transitions to a GDF delivery organisation.					15
6	C+S	To scrutinise and provide of advice to the Scottish Government on the management of radioactive waste in Scotland, including the implementation of the near surface – near site disposal strategy					15
7	C+W	To scrutinise and provide advice to the Welsh Government on the management of radioactive waste in					15

		Wales.					
8	C	To scrutinise and provide advice to BEIS, and NDA and the storage of radioactive waste, spent fuel and nuclear materials that may be destined for disposal in a GDF.					15
9	C	CoRWM outreach					18

Table 5. Outline Work Programme for 2019-20

Key



Source C - CoRWM, B – BEIS, S – Scottish Gov, W – Welsh Gov

SG Sub – group responsible for delivery

P Priority Red – high
Yellow – medium
Green - low

AT Allocated time to task in days

ANNEX A CoRWM MEMBERS

	<p>Laurence Williams FREng (Chair) - is an Emeritus Professor of Nuclear Safety and Regulation. He is a Senior Research Fellow at Imperial College London; Visiting Senior Fellow at the National Nuclear Laboratory; Chair of the Defence Nuclear Safety Committee; Member of the Nuclear Innovation and Research Board; Member of the High Scientific Council of the European Nuclear Society; Chair of the Nuclear Institute's Editorial Committee for Nuclear Future; 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; Her Majesty's Chief Inspector of Nuclear Installations; Director for Nuclear Safety and a member of the Board of the Health and Safety Executive; Chairman of the IAEA Commission on Safety Standards, where 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.</p> <p>Current term of office ends: October 2017</p>
	<p>Gregg Butler is Co-Director of Integrated Decision Management Ltd, Professor of Science in Sustainable Development at the University of Manchester, and Head of Strategic Assessment for the Dalton Nuclear Institute. He has a BSc and PhD in metallurgy from Swansea University, and 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 to 2004. Current research interests include Generic Feasibility Assessment of nuclear systems, plutonium use, the sustainability of nuclear power and its regulation, and effectiveness of decision making methodologies in bringing robust conclusions to be reached taking account of economics, regulatory outcomes, and stakeholder views and values.</p> <p>Current term of office ends: November 2018</p>



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: **November 2018**





Professor Melissa A. Denecke is Scientific Director of the Dalton Nuclear Institute at The University of Manchester and holds a Chair in the University's School of Chemistry. She has over two decades experience in nuclear fuel cycle R&D, notably in disposal of radioactive waste and legacy clean-up. She is a world expert on studies of radioactive materials using synchrotron radiation. Melissa serves on a number of scientific advisory boards, including the DESY Photon Science Committee and the Institut de Chimie Séparative de Marcoule, and committees propagating gender balance, such as Women in Nuclear Global Executive Board representing Europe.

Current term of office ends: **November 2020**



Campbell Gemmill (Deputy Chair) is Professor of Environment Research, Policy, Regulation and Governance in the University of Glasgow and a Partner in Canopus Scotland Consulting, working largely on environment regulation issues. He is an Adjunct Professor in Environment Contamination Assessment and Remediation in the Future Industries Institute at UniSA, Adelaide and collaborates with the CRC CARE at University of Newcastle, NSW.

He is former CEO of the South Australian EPA (2012-14) and was CEO of SEPA 2003-12, with responsibility for environmental regulation of the civil nuclear programme in Scotland and relevant wastes from the defence and research sites and was closely involved in assessing and tackling the Dounreay particles legacy and related issues in other locations in Scotland. He was a member and Chair of the Dounreay Particles Advisory Group 2001-11. Campbell also chaired the

	<p>South Australian State Radiation Protection Committee and was during 2016 an Independent Advisor to Scottish Government on Underground Coal Gasification. Campbell is also a qualified mediator. Current term of office ends: November 2020</p>
	<p>Andy Hall has recently retired from the position of Chief Nuclear Inspector in the Office for Nuclear Regulation. His career with the regulatory body spanned technical assessment, site inspection and nuclear policy roles, and over the years he held various senior management positions including Head of the Nuclear Power Reactors Division, Head of the Nuclear Fuel Cycle & Decommissioning Division, and Head of the Health & Safety Executive's Nuclear and Hazardous Installations Policy Division. His expertise was recognised internationally through his appointment as Chair of the European Nuclear Safety Regulators Group (ENSREG), which advises the European Commission, and his election to Vice-President for the 4th Review Meeting of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management. Andy's early career was spent in academia undertaking research in astrophysics, during which he was elected a postdoctoral Research Fellow and member of the Governing Body of St. Edmund Hall, Oxford. He is a Fellow of the Institute of Physics.</p> <p>Current term of office ends: November 2020</p>
	<p>Joanne Hill is an Engineer with over 20 years' experience in the nuclear industry holding senior roles in academic, regulatory and commercial environments. She is a specialist in radioactive waste management, with experience in the civil nuclear energy programme covering operational and decommissioning sites, new build and geological disposal facilities. Joanne is a Fellow of the Institute of Materials, Minerals and Mining (FIMMM) and holds a Ph.D in Radioactive Waste Management. After gaining her Ph.D she worked as a Senior Research Fellow in the Immobilisation Science Laboratory at the University of Sheffield, before moving to Nirex (now Radioactive Waste Management Ltd.) as the Wasteform Research Manager focusing on the provision of underpinning evidence to support the Geological Disposal Facility (GDF) concept. Joanne moved to the private sector in 2006 and has worked in a number of consultancy roles covering a broad range of the civil nuclear sector. She is currently a Technical Director at Hydrock NMCL. Throughout her career, Joanne has developed a wide and in depth knowledge and experience in the field of Radioactive Waste Management and Disposal in addition to the personal qualities necessary to build and maintain strong business relationships.</p> <p>Current term of office ends: November 2020</p>



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: **November 2018**



Simon Redfern is Professor of Mineral Physics at the University of Cambridge. His research focuses on the behaviour of minerals and aqueous fluids at high temperatures and pressures. He has previously led large research projects investigating the fate of radionuclides in minerals and in the environment, within the context of searching for methods for high level radioactive waste disposal. He studied Mineral Sciences at the University of Cambridge, obtaining a BA and PhD. Since then he has published more than 200 research papers in the peer reviewed scientific literature and mentored dozens of postgraduate students to their own PhDs. He currently serves as a member of the Science Board of the Natural Environment Research Council and formerly filled a similar role on the Science and Technologies Facilities Council, with particular oversight of national neutron research facilities for environmental science.

Current term of office ends: **November 2020**



Richard Shaw is an exploration and mining geologist (C. Geol; Eur. Geol) with over 25 years of experience in the deep geological disposal of radioactive waste. He retired from the British Geological Survey in October 2016. Previous experience includes 7 years of exploration, environmental impact assessment and mining feasibility for a uranium deposit in Africa. He was Team Leader of the BGS's Radioactive Waste Team until April 2016 with responsibility for all work, both internally funded and commissioned that the BGS undertook in the radioactive waste disposal sector. He has considerable experience of the Nirex site investigation programmes and relevant experience of other European programmes, in particular those of France and Sweden, and has undertaken work for Andra, Ondraf-Niras, SKB, Covra, and JAEA as well as RWM. He was Co-ordinator (2009-2013) of

	<p>the EC FP7 Euratom FORGE (Fate of Repository Gases) Project. This pan-European (24 partners in 12 countries) was looking at the generation, migration and fate of gases in a radwaste repository context.</p> <p>Current term of office ends: November 2020</p>
	<p>Stephen Tromans QC is a barrister practising at 39 Essex Chambers, London. He was Joint Head of Chambers from 2011-2015. He was worked as an academic at Cambridge (1981-1987) and as a solicitor (1987-1999). He became a barrister in 1999 and was appointed Queen’s Counsel in 2009. His area of specialism is environmental, energy natural resources and planning law. He has extensive experience of advising companies and government and representing them in court and at public inquiries. He has a particular focus on nuclear law and is the author of the leading text, “Nuclear Law”. He is also the author of leading works on environmental impact assessment and contaminated land and has spoken and written widely on these topics. He has been a member of the UK Environmental Law Association (UKELA) since its formation in 1986, and has been Chair and a Council member of UKELA. He is also a member of the International Nuclear Law Association (INLA) and a director of INLA UK. From 1994-2002 he was a Council Member of English Nature, the predecessor of Natural England and from 2010-2014 was the Chair of the Environmental Law Foundation (ELF).</p> <p>Current term of office ends: November 2020</p>
	<p>Andrew Walters is an Environmental Lawyer and Chartered Town Planner. He has worked on an extensive range of project and policy work in the public and private sectors with a career stretching across 20 years in the UK and overseas. He has developed a reputation for delivery of complex environmental consents on a diverse range of infrastructure projects from the construction of deep water ports and harbours, nationally significant rail, highways, bridges, energy, waste and commercial development projects. Andrew’s regularly leads consenting campaigns bringing a deep understanding of the challenges of consenting development projects in multiple legislative environments, often with complex engineering considerations in highly sensitive sites of significant environmental importance.</p> <p>Current term of office ends November 2020</p>



Julia West is Principal of West Consult having spent most of her career at the British Geological Survey (BGS). She is also an Honorary Research Associate at BGS and Honorary Visiting Professor at the University of Manchester (School of Earth, Atmospheric and Environmental Sciences). She is a Chartered Biologist and Fellow of the Royal Society of Biology. Julia has a PhD in geomicrobiology with over 35 years of practical experience in the multi-disciplinary science underpinning radioactive waste management. She has provided expertise and advice to national programmes in the UK, Europe, Japan and North America, often working in international collaborations. Her work has included site characterisation and performance assessment studies, development of repository concepts, natural analogue studies as well as her seminal geomicrobiology research. Julia also has long experience in advisory groups and committees in the UK and overseas. She has a great interest in the communication of geoscience, lecturing and writing on this topic, particularly in the context of radioactive waste disposal. Julia is the author/co-author of over 200 articles, scientific papers, book chapters and commercial technical reports.

Current term of office ends: **November 2020**



Janet Wilson is the owner of Touchstone Nuclear Ltd providing strategic advice and support to the nuclear industry.

She has spent the majority of her career to-date working in the nuclear sector (public and private both civil and defence) at senior and executive level as a policy developer, strategic thinker, regulator and most importantly “doer” with an expert interest in areas of organisational development, nuclear safety, security, environment, non-proliferation and policing (armed response).

She is a Chartered Engineer, a Fellow of the Institution of Mechanical Engineers, a Liveryman of the Worshipful Company of Engineers, a Member of the institute of Directors and has a PhD associated with nuclear reactor safety.

Current term of office ends: **November 2018**

ANNEX B SUBGROUP FOCUS AND MEMBERSHIP

Subgroup 1: Working with Communities and Communications (6 Members)

Primary tasks

1. To scrutinise the activities of BEIS, the Welsh Government and RWM in relation “communities” in the context of the UK and WG policy “Implementing Geological Disposal”, how communities are represented and community benefits.
2. Scrutinise RWM’s implementation of BEIS and WG policy on working with communities.
3. To scrutinise RWM’s communication strategy.
4. To report to the main CoRWM Committee to enable the development of advice to Ministers, NDA and RWM.

Membership

Dr Janet Wilson (Chair)
Mr Paul Davis
Professor Melissa Denecke
Dr Joanne Hill
Professor Simon Redfern
Professor Julia West

Subgroup 2: GDF Safety Case and Geology (6 Members)

Primary tasks

1. To scrutinise the RWM’ s National Geological Screening activities.
2. To scrutinise RWM’s development and use of the public facing documents on the indicative GDF designs and associated safety characteristics for the three rock types.
3. To scrutinise RWM’s siting activities
4. To scrutinise RWM’s development of the GDF safety case.
5. To scrutinise RWM’s “Letter of Compliance” process.
6. To review the timescale for and cost of site characterisation.
7. To report to the main CoRWM Committee to enable the development of advice to Ministers, NDA and RWM.

Membership

Mr Paul Davis (Chair)
Dr Andy Hall
Mr Stephen Newson
Professor Simon Redfern
Dr Richard Shaw
Professor Julia West

Subgroup 3: Planning and Regulation (4 Members)

Primary Tasks

1. To scrutinise the work being done by BEIS on the development of the Draft NPS for geological disposal.

2. To scrutinise ONR and BEIS activities associated with prescribing the disposal of radioactive waste as a licensable activity under the `Nuclear Installations Act 1965 as amended.
3. To scrutinise the development of the GDF regulatory framework both during the run-up to the launch of the GDF siting process and during the initial engagement between RWM and interested communities.
4. To report to the main CoRWM Committee to enable the development of advice to Ministers, NDA and RWM.

Membership

Dr Andy Hall (Chair)
Mr Stephen Tromans QC
Mr Andrew Walters
Professor Julia West

Subgroup 4: Organisational Development (7 Members)

Primary Tasks

1. To scrutinise the RWM / BEIS readiness review activities.
2. To scrutinise the organisational development of RWM as it transitions from its current research and development focus into a GDF delivery organisation.
3. To review the letter of compliance process especially in relation to its application to Scottish waste.
4. To report to the main CoRWM Committee to enable the development of advice to Ministers, NDA and RWM.

Membership

Mr Stephen Newson (Chair)
Professor Campbell Gemmell
Dr Joanne Hill
Mr Stephen Tromans QC
Mr Paul Davis
Dr Andy Hall
Dr Richard Shaw

Subgroup 5: Scottish Government Activities (4 Members)

Primary Tasks

1. To scrutinise the Scottish Government's activities in relation to the management of higher activity radioactive waste (HAW) in Scotland.
2. To report to the main CoRWM Committee to enable the development of advice to Ministers, NDA and RWM.

Membership

Professor Campbell Gemmell (Chair)
Mr Andrew Walters
Dr Janet Wilson
Mr Stephen Newson

Subgroup 6: Welsh Government Activities (4 Members)

Primary Tasks

1. To scrutinise the Welsh Government's activities in relation to the delivery of the IGD policy in Wales.
2. Support SG1 on the Welsh Government's activities on "Communities" and communication.
3. To report to the main CoRWM Committee to enable the development of advice to Ministers, NDA and RWM.

Membership

Professor Gregg Butler
Professor Melissa Denecke
Dr Richard Shaw
Joanne Hill

Subgroup 7: Storage of Radioactive Waste, Spent Fuel and Nuclear Materials (2 Members)

Primary Tasks

1. Keep a watching brief on the storage of radioactive waste, spent fuel and nuclear materials. The subgroup will focus on engagement with the NDA, but will also keep an eye on spent fuel and HAW storage in Wales and Scotland.

Membership

Professor Gregg Butler
Professor Simon Redfern

Subgroup 8: Euratom (6 Members)

Primary Tasks

1. Review of the radioactive waste management implications of the UK withdrawal from the Euratom Treaty and provide advice to the UK Government, the Scottish Government, the Welsh Government and the Northern Ireland Executive.
2. Provide advice to BEIS, SG, WG, and NI Exec on changes needed to current UK arrangements for managing radioactive waste

Membership

Professor Laurence Williams (Chair)
Professor Campbell Gemmell
Professor Gregg Butler
Dr Janet Wilson
Professor Melissa Denecke
Mr Andrew Walters
Mr Stephen Tromans QC

These subgroups will exist for 2017-18 only and will be replaced with new subgroups for the subsequent years covered by this programme.

Sub-group	Topic	Chair	Members	days
SG1	Working with Communities and Communication	Janet Wilson	Simon Redfern Julia West Joanne Hill Paul Davis Melissa Denecke	39
SG2	GDF Safety Case and Geology	Paul Davis	Richard Shaw, Simon Redfern, Andy Hall, Stephen Newson, Julia West	39
SG3	Planning and Regulation	Andy Hall	Stephen Tromans QC, Andrew Walters Julia West	27
SG4	Organisational Development	Stephen Newson	Stephen Tromans QC Campbell Gemmell Paul Davis Joanne Hill Andy Hall Richard Shaw	45
SG5	Scottish Government Activities	Campbell Gemmell	Andrew Walters Janet Wilson Stephen Newson	27
SG6	Welsh Government Activities	Gregg Butler	Melissa Denecke Richard Shaw Joanne Hill	27
SG7	Storage of Radioactive Waste, Spent Fuel and Nuclear Materials	Gregg Butler	Simon Redfern	12
SG8	Euratom	Laurence Williams	Campbell Gemmell Gregg Butler Janet Wilson Melissa Denecke Stephen Tromans QC Andrew Walters	42

2017-18 Subgroup Membership and Indicative Time Allocations

Mem	Subgroup Membership and Time Allocations (days)											Total
	1	2	3	4	5	6	7	8	P	M	A/R+ WP	
GB*						9	6	6	18		4	43
PD*	6	9		6					18		4	43
MD	6					6		6	18		4	40
CG**				6	9			6	18	5	4	48
AH*		6	9	6					18		4	43
JH	6			6		6			18		4	40
SN*		6		9	6				18		4	43
SR	6	6					6		18		4	40
RS		6		6		6			18		4	40
ST			6	6				6	18		4	40
AW			6		6			6	18		4	40
JW	6	6	6						18		4	40
JEW*	9				6			6	18		4	43
Chair								6	18	41		65
Total	39	39	27	45	27	27	12	42	252	46	52	608

2017-18 Member Indicative Time Allocations

* Subgroup Chairs ** Deputy Chair