

CoRWM Open Plenary – 21st March 2023

Details:

Venue: Teams Video Conference / 1 Victoria Street

Time: 10.00am – 12.00pm

CoRWM Nigel Thrift

Chair:

Members Attending: Penny Harvey, Derek Lacey, Mark Kirkbride, Ray Kemp, Clare Bond, Stephen Tromans, Claire Corkhill, Catherine MacKenzie and Simon Webb

Guest Stefan Mayer (IAEA)

Speaker:

CoRWM Secretariat: Anastasia Aidoo (DESNZ) and Shubhnit Seera (DESNZ)

Attendees: Eileen McKeever (NWS), Rachel E Moore (Mott MacDonald), Philip Matthews (NuLeaf), Raj Jassal, Pete Roche, Catherine Draper (NuLeaf), Flo Sawyer (UCL), James Gibbs (Welsh Government), Diane Hamilton (Scottish Government), Spencer Cohen (LSE)

Agenda:

1. Meeting open, welcome and introductory comments (Chair)

Chair's recent meetings

2. Declaration of Interests

3. Approval of Minutes from the [November Open Plenary](#)

4. Update on Subgroup Activities and Plans

i) *Key topics:*

SG 1 Working with Communities (Penny Harvey)

SG 2 GDF Geology and Delivery (Mark Kirkbride)

SG 3 Planning and Regulation (Ray Kemp)

SG 4 Scottish Government Activities (Clare Bond)

SG 5 Welsh Government Activities (Stephen Tromans)

SG 6 Storage of Waste, Spent Fuel, and Materials (Derek Lacey)

5. Presentation

Speaker: Stefan Mayer (International Atomic Energy Agency) on “Global Status and Guidance towards implementing Deep Geologic Disposal”

6. Questions from the public

7. Any other business

8. Next Meeting: 16th May 2023, London

Minutes:

Agenda item 1., Meeting open, welcome and introductory comments

Chair's recent meetings

1. Nigel Thrift (NT), the Chair of CoRWM, thanked and welcomed attendees to this meeting and provided a series of updates.
2. CoRWM were invited to present to the then-BEIS Scientific Experts Group, with NT, Penny Harvey (PH), Claire Corkhill (CC) and Derek Lacey (DL) attending, as well as submitting a guide to radioactive waste which will be published on the CoRWM website.
3. The CoRWM website will also be renovated to be more accessible in the coming months.
4. CoRWM and NWS held a joint workshop in February. CoRWM will be producing a series of annual reports providing commentary on how the GDF is progressing, with the draft report discussed at the workshop.
5. Professor Barry Lennox has submitted a report on the use of robotics in the GDF on behalf of CoRWM and will be published as a position paper.
6. Stephen Tromans (ST) has become Chair of Subgroup 5 (Welsh Government Activities).
7. CoRWM will be working on a response to the recently published consultation on managing radioactive substances and nuclear decommissioning.
8. CoRWM will be having a number of visits this year to Bure, Dounreay, Boulby, Trawsfynydd, and likely more.

Agenda item 2., Declaration of Interests

9. SW declared he is working as a programme manager for The Nichols Group on the STEP project.

Agenda item 3., Approval of Minutes from the [November Open Plenary](#)

10. Approved.

Agenda item 4., Update on Subgroup Activities and Plans

i) *Key topics:*

- a) *SG 1 Working with Communities (Penny Harvey)*

11. PH offered the following update:
12. **Social Sciences:** Since the November plenary SG1 has focused on producing a document on the potential contribution of social sciences to the GDF process. The aim was to offer a fairly comprehensive overview that identified the many ways in which the social sciences could contribute to the GDF process by addressing key areas such as Building Trust, Creating Partnerships and Mutual Understanding, Generating Interest and Engagement in the Visioning Process, and Addressing Uncertainties. We outlined a range of approaches and methods available, and the possible connections to specific areas of the current NWS work programme. Discussion points included: the fundamental importance of the Community Partnerships to the GDF programme; the need to build awareness of resources at different scales and different times, and equally to address the practical difficulties of mobilising resources. We sought clarification on the aim to make the “down selection” of two communities by 2026, and the process by which that would be undertaken; and we noted the potential for confusion between the necessary DCO consultation process and the Test of Public Support (ToPS).

We argued that the programme could benefit from the appointment of a senior social scientist, possibly with experience of working on a comparable infrastructure programme, to help shape a strategic vision that can develop and embed a credible social science based understanding of the wider social issues that are integral to the successful delivery of the GDF. We remain mindful that a willing host community or “the social licence to operate” is as fundamental to the delivery of a GDF as are the formal DCO and associated safety and environmental approvals.

We have agreed with NWS to arrange a workshop (or series of workshops) to discuss these issues in more depth with the siting and engagement and the communications teams in the first instance. We will also have further discussions with key members of the leadership team on how to embed these approaches more generally, and point to comparative examples from other international programmes, and other industries.

13. **Seismic Surveys:** On 9th December 2022, SG1 joined with SG2 to discuss communication of the seismic survey; issues of data and data quality, interpretations of surfaces and structures, and how understanding of the uncertainties of the interpretation are key at this point, and how interpretations of the data will be used to make decisions. We discussed a communications plan for the next 12-18 months.
14. **Community Engagement:** Annabelle Lillycrop (AL) and Sam King (6th March 2023) met with PH to continue discussion of the contribution of the social sciences, and to offer an update on the siting process. AL is focused on working with younger people. The current recruitment to the Allerdale Partnership is looking positive in this regard. She has also secured a budget to hold a National Youth Forum in the coming year.

15. PH visited East Lincolnshire (6th-11th March, 2023), where she spent time with the Community Engagement Team at the Coastal Centre in Mablethorpe and had the opportunity to meet four members of the Theddlethorpe GDF Community Partnership. She also attended five engagement events in East Lincolnshire. These events were held in villages located just outside the current search area (at Aby, Saltfleetby, Manby & Grimodly and Saltfleet), in response to requests by parish councils for greater engagement with NWS Subject Matter Experts (SMEs). The other event was in response to an invitation from the John Spendluffe Tech College, Alford.

In addition to exhibition displays, which included a new model of the elements of the GDF surface facilities, all five events were structured around the screening of short video clips interspersed with Q&A sessions with the SMEs (broadly focused on the engineering programme, the safety case, the geology and the policy/regulatory framework). Seventy-three people attended the five events, and 95% of these stayed for between two and three hours. The film-clip and open-discussion format enabled an informal and intimate setting that allowed conversations to emerge as an engagement between interlocutors rather than a one-way delivery of information. The majority of attendees (over 65%) said that they had become more interested in the GDF process as a result.

16. General communications:

- a) CC gave evidence on behalf of CoRWM to the Parliamentary Science and Technology Committee (12/2/2022)
- b) PH gave an interview to Chemistry Today; and was filmed in conversation with Samia Henni for an exhibit on nuclear waste (Amsterdam, Autumn 2023).

- b) *SG 2 GDF Geology and Delivery (Mark Kirkbride)*

17. SG1 and SG2 met with NWS on December 9th to discuss:

- a) Communicating information from the seismic studies in Cumbria.
- b) Interpretating the data obtained from the seismic studies.
- c) Introduction and overview of Waste Forms and Waste packaging
- d) Site Evaluation Update and Status of the 4 different community partnerships and their geology.
- e) The capability of geological characterisation and a geological model and how to build that capacity.

18. SG2 members attended the CoRWM-NWS visit to Magnox and workshop in Harwell on February 22nd and 23rd.

19. SG2 will be meeting with NWS on April 17th. Agenda to be confirmed but the main focus will be on progress with site evaluation, site characterisation process, seismic data processing and its outputs.

20. SG2 have continued working on the "Underground Verification Project" (UVP) position paper, with a first draft of the paper ready for initial internal reviews due

to be published in 2023. The paper sets out CoRWM's position, such that a UVP or Underground Rock Laboratory (URL) will be required to provide evidence for the design of the GDF, with NWS having no plan for a URL in their development of the GDF.

21. Pete Roche (PR) referred to the current community partnership (CP) websites which had no mention of an onshore facility and questioned if this was still an option. CoRWM stated that an onshore facility is not out of bounds, but that the current communities have an inshore facility as their preference.
22. Raj Jassal (RJ) asked what the current landscape of retrievability looks like. CoRWM stated that retrievability can only be implemented when the facility is operational, with the facility sealed as the last package is emplaced. There is no intention in the UK for the GDF to remain in a suspended state for retrieval.
23. Phillip Matthews (PM) asked if, and CoRWM agreed that, a requirement for a URL would have a significant impact on the timescale of the GDF.
24. SG2 are intending to confirm a date to visit the British Geological Survey to discuss West Coast geology and to be able to inspect relevant core samples.
25. A 3-year plan has been prepared for SG2 activities and focuses on areas such as refreshing CoRWM's position on retrievability.
26. Responses have been prepared with respect to NWS position relating to CoRWM cost paper and inshore reports.

c) SG 3 Planning and Regulation (Ray Kemp)

27. SG3 met with the Marine Maritime Organisation (MMO) on February 9th discussing the process, key issues, and key parties from the MMO perspective in relation to:
 - i) Licensing and permitting for an "Inshore" GDF - including investigation works; and
 - ii) High Active Waste Transport by Sea to a GDF
28. Members were given a very clear overview of the role and responsibilities of the MMO; of marine plans and the need to balance competing demands of different energy sector and other development proposals; and how the MMO will fold its own assessments and consultations under the Development Consent Order (DCO) process. One interesting aspect was the relatively recent experience of the MMO of Judicial Review in relation to the Hinkley Point C decision. The need for evidence of sound procedures and a clear audit trail was emphasised - as was the reassurance subsequently obtained by the MMO in having gone through the Judicial Review (JR) process successfully.
29. SG3 members also visited the Magnox facilities in Harwell on February 22nd and benefitted from
 - a) A presentation of site history and decommissioning
 - b) A visit to the BEP0 hangar (British Experimental Pile 0)
 - c) A visit to the DIDO reactor museum

30. In preparation for the year ahead SG3 members have been in close discussion with NWS to agree priorities for exchange of information and dialogue between SG3 and the NWS legal team. SG3 shared an extensive list of issue areas where further engagement would be of value to both groups.
31. In addition to regular updates, and maintaining an eye on legal and policy issues with potential to affect the overall GDF programme, SG3 and NWS have committed to a series of meetings throughout 2023, on a number of topics of interest including:
 - a) The place / need for a URL as part of the GDF safety case and licensing process
 - b) Near Surface Disposal – potential / inventory / approach to design, safety case, permitting etc
 - c) Legal, regulatory and planning permitting aspects of Waste Transport
 - d) Managing Risk of Legal Challenge / Judicial Review
32. A SG3 representative will in future be invited to attend NWS' Regulatory Stakeholder Group meetings which include all the key regulators and where an update on relevant activity is provided.
33. During the meeting with senior staff at Harwell on February 22nd- 23rd NWS provided a helpful presentation on: "Working with Regulators – an overview of the planning and regulatory landscape". This covered the context, strategy, process, priorities and current focus; and preparations for Borehole permitting as a 'live' example.
34. Finally, SG3 will also be engaging with the government's consultation to update policies on managing radioactive substances and nuclear decommissioning which was published on gov.uk on March 6th. ST has prepared an initial note for wider discussion within CoRWM.

d) *SG 4 Scottish Government Activities (Clare Bond)*

35. CoRWM SG4 met with the Scottish Government after the Open Plenary on November 29th to discuss their initial thinking on the development of a HAW work programme to progress and deliver against the commitments made in the 2016 HAW Implementation Strategy. CoRWM are mentioned in that document as:
 - a) "Scottish Government, CoRWM and NDA will identify public attitudes and societal concerns in Scotland on radioactive waste management".
 - b) "Scottish Government, with advice from the Chief Scientific Advisor for Scotland, and CoRWM will work to develop a long-term plan to explore opportunities to enhance and promote Scottish waste management capabilities internationally, and ensure Scotland is represented within the nuclear decommissioning and radioactive waste management development landscape.

CoRWM intend to review the document and provide feedback to the Scottish Government, with the review period ending this Summer.

36. Scottish Government have been running a series of site visits for stakeholder groups, who were also invited to input into the consultation “Draft Energy Strategy and Just Transition Plan” with a focus on jobs and skills.
37. RJ asked when Scotland intend to commence with NSD, with CoRWM stating that Scottish Government have started to review the implementation strategy for that process.

e) *SG 5 Welsh Government Activities (Stephen Tromans)*

38. CoRWM thanked Gerry Thomas, former Chair of SG5, for her time and work as a member of CoRWM.
39. CoRWM intend to prepare a briefing paper to understand the devolved responsibilities that fall under the Welsh Government.
40. ST thanked James Gibbs for briefing him on current activities. The Welsh Government have been focussed on participating on the consultation on managing radioactive substances and nuclear decommissioning policy framework issued on March 1st, as well as a lot of work on retained EU Law Legislation. SG5 will brief James Gibbs on CoRWM’s current areas of work and interest.
41. SG5 expressed their interest in visiting Trawsfynydd, with the site considered for NSD along with Wylfa, a prime candidate for SMR/AMRs in Wales.
42. Phillip Mathews commented “Re: the Well-Being of Future Generations Act in Wales, it is worth noting that a private members bill on similar legislation is currently being taken forward within the Scottish Parliament.”

f) *SG 6 Storage of Waste, Spent Fuel, and Materials (Derek Lacey)*

43. CoRWM provided an update on Spent Nuclear Fuels (SNF) & Nuclear Materials (NM) - Material not currently declared as waste because of its potential value but is included in the inventory for disposal because a GDF will be its ultimate destination.
44. CoRWM’s interests in disposal extend to the treatment of this material in readiness for disposal as well as the definition and understanding of the inventory for disposal. There is an ongoing interest in the safe interim storage of this material, with 25 years to First Waste Emplacement (FWE) and 50 years for FWE for this part of the inventory.
45. The interest is also due to the Policy consultation on SNF and NM from the Department for Energy Security and Net Zero, which has changed the policy in relation to reprocessing as set out in the 2008 energy white paper in order to reflect the new and advanced nuclear power sector. CoRWM’s response to the consultation will be founded on their interest in understanding the waste from AMR’s.

46. On Uranium (U), the consultation makes clear that whilst U is covered by general policy on NM, there is no specific extant policy, with the new policy recognising the diversity of the inventory and the need for bespoke solutions. It places responsibility on the owners to determine whether the material is declared as waste and recognises the merits of re-use.
47. CoRWM will comment on that part of the consultation, with a recently completed study on U forming the basis of that response, with a report to be published in the coming months. The main conclusions of the paper are that:
- a) there is a need to maintain an understanding of the inventory,
 - b) disposal of a substantial part of the Depleted Natural and Low Enriched Uranium (DNLEU) is inevitable,
 - c) generic work provides confidence that a safety case can be made for geological disposal.
48. The consultation makes no change to the policy on Plutonium (Pu), but notes that decisions over coming years which will enable the NDA to implement the existing policy.
49. SG6 provided a summary of key information on SNF and NM and their implications:
- a) On Spent Nuclear Fuels (SNF):
 - i) There is a diverse range of SNF (Magnox, Oxide, Exotics and potentially Advance Modular Reactor fuels)
 - ii) Reprocessing of the material has been complete, there is focus now on interim storage for most current and future SNF. International experience of management of SNF helps build confidence in safety.
 - iii) When declared as waste SNF will be heat generating and will create a greater demand for space in a GDF. The increase in planned capacity of power generation from 16GW to 24GW increases the footprint of GDF.
 - iv) AMR options may include reprocessing, and none are fully understood. Any reactor designs will be considered in a GDA by ONR and EA with advice from NWS. CoRWM are considering whether an earlier review of waste management implications is necessary.
 - v) FWE date for SNF is currently 2075 and the target for completed disposal is 2125. There is a demand for greater clarity on the inventory for disposal which will need to become clearer in the period before the ToPS and the commencement of the DCO process.
 - b) Nuclear Materials: U and Pu
 - i) The inventory consists predominantly of depleted U from enrichment activities and U and Pu from reprocessing. DNLEU is approximately 25% by volume, U is a small part of the inventory, Pu a large inventory with security implications.
 - ii) A common management sequence is in place for these materials: consolidation, interim storage, re-use or disposal.

- iii) U – the inventory from historic fuel cycle activities is well known. Additional generation of depleted U from enrichment activities is uncertain and depends on the UK's commercial activities over the coming decades. The target for interim storage is 2055, and for reuse or disposal is 2120.
 - iv) Pu - 140 tonnes consolidated at Sellafield. The target for interim storage is 2060, target for reuse or disposal is 2120.
 - v) Pu – the UK Government will consider NDA's proposals for a disposition solution that addresses security and non-proliferation concerns which will take decades to develop and fully implement.
 - vi) U and Pu – There are long timescales before disposal, but there is demand on safe interim storage and a need to develop clarity on the form and size of inventory for disposal due to the extent of re-use and commercial activity.
50. Pete Roche referred to the [West Cumbria MRWS Partnership | Advisory body for higher activity nuclear wastes | Advice on long-term solution for nuclear waste. \(westcumbriamrws2013.info\)](http://westcumbriamrws2013.info) with paper 97 on Principles for Inventory Change and asked for any thoughts on the need for a community partnership to know more detail on the inventory. CoRWM stated it is important that the community understands, especially as a community approaches the ToPS, where the inventory will need to be clearly defined to allow for decisions to be made.

Agenda item 5., Presentation

51. Nigel Thrift introduced the speaker for the Open Plenary, Stefan Mayer, Team leader on Radioactive Waste at the International Atomic Energy Agency (IAEA), who shared a presentation on "[Global Status and Guidance towards implementing Deep Geologic Disposal](#)", on:
- a) Global inventory and need to implement a Deep Geological Repository (DGR)
 - b) Global progress towards implementing DGR
 - c) IAEA technical guidance on DGR implementation
 - d) Stakeholder Engagement with Nuclear and with Disposal

Agenda item 6., Questions from the public

52. PH and SM discussed the approach the IAEA takes to have meetings between communities across the world. The IAEA sends invitation letters to waste organisations from member states who contact a representative for a designated or recommended community for the site, with no prerequisite for the community to be selected for the GDF programme.
53. RJ asked whether a joint GDF/disposal site could be set up between a number of IAEA member states. SM discussed how most countries will have some form of nuclear waste (e.g. from medical isotopes) and will be responsible to provide safe management of these materials. They can work with other countries to manage their waste, with Belgium agreeing to take Luxembourg's nuclear waste into their repository, and Croatia and Slovenia sharing their waste responsibilities, as well as being part of ERDO (The European Repository Development Organisation) which explores the opportunities to collaborate.
54. Simon Webb asked whether the IAEA had work covering generic lessons on programme governance across countries. SM stated the IAEA had some foundational documents on policy and strategy from 10 years ago, but no documents on governance of a GDF. This document could be of value but would be delicate as it could only work if the lessons learnt of failed GDF attempts are openly shared. SM referred to the IAEA's Generic DGR Roadmap (slide 13 of the presentation) which provides some guidance on governance.

Agenda item 7., Any other business

55. NT thanked Stefan Mayer once more for his presentation, along with all attendees at the meeting.

Next Meeting: 16th May 2023, London