



Committee on Radioactive Waste Management

COMMITTEE ON RADIOACTIVE WASTE MANAGEMENT

**ELEVENTH ANNUAL REPORT
2014-15**

July 2015

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Chairman's Foreword

This past year has again been a busy time for the Committee. The Committee had to operate within a reduced budget, a reduction in its membership from 12 to 11 and with two members sharing a post giving an effective membership of 10. In spite of these reductions, the Committee has continued to make a significant contribution to the development and delivery of the UK's policies on the management of radioactive waste.

In the past year the Committee's work has been dominated by the scrutiny of the Government's revision to the GDF siting policy and the development of the "Implementing Geological Disposal" White Paper. This report shows that the Committee not only scrutinised the activities of DECC and RWM officials, but it also gave timely advice as reflected in Annex D. The Committee is satisfied that the revision to the siting process was conducted appropriately and that the revised GDF siting process as outlined in the White Paper is appropriate and generally consistent with the views expressed in the responses to the consultation. The successful completion of the work packages described in the White Paper will require a continued high-level management focus.

The Committee has also scrutinised the development of the Welsh Government's Radioactive Waste Management Policy and provided timely advice when appropriate. Again the Committee is satisfied that the policy development processes have been appropriately conducted and that the Consultation reflected the comments made in the earlier call for evidence.

The Committee has provided authoritative and independent advice, and has achieved its key deliverables as set out in the 2014-15 Work Programme. On a personal note, I would like to acknowledge the dedication and commitment shown by the Members of CoRWM during this past year. They have often had to work to incredibly tight timescales to respond to requests from Government and RWM.

Laurence G Williams

Professor Laurence G Williams FREng
Chair of the Committee on Radioactive Waste Management

Executive Summary

The Committee's work for 2014-15 was set out in the 2014-17 Work Programme approved by Ministers (CoRWM doc 3151). This report sets out the progress made by CoRWM in the past year in the delivery of the objectives set out in that programme. As can be seen, the Committee's work has been dominated by the scrutiny of the Government's revision to the GDF siting policy and the development of the "Implementing Geological Disposal" White Paper. The Committee also provided the Welsh Government with advice on its review of Radioactive Waste Policy and kept a watching brief on RWM's development of the generic safety case for a GDF, the interim storage of radioactive waste and spent nuclear fuels, and the management of the UK civil plutonium stockpile.

GDF Siting Policy

CoRWM was actively involved in scrutinising development of the UK Government's revision to its GDF siting policy for the disposal of Higher Activity Radioactive Waste (HAW) as set out in the White Paper (WP) "Implementing Geological Disposal". CoRWM provided informal advice to DECC on analysis of the siting process consultation responses.

CoRWM also gave extensive informal advice to DECC during the formulation of the WP. Many of the key points that CoRWM made were accepted. However, CoRWM did express strong reservations about using the word "screening" in the work package to better explain the available geological information in England and Wales. CoRWM's concern was that the term "screening" would raise public expectations in relation to the production of maps and identification of areas which would be "screened in or out". The Committee's advice was not accepted on this occasion for reasons that DECC explained to the Committee.

CoRWM supports the decision to use a two-year period to resolve some of the key issues raised in relation to the definition of the "Community" that will host the GDF; identification of the decision makers who will make the decision to host the GDF or exercise the right to withdraw from the process; the development of the "National Geological Screening Guidance" and its implementation.

As a result of its scrutiny activities, CoRWM is satisfied that the revision to the siting process was conducted appropriately and that the revised GDF siting process as outlined in the WP is appropriate and generally consistent with the views expressed in the responses to the consultation.

National Geological Screening

CoRWM recognises the importance of this activity, especially in relation to the dangers of creating unrealistic public expectations. As a result CoRWM has followed closely the development of this work package and provided RWM and DECC with extensive informal advice, often under very tight timescales. CoRWM observed the first National Geological Screening Technical Event held at the Geological Society of London on 30 September 2014 and was so concerned about the arrangements for and content of the meeting that it provided a detailed set of observations to DECC. Subsequent events observed by CoRWM showed a much clearer focus on geological screening issues rather than on GDF siting characteristics.

CoRWM has provided advice to RWM on its development of the National Geological Screening Guidance (NGSG). CoRWM recommended that there needed to be a clearer explanation of what this guidance is for and how it will be used. CoRWM also recommended that RWM's guidance document should contain two parts – Part 1 being written for the general public to explain the purpose of the guidance, the form of the screening outputs and how the guidance will be used and Part 2 should contain the technical detail for use by the BGS.

CoRWM believes that, in relation to the National Geological Screening exercise, more needs to be done to enable findings to be communicated both in relation to all three geological settings, and to the associated generic¹ environmental safety cases.

Regulatory Framework

CoRWM believes that it is vitally important that there is a clear nuclear safety and environmental regulatory framework for the GDF in order to give the public confidence that it will be properly regulated. It is essential that the issue of licensing under the Nuclear Installations Act is resolved before communities are invited to participate in the process. CoRWM recognises that ONR has to balance its priorities but is nevertheless concerned that it has not yet publicised its proposed approach to licensing.

¹ The term “generic environmental safety case” used in this report refers to a non-site specific environmental safety case that incorporates all the safety features for the particular geological setting and an analysis of the key safety functions based upon generic data.

Recommendation 1: GDF Licensing under the NI Act 1965

CoRWM recommends that the Government should ensure that the details of the licensing of the GDF should be agreed and published before the end of the initial action period in the White Paper (end of 2016).

Generic Environmental Safety Cases

CoRWM believes that in order to encourage communities across the country to engage in the siting process it is essential that there is relevant safety information relating to the potential location of a Geological Disposal Facility in their area. At the early stage in the process this information can be provided in the form of a “generic environmental safety case” and hence CoRWM believes that RWM should produce a generic environmental safety case for each of the three geological settings that are of interest for geological disposal, namely hard rock, clay and salt. To date RWM has quantified only the hard rock case, with associated qualitative statements on how the other safety cases relate to the hard rock case. CoRWM believes that this is not an acceptable position. Communities which have clay or salt geologies should have the ability to see what the safety case for a GDF in their area could look like. If RWM were able to show these communities what the GDF would look like for their geological setting and how the safety case would be developed, CoRWM believes that this would encourage communities to engage in the process.

Recommendation 2: Generic Environmental Safety Cases

CoRWM recommends that RWM produces individual generic environmental safety cases for each of the three geological settings, hard rock, clay and salt.

Community Representation

CoRWM believes that the success of the work by CRWG on communities, and how its recommendations will be viewed by DECC Ministers, will be critical to the delivery of the GDF siting process as set out in the WP. Without acceptable definition of the “Community” that will host the GDF, CoRWM believes that the process may fail. It is therefore essential that the public has confidence in the process that defines the community and, subsequently, in the method adopted for establishing public support. To have credibility and to secure support for its recommendations to Ministers, the CRWG must be inclusive and involve all levels of local government in its deliberations. CoRWM has observed the setting up of the Community Representation Working Group (CRWG) and notes that good progress is being made.

Welsh Government: Higher Activity Waste Policy Consultation

CoRWM has been actively involved in scrutinising the Welsh Government's review of its radioactive waste policy and providing timely advice when appropriate. CoRWM welcomed the Welsh Government's decision to review its current policy and agreed that it was an appropriate time for such a review. CoRWM considered that it was extremely important for the Welsh Government to clarify its position on radioactive waste management so that it can play a strong role in the development of policy at the UK level. CoRWM confirmed its view that geological disposal, supported by a robust programme of interim storage, is currently the only feasible disposal option for most HAW.

CoRWM advised that, if Welsh Government did decide to adopt a policy of geological disposal, there would be a need for further consultation on the next steps for taking the process of site selection forward in Wales should a Welsh community come forward as a potential volunteer community.

RWM Transition

CoRWM has continued to provide scrutiny on the transition of RWM into a wholly owned subsidiary of the NDA. CoRWM was provided with a total of 27 documents to assist with the scrutiny exercise. CoRWM notes that RWM remains dependent on the NDA for some aspects of its governance and service support. It also is aware that it is the intention of RWM to develop, in a staged manner, into a Site Licence Company (SLC) capable of applying for the necessary regulatory licence and permissions to develop the design and construct, operate and eventually close a GDF, should a suitable site be identified.

CoRWM would finally highlight that none of the documents examined indicate how RWM is preparing itself to work through the process of securing volunteer sites and then undertaking the site selection activities. CoRWM remains of the view that, in the longer term, RWM should become fully independent of the NDA.

Scottish Government

There does not appear to have been a great deal of activity within the Scottish Government on radioactive waste policies in the past year. The Committee had expected that the Scottish Government would publish a Consultation on a Draft of a Strategy to implement the January 2011 HAW Policy. However this did not happen in

2014-15 and hence CoRWM was not able to scrutinise the process or provide advice to the Scottish Government.

Although site operators and regulators were involved in development of the Strategy, the Committee is concerned that the delay in consulting on its implementation could create the risk that site operators in Scotland will not have a clear or consistent understanding of how the Strategy is to be interpreted and implemented. This could result in site operators submitting individual (and possibly inconsistent) proposals for the management of their HAW for approval to the regulators.

Interim Surface Storage

Whilst the independent nuclear regulators have responsibility for regulating safety, security and environmental protection at nuclear sites, CoRWM also has a responsibility to scrutinise and provide independent advice on the management of radioactive waste including robust interim storage of HAW in the UK. During the year CoRWM visited the nuclear sites at Sellafield, Dounreay, Wylfa and Berkeley. The purpose of these visits was to discuss both the interim storage of HAW and proposals for retrieval and treatment with staff at the sites, and to observe the physical condition of the facilities. On the basis of the site visits made during 2014-15 CoRWM sees no reason to suggest that HAW in the UK is not being safely stored or adequately managed.

Spent Fuel, Plutonium and Uranium Management

CoRWM recognises that neither spent fuel or plutonium have been designated as being radioactive wastes. However, given that it is possible that these materials may be designated as being radioactive wastes in the future, CoRWM maintains an interest in the context of robust interim storage. As part of its scrutiny role, CoRWM's subgroup on spent fuel and plutonium has corresponded with NDA and held meetings to discuss a list of '*points of interest to CoRWM*'.

CoRWM is reassured by the approach being taken by the NDA, but notes that, should the availability of the GDF become delayed, then the option of long-term storage of spent fuel in ponds may need to be revisited. CoRWM also notes that the planned closure of THORP will remove one proven option of dealing with the stored spent fuel.

With regard to storage of plutonium, CoRWM agreed with the NDA that it would be timely to wait for its recommendations to be finalised. CoRWM will review plutonium storage and disposition in its 2015-2016 work programme.

The UK's stocks of reactor depleted uranium from reprocessing and depleted uranium from enrichment present both a potential waste challenge and a potentially huge energy resource if used in fast reactors. However, CoRWM is only concerned with the implications of this uranium being declared a waste and hence its impact on the GDF safety case. In 2014-15 CoRWM did not spend any time scrutinising the storage of uranium or its potential impact on a GDF.

CoRWM Outreach

CoRWM Members attended a number of events throughout the year to highlight the role of the Committee.

CoRWM ELEVENTH ANNUAL REPORT 2014-15

1 Introduction

1.1 This is the eleventh Annual Report of the Committee on Radioactive Waste Management (CoRWM). It describes the Committee's work in the financial year from April 2014 to March 2015 and outlines CoRWM's current views on the status of UK plans and arrangements for the long-term management of higher activity radioactive wastes.

1.1 Scope of CoRWM's work

1.1.1 CoRWM's sponsors are the Department of Energy and Climate Change (DECC) for the UK Government, the Scottish Government, the Welsh Government and the Department of the Environment in Northern Ireland.

1.1.2 The Committee's work programme for 2014-15 (CoRWM doc. 3151) was agreed with its sponsors and was carried out within CoRWM's agreed budget (Annex A).

1.1.3 CoRWM's remit is given in its Terms of Reference (Annex C). These state that: ".....The role of the reconstituted Committee on Radioactive Waste Management (CoRWM) will be to provide independent scrutiny and advice to UK Government and devolved administration Ministers on the long-term management, including storage and disposal, of radioactive waste. CoRWM's primary task is to

provide independent scrutiny on the Government's and Nuclear Decommissioning Authority's proposals, plans and programmes to deliver geological disposal, together with robust interim storage, as the long-term management option for the UK's higher activity wastes."

1.1.4 During its work in the past year, CoRWM has primarily engaged with the Nuclear Decommissioning Authority (NDA) and with Radioactive Waste Management Limited (RWM), which is now a wholly owned subsidiary of NDA. RWM is the developer for geological disposal facility (or facilities, should more than one be needed). However, the Committee has also engaged with officials within DECC, the Welsh Government, the Scottish Government and the Northern Ireland Executive.

1.2 Summary of Year

1.2.1 In the financial year 2014-15, CoRWM has provided the following advice and undertaken scrutiny in the following areas.

- Advice to DECC and RWM on the GDF Siting Policy and issues arising from the "Implementing Geological Disposal" White Paper and scrutiny of both DECC's and RWM's activities relating to the management of HAW.
- Advice to DECC and RWM on the role of the safety case in the GDF siting process and on the development of the GDF generic Disposal System Safety Case (gDSSC).
- Advice to the Welsh Government on its proposals to develop a new radioactive waste policy and scrutiny of the Welsh Government approach and any subsequent analysis of consultation responses.
- Advice to the Scottish Government on its policy, and its development of a strategy for implementing the Policy for managing higher activity radioactive waste; and scrutiny of the Scottish Government's approach.
- Advice to DECC on the transition of RWM into an effective implementer of geological disposal and scrutiny of change from NDA/RWMD to RWM.
- Advice to DECC and NDA on the current status of interim storage of radioactive waste, spent fuel and other nuclear materials in the UK and the implications for the GDF; and scrutiny of NDA and its site licence companies.

1.2.2 CoRWM also undertook a number of activities to provide effective engagement with the public and other stakeholders. The aim of these activities was to raise the profile of CoRWM and help inspire confidence in its work.

1.2.3 Progress on each of these is reported in later chapters.

1.3 Public and Stakeholder Engagement and Communications

1.3.1 CoRWM undertakes public and stakeholder engagement (PSE) to support its work programme and in general uses PSE to assemble evidence, obtain the views of stakeholders, check the factual accuracy of its draft documents and seek comments on its proposed advice.

1.3.2 CoRWM held six open plenary meetings throughout the year at which members of the public were free to attend and observe the Committee in action. (CoRWM docs: 3162, 3200, 3177, 3169, 3204, 3207) At these meetings, there was the opportunity for those observing to ask questions as part of the formal meeting and to talk informally to Committee members during refreshment breaks.

1.3.3 CoRWM also held a number of evening, public meetings when it visited the nuclear sites at Dounreay in Scotland, Wylfa in Wales (CoRWM doc. 3176) and Sellafield in England. CoRWM believes that its stakeholder engagement meetings provide an important opportunity for the public to meet the Committee to discuss issues surrounding the management of radioactive waste in the UK. Some people attending CoRWM's public meeting in Anglesey were under the impression that the Committee was there to promote siting of a GDF in Anglesey. In view of this and DECC's concerns that similar misunderstandings of the purpose of the CoRWM visits might arise if CoRWM held public meetings as other nuclear sites, the Committee (CoRWM doc 3169) decided to cancel further public meetings and review the position in 2017 after the completion of the work packages identified in the "Implementing Geological Disposal" White Paper.

1.3.4 CoRWM is aware that its document archive is no longer available to the public because of the move of CoRWM's website into the Government general Government website.

1.4 CoRWM's Assessment of Performance

1.4.1 Members of the Committee were assessed on their individual performance in November 2014 in line with good practice for public appointments. All Members met the required performance levels.

2 Delivery of 2014-15 Work Programme

2.1 GDF Siting Policy

2.1.1 The main focus of the Committee's work in 2014/15 was to provide advice on and scrutiny of DECC's GDF Siting Process Review and any subsequent

revision to the Policy. The Committee's work in this area was sub-divided into six key tasks, namely the GDF siting consultation, the revision to siting policy, the DECC/RWM stakeholder engagement strategy, the regulatory framework, RWM's development of a generic safety case for a GDF, and Stakeholder Engagement.

2.1.1 GDF Siting Consultation

2.1.1.1 The aim of this task was to provide informal advice to DECC on its analysis of the GDF siting process consultation responses.

2.1.1.2 Given that there were 719 responses (with 301 being part of a orchestrated letter writing campaign), CoRWM did not have the time or the resources to conduct its own independent analysis of these responses. CoRWM considers that the DECC summary of the responses was a balanced attempt to provide a factual appraisal of the key points relating to the 9 Questions that were asked in the Consultation Document. It is clear that many of the points that were raised were highly contentious, in particular those relating to decision-making, roles of various levels of Local Government and Geological Screening. However, the acid test for CoRWM was to see how DECC planned to take account of these widely diverse, and often conflicting views, in formulating the content of the GDF White Paper.

2.1.1.3 CoRWM noted the Government response to the Consultation that was published at the same time as the GDF White Paper. Whilst CoRWM does not fully concur with all the DECC responses it is clear that a major effort was made to respond to the conflicting points raised and how these would be taken into account when drafting the White Paper. CoRWM was pleased to note that potential mechanisms to resolve two major areas of concern that were raised in consultation responses were not explicitly defined but would be subject to further detailed analysis. First was the issue of "how to define a community" and, linked to this, issues of decision-making, rights of withdrawal and community benefits. CoRWM was also pleased to note DECC planned to set up an expert group -"The Community Representation Working Group (CRWG)"- to explore these issues. Second was the proposal to explore the form and nature of Geological Screening which had been a major concern to many respondents to the Consultation. CoRWM has been scrutinising as Observers the work of CRWG (see Sections 2.1.6) and providing advice to DECC on the development of the Geological Screening process (see Section 2.1.3).

2.1.2 Revision of Siting Policy

2.1.2.1 Given the importance of the formulation of the GDF White Paper, CoRWM

spent a great deal of time in the early months of the year holding informal meetings with DECC, commenting on drafts of the White Paper and then holding a series of meetings to agree a formal CoRWM position in response to the final draft. CoRWM is pleased to note that many of the key points that it raised were accepted by DECC and included in the published White Paper and appreciates the considered response of DECC to those points that were not.

2.1.2.2 CoRWM's advice during the drafting phase of the White Paper covered such things as:

- the need to have a clear communication strategy for the proposed new approach;
- the concept of "Voluntarism" and clarity that hosting a GDF will be based upon a volunteer community;
- the importance of Community participation in the siting process via their engagement with RWM to gather information to develop the facility safety case;
- the importance of the right of withdrawal from the siting process during the period leading up to the request to host a GDF;
- support for the process to determine how the local "community" should be identified and represented;
- the geological screening proposal, particularly the importance of linking "screening" to the generic environmental safety cases, and the need to avoid raising expectations relating to the outcome of the process;
- the importance of the role of the safety case and its relationship to the inventory, and the need to emphasise it will be the safety case that will determine the inventory;
- the difficulties associated with trying to define the inventory in relation to waste types and volumes at the beginning of the process;
- issues relating to spent fuel and nuclear materials that are currently not designated as being waste;
- the importance of having a clear nuclear safety and environmental regulatory framework; and
- Strategic Environmental Assessment.

2.1.2.3 The DECC response to CoRWM's contribution to the revision of the GDF siting policy is given in Annex D.

2.1.3 National Geological Screening

2.1.3.1 Background to National Geological Screening

2.1.3.1.1. The following section of this report summarises the scrutiny activities of the Committee and the advice given to RWM and DECC on National Geological Screening (NGS). With respect to NGS, the White Paper states (para 5.11) that "The Committee on Radioactive Waste Management (CoRWM) will play a scrutiny role throughout this work, providing oversight of the process to develop this guidance through open public and stakeholder engagement."

2.1.3.1.2 Given this remit, CoRWM set up a subgroup to scrutinise the work of RWM and the Independent Review Panel established by the Geological Society to advise Government on development of screening guidance. In its 2015-16 work programme, CoRWM intends to scrutinise the planned public consultation on the NGS Guidance to be carried out by RWM.

2.1.3.1.3 CoRWM held an initial meeting with RWM to discuss its proposed approach to NGS and the associated communication / presentation strategy (12 September 2014). CoRWM also observed the National Geological Screening Technical Event held at the Geological Society on 30 September 2014.

2.1.3.1.4 The NGS Technical Event held on the 30th September was structured into two sessions, the first session being a series of presentations and the second session a panel-led discussion of issues surrounding screening. The presentations in session 1 covered:

- a) the White Paper and Government policy;
- b) the framework and timeline for the activities associated with NGS timetable;
- c) international experience on screening and siting;
- d) the role of the Geological Society in the NGS exercise, including initial ideas in relation to setting up the Independent Review Panel on the guidance;
- e) international (IAEA) principles and guidelines on screening and siting; and
- f) the Safety Case.

2.1.3.1.5. The presentation on international experience of screening demonstrated that 1) there is no international 'best practice', and 2) most international programmes have screened for an established GDF concept or variants. The approach proposed in the present UK process has not been attempted elsewhere.

2.1.3.1.6. Session 2 included discussion of groundwater flow, structural geology and modelling approaches, geomechanical properties of rocks, and siting in relation to prospecting concepts. Whilst the availability and quality of data at national scales for the depth ranges relevant to a GDF were noted, much of this panel discussion

focused on site identification and characterisation rather than national geological screening. The information that could be accessed/available for screening at the national scale (i.e. for screening) was considered to be lithology, thickness of unit and, to some extent, groundwater flow.

2.1.3.1.7. As the NGS Technical Event was the first public meeting by RWM on its plans for screening, CoRWM provided, on request from DECC and immediately after the meeting, a detailed set of initial observations on the National Geological Screening Technical Event (CoRWM doc.3222). In response to a further request from DECC CoRWM subsequently provided a more wide-ranging set of reflective comments on national screening guidance (CoRWM doc. 3223).

2.1.3.1.8. CoRWM's initial scrutiny of the NGS Technical Event (CoRWM doc. 3222) highlighted the need for RWM to provide strong leadership and direction in these events, focused on clear presentation of the requirements and definition of screening as described in the White Paper. CoRWM advised DECC that the distinction between screening and siting required careful explanation at all times, especially in relation to the scale at which the screening guidance would be applied, and hence what might be feasible in terms of available data. As the Independent Review Panel would play an important role in assessing the National Screening Guidance, CoRWM advised DECC that terms of reference of this Panel and the process of selection and appointment of its members required urgent clarification. Finally, CoRWM advised that the relationships between the GDF Safety Case requirements and screening proposals, required careful presentation and explanation in terms of three generic environmental safety cases, in order to be authoritative and avoid any impression of bias.

2.1.3.1.9. CoRWM observed a number of subsequent local and regional National Geological Screening meetings conducted by RWM as part of the National Geological Screening Guidance development process. These included regional and stakeholder events held in Bristol, Cardiff, Manchester, London, Leeds and Plymouth over the period January-March 2015.

2.1.3.1.10. CoRWM's gave further reflective advice to DECC on the NGS Guidance process, informed by the White Paper and its observation of the NGS meetings. CoRWM (CoRWM docs: 3223, 3224) highlighted six aspects in which greater clarity was required, namely:

- a) **White Paper context.** The explanation of what NGS actually comprises in the process as defined by the WP needs to be presented with great care, and differentiated from common perceptions of screening in a consistent and justifiable manner.

b) **Safety Case context.** New presentation materials should be prepared for at least disposal in the three geological settings, including how these translate into safety cases, and how geology contributes to long-term operational and post-closure safety in each case. All should be understandable to a lay audience.

c) **Information, datasets and conveying uncertainty.** The information requirements arising from the 3-dimensional nature of disposal should be clearly conveyed, especially the nature and level of associated uncertainties. Examples of the types of national-scale datasets that may be available and usable should be provided and explained, along with their inherent uncertainties.

d) **NGS outputs and deliverables.** A detailed and authoritative narrative of what the essential deliverables of the NGS guidance are expected to be, beyond the general statements in the White Paper, is required at an early stage of the process.

e) **More detailed process timeline.** The strong commitment of Government to deliver a safe geological disposal solution, with public support and engagement at every stage, could be reiterated. To support this, a timeline of RWM's expectations of the NGS exercise and its deliverables should be presented.

f) **Relationship to Planning.** The very separate roles of site selection and planning should be emphasised at all times.

2.1.3.1.11. CoRWM also provided detailed advice and comments on the remit and role of the NGS draft guidance Independent Review Panel, including appointment of members, range of expertise and balance of skills, the need for knowledge of the White Paper context and awareness of the process.

2.1.3.2 CoRWM Comments and Advice to DECC on Draft Geological Screening Guidance

2.1.3.2.1 RWM provided CoRWM with a draft screening guidance document for comment on 6th March 2015. This draft document had been commented upon by RWM's Technical Advisory Panel prior to being distributed to CoRWM, and was to be further revised prior to distribution to the Independent Review Panel in April 2015. CoRWM responded to the RWM request for rapid feedback. In summary, the key

CoRWM comments on the draft guidance document were:

- a) a clearer explanation of the purpose of the guidance document was required;
- b) there was little link to the generic environmental safety case and, although the draft guidance referred to the requirements of the generic GDF safety case, these requirements were not actually defined in the document;
- c) terms (aspect, attribute, characteristic, factor, requirement) needed to be properly defined and used consistently throughout;
- d) screening outputs, and their specification and presentation, required greater explanation;
- e) there should be two clearly defined outputs for each region: one being a 'screening engagement' document discussing broad areas for discussion of 'initial prospects' for a GDF, and the other containing the more detailed geological attribute information, relevant to safety, for the region. This second document would provide a more detailed basis for discussion with communities.
- f) a structured approach to presentation of generic environmental safety cases should be employed, to provide a link to safety, aid the discussion of attributes, and structure the information that is being presented in the guidance documents;
- g) in order not to raise community expectations of screening in terms of areas or regions being 'in' or 'out', the word 'screening' could be helpfully removed from every section beyond Section 1.2.;
- h) the guidance document should explain the multi-barrier concept, and the role geology plays within it, for each type of safety case;
- i) reference to the geology of the 'cover sequence' should be removed from the Guidance document. Amongst the several reasons for this, the most important is that its use suggests an inherent bias towards the 'basement under sedimentary cover' concept developed in the UK; and
- j) for communication purposes, CoRWM suggested that the Draft Guidance be split into a public-facing short document that is readable and understandable to a lay audience, and a technical specification (technical guidance) that is principally for the BGS and the expert geoscience community.

2.1.3.2.2 CoRWM has provided advice to RWM on its development of the National Geological Screening Guidance (NGSG). CoRWM recommended that there needed to be a clearer explanation of what this guidance is for and how it will be used. CoRWM also recommended that RWM's guidance document should contain two parts – Part 1 being written for the general public to explain the purpose of the

guidance, the form of the screening outputs and how the guidance will be used and Part 2 should contain the technical detail for use by the BGS.

2.1.3.2.3 CoRWM will continue to scrutinise the development and use of RWM's National Geological Guidance in its 2015-16 work programme.

2.1.3.3 The Generic Safety Case and NGS Guidance

2.1.3.3.1. The 2014 White Paper specifies that the NGS exercise will comprise “a national geological screening exercise based on the requirements of the existing (i.e., 2010) generic GDF safety cases.” As pointed out by CoRWM in its review of the 2010 gDSSC (CoRWM, *Assessment of the generic Disposal System Safety Case*, CoRWM doc. 2994, March 2012), the use of a simple four-parameter model to simulate the transport of radionuclides through the geosphere limits the usefulness and applicability of the gDSSC. In the current NGS, the simple four-parameter model precludes any direct linkage between the 2010 gDSSC and geological safety attributes proposed for the draft NGS Guidance.

2.1.3.3.2. CoRWM notes that there is one critical connection between NGS and the gDSSC that has not been addressed in the screening activities to date - the relationship between potential human intrusion and screening criteria. The largest doses (of the order of tens of Sieverts) calculated in the 2010 gDSSC were for human intrusion. Following the guidance in the GRA, RWM argued that these doses are not of concern because the “*MRWS Site Selection Process ensures that areas with exploitable resources at depth are screened out at an early stage.*” Unlike the other scenarios analysed in the 2010 gDSSC or any gDSSC, the generic human intrusion scenario is not likely to change significantly with the identification and characterisation of a specific site for a GDF.

2.1.3.3.3. CoRWM will monitor developments in this area as part of its 2015-16 work programme.

2.1.4 Regulation of Geological Disposal of Higher Activity Waste

2.1.4.1. CoRWM believes that it is vitally important for there to be a clear regulatory framework for a GDF to give the public confidence that the design, construction, commissioning, operation and eventual closure of a GDF will be properly regulated. The Government recognises the importance of effective regulation and DECC has a work package addressing this issue and is liaising with the regulators.

2.1.4.2. CoRWM Members had a meeting with DECC in November 2014 to discuss the regulation workstream. The discussion focused on the approach to licensing and the link to the planning process and environmental permitting.

2.1.4.3. CoRWM has commenced engagement with the ONR to gain an understanding of the proposed approach to the licensing of a GDF and the relationship between nuclear safety, nuclear security, safeguards, transport and environmental permitting. Progress has been slow. CoRWM is aware that ONR is seeking to have an agreed approach, endorsed by the Chief Nuclear Inspector. CoRWM will give priority to interacting with ONR in its 2015-16 work programme.

2.1.4.4. In relation to the cooperation between ONR and the environmental regulators, CoRWM is aware that a joint guide to regulation is being developed and the regulators aim to have this available to support the community engagement process when it commences in 2017. CoRWM anticipates being able to scrutinise development of this guide in the forthcoming year. CoRWM clearly welcomes the intention of the regulators to continue to work together on the regulation of a GDF through the joint scrutiny programme. In relation to Wales, CoRWM notes that ONR were awaiting the outcome of Welsh Government's review of its policy for the long-term management of Higher Activity Waste before any further engagement with Natural Resources Wales. Similarly in the case of Scotland, whilst Scottish policy does not support geological disposal, ONR is obviously mindful that its regulatory strategy for a GDF should have regard to implementation of Scottish policy, and CoRWM welcomes ONR's intention to liaise with SEPA as necessary.

2.1.4.5. CoRWM believes that the approach to nuclear site licensing of the GDF needs to be agreed and any required legal changes and supporting guidance should ideally be in place before community engagement commences from 2017 onwards. The regulatory framework, the respective roles of Government, the Implementation Body and the Regulators at the various stages of the project must be clearly explained to communities. A clear and robust regulatory framework for a GDF project needs to be prioritised. The Environment Agency has had the legislative basis for its permitting process in place since 2010 and the process is described in the GRA.

2.1.4.6. CoRWM believes that it is essential for communities that wish to engage in the GDF siting process to be able to interact with the regulators. CoRWM also believes that it is important for the regulators to be adequately resourced to undertake these activities, in addition to any formal regulatory scrutiny that may be required including the development of the guidance material discussed above. CoRWM is aware that ONR and the Environment Agency are also engaging with

RWM through the packaging advice programme as part of their interactions with licensees reviewing the arrangements for management of HAW on nuclear licensed sites.

2.1.4.7. CoRWM recognises that ONR has to balance its priorities but is nevertheless concerned that it has not yet publicised its proposed approach to licensing. CoRWM also recognises that any ONR resource allocation must be balanced against the regulation of current licensed sites and it understands ONR's published strategy is to focus regulatory attention on the UK's nuclear priorities, including hazard reduction and remediation at Sellafield, and the nuclear new build programme. However, the effective management of radioactive waste including eventual disposal is also of vital importance and, as mentioned above, clear definition of the licensing regime should, in CoRWM's opinion, be on the critical path for commencement of community engagement. CoRWM recognises that environmental permitting regulations are already in place in relation to the disposal of radioactive waste and are part of the regulatory framework for a GDF.

Recommendation 2: GDF Licensing under the NI Act 1965

CoRWM recommends that the Government should ensure that the details of the licensing of the GDF should be agreed and published before the end of the initial action period in the White Paper (end of 2016).

2.1.5 Generic Safety Cases

2.1.5.1 In the 2014-15 Work Programme CoRWM allocated 10% of its available time to scrutinising RWM's generic safety case activities. The intention was to scrutinise RWM's Generic GDF Safety Case approach, produce a clear and consistent understanding of the terminology used in GDF safety cases and to provide advice on how the generic safety case would be used in the revised siting process. CoRWM reviewed the 2010 generic Disposal Safety System Case (gDSSC see: CoRWM, *Assessment of the generic Disposal System Safety Case*, CoRWM doc. 2994, March 2012).

2.1.5.2. CoRWM's objectives in scrutinising RWM's generic safety case activities were to determine if RWM:

- had displayed a sufficiently comprehensive understanding of the scientific knowledge underpinning geological disposal;
- was making full use of this knowledge in its development of the gDSSC;

- was making full use of the gDSSC in supporting the siting process specifically, National Geological Screening and interaction with potentially interested communities; and
- had in place processes to identify and fill gaps in its knowledge on appropriate timescales (where the judgement on “appropriate” takes into account whether the knowledge gap needs to be filled on a generic, rock type-specific or site-specific basis).

2.1.5.3. The Safety Case subgroup corresponded with RWM over the past year and met with RWM on 16 December 2014 at Harwell to discuss activities related to its generic Disposal System Safety Case (gDSSC). The meeting focused mainly on the relationship between RWM’s gDSSC and National Geological Screening, and RWM’s plans for and progress toward the 2016 gDSSC. The issues relating to geological screening are covered in section 2.1.3 above.

2.1.5.4 CoRWM notes that RWM has been working to improve the 2010 gDSSC with the goal of publishing a new gDSSC in 2016. The intention is for the development of the generic safety case to continue to be parallel and separate from any site-specific safety case as described in RWM’s Geological Disposal Environmental Safety Case Strategy (NDA Report no. NDA/RWMD/090) and includes waste from assumed new build reactors.

2.1.5.5. It is CoRWM’s understanding that RWM will undertake a quantitative analysis of one design for the full inventory in the 2016 gDSSC meaning that options, for example multiple repositories, each for different wastes (i.e., ILW vs HLW), will not be analysed. RWM will also continue to use the simple four-parameter model to describe transport of radionuclides through the geosphere. Unlike the 2010 gDSSC, the 2016 gDSSC environmental safety case will only include calculations for risk - no integrated dose assessment will be performed.

2.1.5.6. RWM has created “Data Definition Forms” to capture what is known about key geosphere-related parameters and other important data, following advice from CoRWM, RWM will use the concept of Safety Narratives (i.e., how safety is provided by the whole system with definitions of the safety functions of the different components of the GDF) when documenting their 2016 gDSSC in an effort to clarify the safety case for non-experts.

2.1.5.7. CoRWM supports the RWM development of “Data Definition Forms” and the use of Safety Narratives. However, CoRWM continues to be concerned over the use of the simple four-parameter model and the parallel development of generic and site-specific safety cases. CoRWM would like RWM to consider the development of three separate generic environmental safety cases (high-strength rocks, clays, and

salt) and evolve those generic safety cases into site-specific safety cases as sites are identified. The current approach of trying to address each rock type within one safety case complicates the identification of research needs.

2.1.5.8. CoRWM believes that, in order to encourage communities across the country to engage in the siting process, it is essential that there are illustrative generic environmental safety cases for each of the three geologies that are of interest for geological disposal. As shown above, to date RWM has quantified only the hard rock case with associated qualitative statements on how the other safety cases relate to the hard rock case. CoRWM believes that this is not an acceptable position. Communities that have clay or salt geologies should be given insight into the safety case for a GDF in their area. If RWM were able to show these communities what the GDF would look like for their geology and how the safety case would be developed, CoRWM believes that this would encourage communities to engage in the process.

Recommendation 2: Generic Environmental Safety Cases

CoRWM recommends that RWM produces individual generic environmental safety cases for each of the three geological settings, hard rock, clay and salt.

2.1.6 Community Representation Working Group (CRWG)

2.1.6.1.1 The CRWG was established to support Ministers in reaching final policy decisions on practical approaches to community representation, engagement and investment, in accordance with the principles and commitments made in the UK Government's 2014 White Paper. The Terms of Reference of the Group, minutes of meetings and some papers of the Group as their work evolves can be seen on the CRWG web site.

2.1.6.1.2 The CRWG held its first meeting on January 8th 2015 after DECC identified individuals who agreed to participate in the Group. As part of its role, CoRWM was invited to observe the CRWG meetings to scrutinise its activities. As well as attending meetings in January and March CoRWM has held informal meetings with DECC officials to discuss CRWG matters.

2.1.6.1.3. In the short period that CRWG has been in existence, CoRWM considers that good progress has been made. The ToR have been modified to take account of CRWG members views that issues of decision-making should be expressly included. The initial composition of the Group has been changed and CoRWM consider that the current Group is beginning to work in a constructive and

cohesive manner to achieve their objectives. Technically the Group is strong and CoRWM's initial concern that representation on social and ethical matters was somewhat limited has seen additions that now balance those with experience of major nuclear and infrastructure projects.

2.1.6.1.4. Initially CoRWM was concerned that the contractor appointed by DECC, Local Partnerships (LP), was an organisation wholly owned by the Local Government Association and Her Majesty's Treasury and an issue might arise as to whether it would be in a position to provide independent advice. However, having seen LP in action, CoRWM is satisfied that factual and unbiased information, papers and reports will be produced. Further, CoRWM believes that the Group will ensure that the research initiated will be that required to allow the WG to do its job effectively. CoRWM notes that, in addition to LP, two individual members of CRWG come with a background of experience in the upper tiers of local government. DECC will need to ensure that all levels of government, including the parish level, play an important role in the ongoing process of defining community and the related issues being considered by the CRWG.

2.1.6.1.5. CoRWM therefore considers that overall CRWG has got off to a positive start. The work of the Group is critical given that the questions of community representation, decision-making and the roles of elected and non-elected representatives in decision-making will influence whether the proposed GDF process is successful. The Group is mindful of the need to be as open and transparent as possible. This too was a concern of CoRWM when the Group was established given that the question of community representation, as witnessed by the Consultation responses and reviews of the previous MRWS process, was a burning issue. CoRWM supports CRWG's plan to provide as much information as possible to stakeholders and the wider public only when they consider that it will be in a form that can lead to constructive responses.

2.1.6.1.6. In its work programme for 2015-2016 CoRWM has given high priority to scrutinising the progress of the CRWG.

2.1.6.2 *Communication Working Group*

2.1.6.2.1. In its 2014-15 Work Programme CoRWM identified the need to scrutinise and where appropriate provide advice to RWM and DECC, on their stakeholder engagement strategies and activities. The WP "Implementing Geological Disposal" identified stakeholder engagement and communication in the initial 2-year period as being a major work package.

2.1.6.2.2. This initial two-year period in the revised GDF siting process can

best be described as one of education and awareness raising, given that the White Paper explicitly states that during this time the Government will not formally accept any expressions of interest from a community, however this may be defined. It is in this context that CoRWM considered DECC's and RWM's evolving engagement strategies. DECC and RWM focused on what methods would be most effective in engaging with potentially interested communities when the two year "education and awareness" period ends.

2.1.6.2.3. The work package on stakeholder engagement and communication was slow in starting due to delay in the appointment of a Communication Director in RWM. CoRWM has observed the setting up of the Communication Group, which is being managed by RWM with inputs from DECC. CoRWM believes that, given the issues that arose in Cumbria and Shepway during the previous process, the output from this work package, comprising planning of how to engage with those that will be in favour of a GDF, and those who will be opposed, will be crucial to successful engagement with prospective communities.

2.1.6.2.4. When the Communication Group was up and running, CoRWM met with DECC and RWM's new Head of Communications to explore matters of mutual interest concerning engagement activities. A number of points arose from this meeting. RWM is in the process of formulating an overall engagement strategy that will attempt to integrate all of the engagement activities that are identified in the WP. CoRWM welcomes the development of this inclusive integrated approach to engagement being developed by RWM. CoRWM recognises the value of this approach, not least so that potential "stakeholder fatigue" can if possible be avoided. CoRWM will prioritise scrutiny of the development of this strategy in its 2015-16 Work Programme.

2.1.6.2.5. CoRWM considers that effective engagement is key to the successful siting of a GDF. CoRWM therefore welcomes the resources and effort that now appear to be being taken to ensure that individual and overall engagement processes are "fit for purpose". Clearly the inputs from the engagement conducted when formulating the White Paper played a key role in helping formulate its content and CoRWM considers that in taking the current process forward stakeholder and public engagement must be given the highest priority.

2.1.7 National Land Use Planning

2.1.7.1. Members of the National Land Use Planning subgroup met with DECC in November 2014 to discuss issues relating to land use planning provisions for a geological disposal facility. As stated in the White Paper, it is Government's intention that an application for development of a GDF is to be taken through the planning

process as a “nationally significant infrastructure project” (NSIP). The Planning Act 2008 s 14 lists categories of NSIPs but, as originally drafted, the list did not include geological disposal. DECC outlined a proposed timeline for amending the legislation and shared preliminary thoughts on the contents of a draft order. The Infrastructure Planning (Radioactive Waste Geological Disposal Facilities) Order 2015, SI Number 2015/949 was subsequently made and came into force on 27 March 2015. The order adds “development relating to a radioactive waste geological disposal facility” to the list of NSIPs. Development is defined as including the construction of a GDF at a depth underground of at least 200 metres and deep boreholes associated with such a construction.

2.1.7.2. The Order only applies to England.

2.7.1.3. As required under the Planning Act, the process of making this order necessitated approval by a resolution of each House of Parliament. CoRWM followed the debates closely and was pleased that the order was eventually made within the intended time frame.

2.2 Welsh Government Radioactive Waste Policy Review

2.2.1. Welsh Government is in the process of considering its current policy on the management of higher activity radioactive waste (HAW) and CoRWM has provided advice to Welsh Government at each stage of this ongoing process.

2.2.2. The first stage was the issue, on 29 April 2014, of a consultation paper *Call for Evidence: Review of Current Policy on the Disposal of Higher Activity Radioactive Waste*. This set out the background to the possible review and explained that the current policy of Welsh Government was neither to support nor to oppose the UK Government’s policy of geological disposal. CoRWM was able to provide Welsh Government with background information for inclusion in the Call for Evidence and its views were specifically referred to in the consultation document. One of the questions asked was whether Welsh Government should limit its consideration of disposal options for HAW to geological disposal, given that CoRWM had carried out extensive work before recommending disposal in its report in 2006 and had subsequently confirmed its recommendation in 2013.

2.2.3. CoRWM submitted evidence in response to this consultation in June 2014 (CoRWM doc 3163). The response welcomed Welsh Government’s decision to consider whether to review its current policy and agreed that it was an appropriate time for such a review. It added that CoRWM considered that it was extremely important for the Welsh Government to clarify its position on radioactive waste management so that it can play a strong role in the development of policy at the UK

level. CoRWM confirmed its view that geological disposal, supported by a robust programme of interim storage, is currently the only feasible disposal option for most HAW.

2.2.4. The responses to this Call for Evidence raised a number of technical questions. Welsh Government referred these to CoRWM for advice and comment. Detailed comments were sent to Welsh Government in July 2014 (CoRWM doc 3167).

2.2.5. After consideration of the responses to the Call for Evidence, Welsh Government decided that it should carry out a review of its current policy on HAW disposal. It issued a consultation document, *Review of Welsh Government Policy on the Management and Disposal of Higher Activity Radioactive Waste* on 23 October 2014. Annex 3 of this document comprised Welsh Government's commissioning request to CoRWM of 24 June 2014 and CoRWM's response (CoRWM doc 3167).

2.2.6. The consultation sought views on whether or not Welsh Government should adopt a policy for disposal of HAW and spent fuel should it be declared as waste. CoRWM responded to the consultation in January 2015 (CoRWM doc 3172). The response supported the option for Welsh Government to 'seek to adopt a policy for disposal for HAW and spent fuel should it be declared as waste'. It added that Welsh Government's existing neutral position had created a policy vacuum which was unlikely to instil public confidence about the management of HAW. Welsh Government support for new nuclear power at Wylfa Newydd implied that Welsh Government believed the waste from new build will be satisfactorily managed; maintaining a neutral position was, in CoRWM's view, inconsistent with this belief. CoRWM advised that, if Welsh Government did decide to adopt a policy of geological disposal, there would be a need for further consultation on the next steps for taking the process of site selection forward in Wales should a Welsh community come forward as a potential volunteer community. In CoRWM's opinion, this process should be determined as soon as practicable because uncertainty over the process would be likely to lead to confusion and misunderstandings which should be avoided if possible.

2.2.7. In March 2015 Welsh Government sought CoRWM's comments on some of the responses to the consultation document where these referred directly to CoRWM. CoRWM has accordingly provided comments on the factual issues raised.

2.2.8. CoRWM has also advised Welsh Government on what should be included in any further consultations should it be decided to adopt a policy for geological disposal.

2.3 RWM Transition

2.3.1 Background to the formation of Radioactive Waste Management Limited (RWM)

2.3.1.1 CoRWM has continued to scrutinise the transition of RWM into a wholly owned subsidiary of the NDA. This work was undertaken under the general task of providing scrutiny of, and advice to DECC and other Sponsors on the transition of the NDA (RWM) to an effective GDF Delivery Organisation.

2.3.1.2. A meeting was held with RWM representatives on 20 August 2014 to discuss elements of the organisation of RWM. Following this meeting, a total of 27 documents were forwarded to CoRWM to assist with the scrutiny exercise. The documents allowed the background and context of RWM's development to be ascertained. Following the submission of CoRWM's recommendations in 2006, the UK Government had decided :

1. that the NDA would be responsible for planning and implementing geological disposal;
2. that the NDA would incorporate skills and technology from the Nirex organisation; and
3. the organisational model that would apply - with development work and routine operation of a GDF undertaken by a contractor.

2.3.1.3. In June 2008, following publication of the White Paper – Managing Radioactive Waste Safely, the proposal was for NDA's Radioactive Waste Management Directorate to be developed into an effective delivery organisation to implement geological disposal and in due course, for the management of this organisation to be opened to competition if deemed appropriate.

2.3.1.4. In December 2009 it was agreed that RWMD could progress to prospective licensee status subject to voluntary regulatory scrutiny, production of a safety and environmental management prospectus and agreement of an organisational baseline. In 2010, following an organisational effectiveness review of the NDA, there was a 'top-down' organisational review of RWMD that looked 5 years into the future. This effectively covered the then extant Stage 4 of MRWS programme plus preparatory work for Stage 5 (site characterisation, etc.). This review retained the existing business model and incorporated the following design principles:

1. lean, Intelligent client – ensuring the organisation remains robust to enable it to operate effectively as a prospective licensee;

2. flexible and efficient while retaining the necessary core competencies;
3. clear accountabilities for every role; and
4. professional qualifications.

2.3.1.5. In June 2011, RWMD was restructured following the 2010 'top-down' review. In January 2013 RWMD restructured its Executive with the appointment of Directors for: Science and Technology; GDF Siting; Waste Management; Stakeholder Engagement and Communications. RWMD also increased its stakeholder engagement and communications capability along with increased geological capability. RWMD introduced a competency management system and completed its competency assessment in August 2013. In September 2013, a 3 year organisational development plan was adopted.

2.3.2 *Formation of RWM*

2.3.2.1. The formation of Radioactive Waste Management Limited (RWM) as a wholly owned subsidiary of NDA was completed in April 2014. Governance of the new organisation is through RWM Board. The Board membership consisted of:

- an NDA appointed chair;
- three NDA appointed non-executive directors;
- two independent non-executive directors; and
- two executive directors – MD and Science and Technology Director

2.3.2.2. In July 2014, the White Paper described RWM as the developer with responsibility for implementing Government policy on geological disposal.

2.3.2.3. The evidence from the period up to the formation of RWM appears to show that the process was robust and comprehensive. Any issues highlighted by internal and external bodies were addressed, although some are ongoing.

2.3.2.4. CoRWM is, however, concerned that appropriate separation of RWM's operational role from the NDA's strategic role does not yet seem to be clearly in place. The overall leadership of the organisation is firmly embodied in the RWM Board and the composition of this Board consists of four NDA appointees (including the Chair), two RWM executives and two external independent directors. CoRWM considers that this balance should be reviewed at regular intervals.

2.3.2.5. CoRWM notes that RWM has produced two key documents namely: the Organisational Baseline Document (OBD) and Organisational Baseline Compliance Assessment (OBCA). The matters raised in the OBD include:

- RWM remains dependent on the NDA for some aspects of its governance and service support;
- the intention of RWM to develop, in a staged manner, into a Site Licence Company (SLC) capable of applying for the necessary regulatory licence and permissions to develop the design and construct, operate and eventually close a GDF, should a suitable site be identified..;
- the governance and operational arrangements will apply for a period after the formation of the subsidiary while RWM is limited to preparatory work in support of the GDF siting process; and
- the OBD will be reviewed periodically.

CoRWM welcomes the recognition of these issues and will continue to scrutinise the development of RWM in the future.

2.3.2.6. CoRWM notes that a key design principle described in the OBD concerns the retention of sufficient suitably qualified and experienced staff. The OBCA recognises this as a vulnerability because in the presence of 'singletons' within the current organisation. CoRWM notes that contingency arrangements are in place to help mitigate this situation.

2.3.2.7. CoRWM would finally highlight that none of the documents examined indicate how RWM is preparing itself to work through the process of securing volunteer sites and then undertaking the site selection activities.

2.4 Scottish Government Radioactive Waste Management Strategy

2.4.1 HAW Policy Implementation Strategy

2.4.1.1 The aim of task 4a was to input to and review the process for developing a strategy for implementing the Scottish Government Policy for managing Higher Activity Radioactive Waste. The Committee had expected that the Scottish Government would publish a Consultation on a Draft of a Strategy to implement the January 2011 HAW Policy. However this did not happen and hence the Committee was not able to scrutinise the process in 2014-15 or provide advice to the Scottish Government.

2.4.1.2 Although site operators and regulators were involved in development of the Strategy, the Committee is concerned that the delay in consulting on its implementation could create the risk that site operators in Scotland will not have a clear or consistent understanding of how the Strategy is to be interpreted and

implemented. This could result in site operators submitting individual (and possibly inconsistent) proposals for the management of their HAW for approval to the regulator.

2.4.2 *Management of HAW in Scotland*

2.4.2.1. Members of CoRWM observe the twice-yearly Scottish Nuclear Sites Meeting. The remit of this meeting is to:

- enable two way engagement between Scottish Government and stakeholders on issues which affect the nuclear sector; and
- provide a forum to facilitate discussion of cross-Scotland issues and information sharing for site operators, site stakeholder groups and other stakeholders.

2.4.2.2. CoRWM considers these valuable meetings for all concerned as they bring the NDA and site representatives from Chapelcross, Dounreay, Hunterston, Torness and the Ministry of Defence together with SEPA, local community representatives, the overarching Scottish Councils' Committee on Radioactive Substances and Scottish Government officials. The Scottish Nuclear sites meetings were held on 1 May and 20 November 2014. There are no CoRWM papers relating to these meetings as SG produce minutes for all participants.

2.4.2.3. The Committee visited Dounreay to discuss the storage of HAW on 1 July 2014 (See CoRWM website). The details of this visit are discussed in the section of this report that deals with Interim Storage. On the evening of 1 July 2014 there was an opportunity for interested local people to meet informally with the Committee and a small number did so. The following day an open Committee meeting was held in Thurso and again a number of local stakeholders attended (CoRWM doc 3200).

2.5 *Interim Surface Storage*

2.5.1 Whilst the independent nuclear regulators have responsibility for regulating safety, security and environmental protection at nuclear sites, CoRWM also has a responsibility to scrutinise and provide independent advice on the management of radioactive waste including robust interim storage of HAW in the UK. During the year Members made a number of visits to UK nuclear sites both to discuss the interim storage of HAW and proposals for retrieval and treatment with staff of the organisations responsible for treatment and storage and to observe the physical condition the facilities. On the basis of the site visits made during 2014-15,

CoRWM sees no reason to suggest that HAW in the UK is not being safely stored or adequately managed.

2.5.1 Visit to Sellafield

2.5.1.1. CoRWM visited Sellafield on the 1 May 2014 (see CoRWM website) to receive an update on the decommissioning of the legacy facilities and see the current and new waste stores. The Committee was given a tour of the pile fuel pond and briefed on the other three legacy facilities; the Magnox storage and decanning facility, the Pile Fuel Cladding Silo and the Magnox Swarf Storage Silos. The committee also visited the Box Encapsulation Plant and associated stores, a priority project that will receive Intermediate Level Waste (ILW) from the legacy facilities when the facilities are commissioned. Finally, CoRWM was shown the Waste Encapsulation Plant Site and the Windscale Advanced Gas Cooled Reactor Intermediate Level Store.

2.5.1.2. Those Members of the Committee that had previously visited the site were generally impressed by the progress made at the pile fuel pond and the dynamic approach to project management that facilitated simultaneous progress on a number of work streams. These work streams included retrievals of spent fuels, retrieval and treatment of sludges, retrieval and treatment of other pond wastes, and imaging of the pond interior to improve knowledge of its contents.

2.5.1.3. CoRWM was also impressed with the transfer of existing technology from other fields, for example, making use of sonar imaging techniques developed for the oil and gas exploration industry, together with robotic systems to image the interior of the ponds without the high costs of developing novel instrumentation.

2.5.1.4. Some Members that had not visited the Sellafield site for three years remarked on the visual changes and the change in mindset of those that worked there to one of delivery focusing on the end point. They also remarked that staff seemed very aware of the interdependencies and timescales for commissioning new facilities, including making changes to unused facilities to reduce wherever possible the number of delays to getting the waste into safe and robust interim storage.

2.5.1.5. CoRWM thought that the target decommissioning dates seemed more realistic than previous dates that they had been given.

2.5.2 Visits to Dounreay in July and October

2.5.2.1. CoRWM visited Dounreay on the 1 July 2014. (see CoRWM website) Again the format was to hold discussions with the site staff on plans and progress and to observe facilities. The Dounreay staff gave a presentation on the site's strategy to manage its Intermediate Level Waste and the plans for decommissioning the various facilities. The Committee visited the Dounreay Cementation Plant and associated ILW stores, the Dounreay Fast Reactor, and was given a tour of the rest of the site by minibus and a tour of the new Low Level Waste Facility.

2.5.2.2. In general the Committee commented on the clarity, enthusiasm and candidness of the facility managers. The staff seemed highly committed to delivering a good job with storage of the various wastes. However, CoRWM had some concerns that the site only had one cementation plant for raffinates which was designed in the 1980s and would need to be operational over the remaining period that the site would produce waste streams requiring cementation. The Committee agreed that they would look into why plans were cancelled for a new plant and what risks were posed if the current plant were to stop working.

2.5.2.3. The CoRWM was updated on the change of strategy from unshielded containers in heavily shielded stores to the use highly shielded packages in unshielded stores. CoRWM thought that the benefits of the change of strategy were not obvious and clearly depended on the volumes of waste being treated. CoRWM intend to look at the benefits of shielded packaging versus shielded stores in its 2015-16 work programme.

2.5.2.4. CoRWM discussed the need for complete decommissioning of the facilities on the site, and in particular of the shaft. The Committee understood that the shaft was still porous despite the majority of discharge being stopped by grouting. In addition there was still a chance of explosion as there had been one in the past, although the monitoring of gases provided reassurance that the risk was very low. CoRWM recognised that the waste in the shaft was not categorised to the standards required for modern waste packaging and that this presented difficulties in retrieval planning and subsequent treatment and storage. CoRWM supports the retrieval of wastes in the shaft as soon as is reasonably practicable because the shaft does not represent robust interim storage.

2.5.2.6. The visit highlighted the issue that CoRWM had raised with Scottish Government previously, in that the vast majority of ILW wastes at Dounreay (70% by volume and 99% of the radioactivity) were not suitable for near surface disposal. The Committee agreed to discuss this issue further and to raise it with Scottish sponsoring Ministers at the next opportunity.

2.5.2.7. CoRWM observed that it had been shown a number of different designs and solutions for waste packaging across the site, and there could introduce complications for final disposal. The use of concrete boxes similar to the WAGR boxes may also cause handling problems if they were ever to be disposed of underground in limited space. The Committee agreed that the Letter of Compliance process by which RWM assesses each package type for waste disposal is crucial and the Committee agreed to look at the process for issuing the Letters of Compliance in their future work programme.

2.5.2.8. There were a number of outstanding issues resulting from the July visit and several Members of the Committee revisited the site on the 27 October 2014 (CoRWM doc 3181). During this revisit Dounreay staff were questioned in the areas of concern and robust answers were received demonstrating a very good understanding of the issues. In relation to the decision to cancel the proposed new facility, it was demonstrated that DSRL fully understood the implications and had satisfied itself that the risks of continuing to run with the current existing facility were manageable. In particular CoRWM was assured that there were no foreseeable plant life limiting issues and that in the extreme, the most significant plant items could be replaced within 12 months, which would not affect the ability of DSRL to complete the conditioning of all the DFR and PFR liquid fission product waste and deliver the Dounreay site restoration programme agreed with the NDA. Additionally, there was a robust supply chain to provide replacement components.

2.5.2.9. In relation to its previous concerns regarding the move to the use of shielded containers and storage in unshielded stores, CoRWM received robust arguments to support the rationale behind this decision. Regarding the suitability of conditioned ILW for near surface disposal, Members were given a comprehensive response. The key points were that for by 2025 80% of the conditioned waste will not be suitable for near surface disposal and even after 300 years of surface storage at Dounreay some 62 % of the waste will not be suitable for near surface disposal.

2.5.2.10. On the basis of the information received members reported back to the Committee that DSRL had demonstrated a robust defence of their current strategy for the treatment and storage of radioactive waste.

2.5.3 Visits to Wylfa in September 2014 and January 2015

2.5.3.1. CoRWM visited the Wylfa site on 4 September 2014 (CoRWM doc. 3225) to receive presentations on the site's strategy to manage its Intermediate Level Waste and the plans for decommissioning. The Committee was taken on a tour of site but because of confusion over documentation, Members were not given access to the Reactor and the Intermediate Level Radioactive Waste (ILW) stores. In

general the Committee appreciated the presentations and clearly a good deal of effort had been put into planning the day and ensuring that the Committee were given a comprehensive summary of the way radioactive waste is managed on the site. The staff who conducted the tours were clearly knowledgeable and the Committee appreciated both their candid briefings on operations at the site and the issues that they foresaw. The Committee was particularly interested to hear about the work being undertaken to deal with consequences of the water ingress event that had occurred in one of the dry stores many years ago.

2.5.3.2. Because CoRWM had not been able to visit the reactor and the waste storage facilities in September, a follow-up visit to the site by members of the CoRWM Welsh subgroup was arranged for the 12 January 2015. At the follow-up visit the CoRWM subgroup was fully briefed on the management practices for HAW at Wylfa and had opportunities to discuss issues that have arisen in relation to management and the decisions that have been made for addressing these. The Site Director was able to update the subgroup on the impact of Cavendish Fluor Partnership taking over as the parent body organisation in September 2014.

2.5.3.3. The potential role of Wylfa as buffer store for spent fuel if there were problems with reprocessing at Sellafield was discussed. It was explained that fuel is transferred to flasks; the contents being limited by the wet stock limit under the control of MOP (despite the fact that Wylfa does not store its spent fuel in ponds). Sellafield then seeks delivery of flasks as required. It is expected that about 450-500 tons will be sent this year. This amount is in complete alignment with what Sellafield is achieving in its MOP. The Director stated that ending operations in 2015 would not challenge Sellafield. There is a 12 month contingency in the Sellafield plans and, if necessary, Wylfa could store the spent fuel in situ in the reactor.

2.5.3.4. Following the briefing sessions, the subgroup was given a comprehensive tour of the solid ILW drum store, LLW sorting area, ILW mini store, gas turbine house, waste transit store and dry store cells. The subgroup concluded that:

- Plans for end of electricity generation seem robust, with fuel arisings planned within the Magnox Operating Plan envelope.
- The amount of drummed ILW is modest and the alternatives are to store at a location within the reactor building or to transport to the Trawsfynydd ILW store.
- LLW had been planned for incineration on site, but the imposed change to the environmental permit will see this waste transported to off-site facilities for incineration.
- There is a considerable amount of largely metallic ILW in the dry store cells. These facilities will continue to be used, and the assay, removal,

treatment and disposal of this waste will need to be dealt with at final site clearance.

2.5.4 Visit to Berkeley

2.5.4.1 CoRWM's final visit of the year was to Berkeley on the 24 and 25 March 2015. (CoRWM doc. 3226) During the visit, Members observed clear evidence of enthusiasm, pride and team working of staff on the site, excellent housekeeping and an excellent nuclear safety culture. There was tangible evidence of real progress on site. One of the big steps forward was the recognition that off-site preparation (testing and commissioning) was more effective than on site due to the working restrictions on site. There was also recognition (as is seen on other decommissioning sites) that off-the-shelf equipment can often be used instead of bespoke equipment for certain work streams.

2.5.4.2. There was clear evidence of applying the waste hierarchy: re-using material and working hard at categorising waste correctly so that LLW was identified as LLW and ILW was kept separate and treated as ILW.

2.5.4.3. CoRWM is preparing its report on the site visit and this will be published in 2015-16.

2.6 Spent Fuel & Nuclear Materials

2.6.1. CoRWM recognises that neither spent fuel or plutonium have been designated as being radioactive wastes. However, given that it is possible that these materials may be designated as being radioactive wastes in the future, CoRWM maintains an interest in the context of robust interim storage. As part of its scrutiny role, CoRWM's Sub-group on spent fuel and plutonium has corresponded with NDA and held a meeting to discuss a list of '*points of interest to CoRWM*'. (CoRWM doc.3227) The outcomes of the meeting are summarised below.

2.6.1 Spent fuel – Magnox

2.6.1.1. The current UK policy is to reprocess all Magnox fuel, as spent Magnox fuel is not currently declared as being as a waste and as such is not currently covered by a Letter of Compliance for direct disposal in a GDF. Since the success or otherwise of the Magnox Operating Programme could have a substantial impact on the inventory of HAW for disposal, CoRWM was interested in whether '*total reprocessing*' was in fact assured and, if not, what contingency plans were being put in place. NDA discussed its assumptions on Magnox reprocessing, and the plans for

inventory items such as intact fuel, corroded fuel, and fuel currently held in the First Generation Magnox Storage Pond and Dounreay Fast Reactor.

2.6.1.2. NDA is examining a range of '*tolerable end states*', all of which aim to empty the remaining Magnox stations of fuel. This includes some scenarios where relatively small amounts of Magnox fuel remain unprocessed, while ensuring that contingencies are in place to deal with each outcome. This involves:

1. contingency plans to recover from plausible reprocessing failure breakdowns within a 6 month window;
2. an extension of dry in-reactor storage;
3. trials to underpin extended wet storage of Magnox fuel (it is thought this could be extended to ~15 years in optimum conditions); and
4. storage of corroded fuel in ullaged containers so that contamination does not spread into the storage pond.

2.6.1.3. For un-reprocessed fuel, NDA claim that the options of vacuum drying and dry storage in a sealed canister and use of self-shielded boxes could be implemented in time to be used on fuel already wet at the time of reprocessing failure. Alternatively, NDA is looking at an option to treat un-reprocessed fuel using a Bulk Uranium Fuel Treatment Plant (BUFT) whose specification is being developed to cover the end state scenarios, and which is scheduled to be on line in 2028.

2.6.1.4. CoRWM is reassured by the 'defence in depth' approach being taken by the NDA, and by the openness with which potential problems are being confronted and planned for.

2.6.2 *Spent fuel – Oxide*

2.6.2.1. NDA's plans for AGR fuel are now being set to cover a range of plausible futures including further AGR reactor life extensions, while keeping to the 2018 closure date announced for THORP. With the maximum credible AGR life extensions, with the last AGR reactor shutdown will be in 2033, so AGR deliveries to Sellafield are expected to 2037 with the last fuel placed into interim storage in the THORP pond in 2039.

2.6.2.2. The intention is to complete the ~1300te AGR part of the ~1,600teHM of THORP reprocessing programme.

2.6.2.3. Long term AGR spent fuel storage will be in the THORP Receipt and Storage pond (TR&S), which has sufficient capacity for the 6,000teHM expected with the maximum likely AGR life extension and minimum likely reprocessing. In the long term AGR fuel will be stored at pH11, as in Fuel Handling Plant (FHP) and the First

Generation AGR Storage Pond. Notably, the First Generation AGR Storage Pond has had no AGR corrosion failures over 25 years, in spite of having several pond chemistry ‘transients’. TR&S is currently transitioning to pH9 pending the removal of some Multi-Element Bottles (MEBs) which would react at high pH, but will move to pH11 when these MEBs are removed. Some corrosion trials on spent fuel held in containers are in progress in TR&S with 2.5te AGR fuel, with the backstop of reprocessing the fuel should corrosion start to occur.

2.6.2.3. Overall contingency plans are being developed by Sellafield Ltd to cover a range of ‘*problems in pond*’, including degradation of the pond itself, degradation of the fuel, and degradation of the storage environment. Contingencies are also being maintained against changes in policy. There is a technical road map, with underpinning research at ~£600k p.a. undertaken through NDA’s Direct Research Portfolio. A range of contingencies is being examined including:

1. storage of AGR fuel in containers that can be ullaged, isolating the contents from the pond water;
2. skid-mounted ion exchange units for pond water purification; and
3. drying and dry storage similar to that being developed as a Magnox contingency.

2.6.2.4. The focus of the work on dry storage of AGR fuel is to establish a sound technical and safety case basis such that a decision could be made in the unlikely event that the current pond storage approach was not sustainable out to 2075. The earliest any decision to move to dry storage could be taken was around 2027 (for implementation by 2040), and this contingency is being examined with RWM, who are also examining early disposal of AGR fuel in the period 2040-2075.

2.6.2.5. CoRWM is reassured by the approach being taken by the NDA, but notes that, should the availability of the GDF become delayed, then the option of long-term storage of spent fuel in ponds may need to be revisited. CoRWM also notes that the planned closure of THORP will remove one proven option of dealing with the stored spent fuel.

2.6.2.6 CoRWM will scrutinise the arrangements for the storage of spent fuel and the implications of the planned closure of THORP in its 2015-16 work programme.

2.6.3 *LWR Fuels*

2.6.3.1 CoRWM did not allocate any time in 2014-15 to look at the storage of LWR fuels. CoRWM will include the storage of LWR fuel in its 2015-16 work

programme when the complete picture including Sizewell B and new build fuel will be examined, and when current work known to be taking place on storage policy options will have been completed. This study will also cover the fuels (apart from AGR) which are scheduled to be un-reprocessed when THORP closes in 2018.

2.6.4 *Plutonium*

2.6.4.1. As has been publically stated, NDA has been tasked by Government to review three options for the re-use of the UK civil plutonium stockpile, and is also examining the possibility of large scale immobilisation of plutonium, effectively treating the material as a waste. CoRWM agreed with the NDA that it would be timely to wait for these recommendations to be finalised. CoRWM will review plutonium storage and disposition in its 2015-2016 work programme.

2.6.5 *Uranium*

2.6.5.1. The UK's stock of reactor depleted uranium from reprocessing and depleted uranium from enrichment present both a potential waste challenge and a potentially huge energy resource if used in fast reactors. However, CoRWM is only concerned with the implications of this uranium being declared a waste and hence its impact on the GDF safety case. NDA established an Integrated Project Team on Uranium in 2012 and this is scheduled to complete its work in March 2016. Consequently CoRWM did not spend any time scrutinising the storage of uranium or its potential impact on a GDF. Thus 2015-16 would be a more opportune time for CoRWM to examine the storage and potential disposal of uranics.

2.7 ***CoRWM Outreach Activities***

2.7.1 CoRWM as a Committee and as individual Members undertook a number of activities aimed at highlighting the role of the Committee. The main activities under the year were:

- The Chair attended the Public Chairs' Forum at the Institute of Government on 6 May 2014.
- The Chair gave a presentation on "Safe Radioactive Waste Management" at the Westminster Energy, Environment and Transport Forum 20 May 2014.
- CoRWM Public Meeting at Workington 30 April 2014.
- CoRWM Public Meeting in Thurso 1 July 2014.
- Francis Livens and Helen Peters presented at a meeting on "Ethical, Legal and Economic Aspects of Nuclear Energy" Manchester University 2 September 2014.

- CoRWM Public Meeting in Anglesey, 4 September 2014.
- Helen Peters presented a paper on “Implementing Geological Disposal” at the World Nuclear Association Radioactive Waste and Decommissioning Working Group, 8 September 2014.
- Helen Peters gave a presentation on the “White Paper on Implementing Geological Disposal” at the NIA Decommissioning Group Meeting at the Health and Safety Laboratory, on 8 October.
- Simon Harley and Helen Peters participated in a panel discussion on “Geological Disposal facility” at the NERC LO-RISE & TREE Winter School at the University of Manchester, on 22 January 2015.
- Francis Livens attended the CSA and Advisory Committee Chairs meeting in London on 10 February 2015.

3. Triennial Review of CoRWM

3.1 *CoRWM’s Role*

3.1.1. CoRWM is a Non-Departmental Public Body (NDPB) and has four sponsors: the Department of Energy and Climate Change (DECC), the Scottish Government, the Welsh Government and the Northern Ireland Executive. DECC provide the funding for CoRWM and its Secretariat. Like all NDPB’s CoRWM is subject to review every 3 years to ensure that its function is required and that it offers value for money. The following provided the key elements of CoRWM’s submission to the Review. (CoRWM doc. 3197)

3.1.2. As an independent advisory committee CoRWM is part of the UK’s governance arrangements for the management of higher activity radioactive waste (HAW) but CoRWM is not an executive part of Central Government.

3.1.3. The key parts of CoRWM’s Terms of Reference (ToR), which are set by its sponsors, are set out below.

- a) The key functions carried out by CoRWM are:
- to provide **independent scrutiny and advice** to UK Government and devolved administration Ministers on the long-term management of radioactive waste, including storage and disposal;
 - to provide **independent scrutiny** of the Government’s and Nuclear Decommissioning Authority’s (NDA’s) proposals, plans and programmes to deliver geological disposal, together with robust interim

- storage, as the long-term management option for the UK's higher activity wastes; and
- to provide appropriate and timely **evidence-based advice** on government and NDA plans for the delivery of geological disposal under the MRWS programme.
- b) CoRWM's work programme may include review of activities including:
- waste packaging options,
 - geological disposal delivery programmes and plans,
 - site selection processes and criteria, and
 - the approach to public and stakeholder engagement.
- c) CoRWM is expected to test the evidence base of the plans for the delivery of geological disposal.
- d) CoRWM is expected to have an ongoing dialogue with Government, the implementing body, local authorities and stakeholders.

3.2 *Changes since the 2012 Triennial Review*

3.2.1. CoRWM was subject to a Triennial Review in 2012 and at that time it was concluded that:

“CoRWM should continue as an advisory Non-Departmental Public Body providing scrutiny of and advice to Government on issues relating to the management of radioactive waste in the UK. It was the assessment of the Review team that CoRWM offers a range of expertise and scrutiny independent of Government, the nuclear industry and regulators. It is an independent body that is trusted by stakeholders and the wider public alike.”

3.2.2. In the intervening period the work of CoRWM has remained unchanged but there have been changes to the UK Government's policy in relation to the implementation of geological disposal following the Decision of Cumbria County Council not to proceed to stage 4 of the MRWS process.

3.2.3. The revised UK Government's policy set out in the White Paper “Implementing Geological Disposal” places specific tasks on CoRWM namely:

1. to **provide independent advice and scrutiny** to Government (UK, Wales

and Northern Ireland) on the plans and programmes for delivering geological disposal (including the safe and secure interim storage that precedes disposal) [para 3.41];

2. to play a **scrutiny role** throughout the development of the national geological screening guidance, in particular the adequacy of the associated open public and stakeholder engagement [para 5.11]; and
3. to play a **scrutiny role** in relation to the RWM's research and development programme in support of geological disposal [para 2.33].

3.2.4. It is clear that the UK Government sees a vital role for CoRWM in the governance of the process required for the management of HAW, including geological disposal. If CoRWM was stood down, the White Paper would have to be revised because of the elimination of independent scrutiny. CoRWM believes that the removal of independent scrutiny would certainly undermine public confidence in Government plans for geological disposal. CoRWM recognises that the White Paper includes the use of "independent experts" but it is clear that no other organisation has the acknowledged role of independent 'scrutiny' of the program.

3.2.5. In relation to CoRWM's other sponsors, the Welsh Government has embarked on a review of its own policy for radioactive waste management and CoRWM has provided both scrutiny of the process and advice to the Welsh Government on its proposals. The Scottish Government has developed its strategy to implement its policy on radioactive waste management and again it sought and received advice from CoRWM.

3.3 *Why does Government need independent advice?*

3.3.1. CoRWM believes that higher activity waste management is a real and pressing problem for the UK. Legacy facilities are ageing, and failure to demonstrate that the current HAW can be managed effectively has the potential to put public confidence in the new nuclear power programme at risk. There is mistrust of Government and the industry in some parts of society and this is a major barrier to public acceptance of nuclear activities. The existence of a technically qualified and respected independent body which can scrutinise what the Government and industry are doing is not only a powerful asset to improve policy making but it can also build public confidence by providing independent publically-visible challenge. Without a body doing these jobs, policy making and implementation will be poorer, and public confidence will be harder to win.

3.4 *What body should do this job?*

3.4.1. CoRWM believes that whatever body provides scrutiny and advice across HAW management, it has to have expertise in a very wide range of topics. It also needs to have enough expertise to provide internal challenge (i.e. the body needs more than one geologist, one lawyer and so on). It also has to be much more involved with day-to-day activities than many advisory committees in order to be sufficiently engaged with the process to understand what is happening and to contribute in a timely fashion.

3.4.2. In the absence of a body fulfilling this role, Government, which has limited and stretched technical resources, will find itself relying on either the industry, which blurs the demarcation between policy and implementation, or contractors, where there will always be a suspicion that commercial self-interest influences their work, and which, given the diversity and quality of input required, are likely to be substantially more expensive than is provided currently by CoRWM.

3.5 *Continuity and Institutional Knowledge*

3.5.1. CoRWM has an exceptional breadth of knowledge, and as important, no other organisation has the continuity with, and institutional knowledge of, the UK's radioactive waste programme. This is an important issue in relation to the quality of advice that Government needs, especially given the peripatetic nature of civil servants. Most CoRWM Members serve for 10 years and the Committee is refreshed every 4 years. This gives a continuity of knowledge that is not only unique, but also is essential in the delivery of such a long-term programme. CoRWM believes that losing this capability would have a significant detrimental effect on the ability of Government to deliver this vitally important programme.

3.6 *Resources*

3.6.1. In the period since the last Triennial Review CoRWM's funding has been cut and consequently the Committee has been reduced from a Chair and 12 Members to a Chair and 10 Members. The Committee's website has been incorporated into the Government's new website, which has reduced CoRWM's visibility to the public and removed access to the CoRWM document archive. Also because of recent administrative difficulties within the Secretariat, the publication of CoRWM's e-bulletin and other documents on the website has been somewhat limited for a number of months. This has again reduced CoRWM's visibility to the public and other key stakeholders.

4 Forward Look

4.1 Geological Screening

4.1.1. The Draft National Geological Screening Guidance document suite prepared by RWM is proposed to include several documents. A document for Public Consultation, will be issued following revision in the light of comments from the Independent Review Panel, CoRWM and RWM's Technical Advisory Panel (TAP). Another document, the National Geological Screening Guidance Technical Specification, is to provide the detailed Guidance for the BGS in its preparation of the screening outputs. CoRWM will scrutinise the process of development and use of the National Geological Screening Guidance. CoRWM intends to scrutinize the development and implementation of this guidance in the coming year.

4.2 Regulatory Framework

4.2.1. CoRWM believes that the development of the licensing framework for a GDF is crucially important to the success of the Governments "Implementing Geological Disposal" strategy and as such CoRWM intends to scrutinise ONR's activities in this area in the coming year.

4.3. Generic Safety Cases

4.3.1. CoRWM will continue to scrutinise the development of RWM's 2016 generic Disposal System Safety Case as well as their application of the 2010 gDSSC to National Geological Screening in the siting process. CoRWM will continue to encourage RWM to produce three generic environmental safety cases, one for each geological setting.

4.4 Community Engagement

4.4.1. CoRWM believes that the success of the work package on communities is central to the delivery of the GDF siting process as set out in the WP. Without an acceptable definition of the "Community" that will host the GDF, the representative authority that can make the decisions to either host the GDF or exercise the right to withdraw from the process and how public support might be assessed, CoRWM believes that the process will fail. It is therefore essential that the public has confidence in the process. CoRWM has observed the setting up of the Communities Representative Working Group (CRWG). And whilst good progress is being made, it is essential that the CRWG is seen by stakeholders and the public to

be operating in an open and transparent manner in order to build trust as it works to prepare its recommendations to Ministers in Spring 2016. CoRWM will continue to scrutinise this work and provide advice when appropriate.

4.5 RWM Transition

4.5.1. CoRWM has continued to provide scrutiny of the transition of RWM into a wholly owned subsidiary of the NDA. CoRWM highlighted that none of the documents examined indicate how RWM is preparing itself to work through the process of securing volunteer sites and then undertaking the site selection activities. CoRWM believes that it is important to address this issue and intends to continue to scrutinise RWM's development in the coming year.

4.6 Welsh Government: Higher Activity Waste Policy Consultation

4.7.1. CoRWM is pleased to note that Welsh Government published its Policy on the Management and Disposal of Higher Activity Radioactive Waste in May 2015 and, at the same time, issued a consultation document on Geological Disposal of Higher Activity Radioactive Waste: Community Engagement and Implementation Processes. CoRWM will be responding to this consultation.

4.7 Scottish Government

4.7.1. CoRWM welcomes the publication by Scottish Government in May 2015 of a Consultation Draft of the Strategy to implement the January 2011 HAW Policy. CoRWM intends to respond to this consultation. Evidence from the Committee's visit to Dounreay suggests that even after 300 years the majority of HAW will not be suitable for near surface disposal. CoRWM will discuss this with the Scottish Government in 2015-16.

4.8 Spent Fuel, Plutonium and Uranium Management

4.8.1. CoRWM will review the storage and disposition of the UK's civil plutonium inventory in its 2015-2016 work programme.

4.10.2. In 2015/16, CoRWM will examine the plans for uranium interim storage, the implications of this uranium being declared a waste and hence its impact on the GDF safety case.

5 Conclusions and Recommendations

5.1 This past year has again been a busy time for the Committee and in spite of the staff and budget reductions the Committee has continued to make a significant contribution to the development and delivery of the UK's policies on the management of radioactive waste.

5.2. In the past year the Committee's work has been dominated by scrutiny of the Government's revision to the GDF siting policy and the development of the "Implementing Geological Disposal" White Paper" White Paper. This reports shows that the Committee not only effectively scrutinised the activities of the DECC and RWM officials, but it also gave timely advice.

5.3. The Committee is satisfied that the revision to the siting process was conducted appropriately and that the revised GDF siting process as outlined in the White Paper is appropriate and generally consistent with the views expressed in the responses to the consultation. Since the publication of the White Paper the implementation of some of the work packages has been slow but now appears to be on track. The successful completion of these work packages will require a continued high-level management focus.

5.4. The Committee has also scrutinised the development of the Welsh Government's Radioactive Waste Management Policy and provided timely advice when appropriate. Again the Committee is satisfied that the policy develop processes have been appropriately conducted and that the Consultation reflected the comments made in the earlier call for evidence.

5.5. This year the Committee has decided to make two recommendations for DECC and RWM to consider:

Recommendation 1: GDF Licensing under the NI Act 1965

CoRWM recommends that the Government should ensure that the details of the licensing of the GDF should be agreed and published before the end of the initial action period in the White Paper (end of 2016).

Recommendation 2: Generic Environmental Safety Cases

CoRWM recommends that RWM produces individual generic environmental safety cases for each of the three geological settings, hard rock, clay and salt.

References

CoRWM doc 2994 (2012)	CoRWM Position paper on the gDSSC (National Archive)
CoRWM doc 3151 (2014)	<u>CoRWM 2014-17 Work Programme</u>
CoRWM doc 3162 (2014)	<u>Minutes of plenary meeting, May 2014</u>
CoRWM doc 3163 (2014)	<u>CoRWM Response to Welsh Government Call for Evidence: Review of Current Policy on the Disposal of Higher Activity Radioactive Waste</u>
CoRWM doc 3167(2014)	CoRWM Response to Questions from Robert Williams regarding ‘ Responses to Welsh Government Call for Evidence: Review of Current Policy on the Disposal of Higher Activity Radioactive Waste’
CoRWM doc 3169 (2014)	Minutes of CoRWM November Plenary Minutes
CoRWM doc 3172 (2014)	Final advice to Welsh Government consultation
CoRWM doc 3176 (2014)	<u>Note of Public Meeting Anglesey</u> Minutes of Plenary Meeting, Dounreay
CoRWM doc 3177 (2014)	<u>Minutes of Plenary Meeting Anglesey</u>
CoRWM doc 3181 (2014)	<u>Note of follow up visit to Dounreay site/Thank you letter</u>
CoRWM doc 3197 (2014)	CoRWM Response to its Triennial Review 2015
CoRWM doc 3200 (2014)	<u>Minutes of Plenary Meeting, Dounreay</u>
CoRWM doc 3204 (2014)	Minutes CoRWM February Plenary
CoRWM doc 3207 (2014)	Minutes CoRWM Open Plenary - Sign off Work Plan
CoRWM doc 3222 (2014)	CoRWM's initial observations on the National Geological Screening Technical Event

CoRWM doc 3223 (2014)	Key CoRWM Comments: Geological Screening Guidance
CoRWM doc 3224(2014)	Reflective advice to DECC on the National Geological Screening Guidance process
CoRWM doc 3225 (2014)	Thank you Letter to Wylfa
CoRWM doc 3227 (2014)	Note on a Meeting with NDA on Spent Fuel and Nuclear Materials

ANNEX A CORWM EXPENDITURE 2014-15

Table 1 shows CoRWM's budget out-turn for the year, broken down by main spending areas. The budget was set at £293k.

Budget Item	Budget (£k)	Out-turn (£k)
Members' Fees ¹	207.9	188.9
Members' Expenses ²	41.3	40.1
Meetings and Visits ³	43.8	40.0
Website	0	0
Technical support	0	0
Total	293	269
	Reduced to 281.0 Mid year	

Table 1 CoRWM's Budget Out-Turn 2014/15

- ¹ Members' fees include time spent attending CoRWM Plenary meetings; visits to nuclear sites and stakeholder meetings; presenting at/attending conferences; and travelling to and from venues. The figures also include where appropriate Employer National Insurance Contributions.
- ² Members' expenses include transport costs and incidental expenses when travelling to meetings, visits or other venues.
- ³ Meetings and visits include venue and Members' accommodation costs for Plenary Meeting, visits and other meetings.

CoRWM is not required to report the fees that individual members received, but it publishes this information in the interests of transparency. These are shown in Table 2.

The standard fees are those paid at the rates specified in Members terms of appointment. These state that the Chair can claim £450 a day for 1.5 days a week, the Deputy Chair can claim £380 for 1 day a week and Members can claim £300 a day for 1 day a week (all for 52 weeks in a year).

Table 2 Fees Paid to CoRWM Members

<i>Name</i>	<i>Standard Fees (£k)</i>
Laurence Williams (Chair)	24.3
Gregg Butler	14.7
Brian D Clark	12.3
Paul Davis	15.6
Simon Harley	15.8
Francis Livens	18.2
Rebecca Lunn	13.7
Helen Peters	12.3
John Rennilson	10.2
Stephen Newson	13.2
Lynda Warren	13.5
Janet Wilson	6.5
<i>Total</i>	<i>168.0</i>

ANNEX B CoRWM MEMBERSHIP

Professor Laurence Williams FREng - Chair



Laurence 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, Chair of the High level Panel to review the 2007-2013 EURATOM FP7 Nuclear Fission and Fusion Research Programme, 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**

Professor Francis Livens – Deputy Chair



Francis is the Director of the Dalton Institute at the University of Manchester. He 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**

Professor Gregg Butler



Gregg 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**

John Rennilson



John 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**

Professor Rebecca Lunn



Rebecca Lunn – is a Professor in Civil Engineering at the University of Strathclyde. Her expertise includes: monitoring and modelling of deep flow systems; the influence of geological structures on the mechanical and hydraulic properties of rocks; and developing new technologies for ground and subsurface engineering. She is a Fellow of the Royal Society of Edinburgh and a Fellow of the Institution of Civil Engineers. In 2011, she was awarded the Geological Society's Aberconway Medal for a body of research of particular relevance within industry; she was the first woman and first engineer to receive this award. Prof Lunn's research experience is highly multi-disciplinary and she collaborates with structural geologists, seismologists,

mathematicians, microbiologists, material scientists and electronic engineers. She leads two national EPSRC research consortia: 'Biogeochemical Applications in Nuclear Decommissioning and Disposal' (BANDD) and 'SAFE Barriers'. Current research interests include: prediction of rock mass property change over time (from decades to glacial time periods), development of new subsurface monitoring devices, development of low-viscosity grouts for hydraulic containment and ground improvement, and design of engineered barrier systems. Her research is driven by industry challenges in nuclear decommissioning, hydrocarbon production, radioactive waste disposal, geological carbon storage and geothermal energy production. She has additional interests in supporting women in science and engineering, in developing tools for effective public engagement and in communication of scientific uncertainty. She currently holds no other ministerial public appointment.

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

Helen Peters



Helen 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.

Stephen Newson



Stephen 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**

Dr. Janet Wilson



Janet 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**

Professor Simon Harley



Simon 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**

Professor Brian Clark



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



Paul 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**

Professor Lynda Warren



Lynda 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**

ANNEX C CoRWM's Terms of Reference

Introduction

1. Following the announcements by UK Government and the devolved administrations (Government), on 25 October 2006, a new Committee on Radioactive Waste Management (CoRWM) was appointed under these revised terms of reference designed to meet the future needs of the Government's Managing Radioactive Waste Safely (MRWS) programme. The Committee is jointly appointed by UK Government and relevant devolved administration Ministers. Details of its roles, responsibilities and membership are outlined below.

CoRWM's Role and Responsibilities

2. The role of the reconstituted Committee on Radioactive Waste Management is to provide independent scrutiny and advice to UK Government and devolved administration Ministers on the long-term management of radioactive waste, including storage and disposal. CoRWM's primary task is to provide independent scrutiny on the Government's and Nuclear Decommissioning Authority's (NDA's) proposals, plans and programmes to deliver geological disposal, together with robust interim storage, as the long-term management option for the UK's higher activity wastes.
3. Sponsoring Ministers (from the Department of Energy and Climate Change (DECC) and the devolved administrations) will agree a three-year rolling programme and budget for CoRWM's work on an annual basis. Any in-year changes will be the subject of agreement by sponsoring Ministers.
4. CoRWM will provide appropriate and timely evidence-based advice on Government and NDA plans for the delivery of geological disposal under the Managing Radioactive Waste Safety programme. The work programme may include review of activities including waste packaging options, geological disposal delivery programmes and plans, site selection processes and criteria, and the approach to public and stakeholder engagement. Testing the evidence base of the plans for the delivery of geological disposal will be a key component of the work. As well as ongoing dialogue with Government, the implementing body, local authorities and stakeholders, CoRWM will provide an annual report of its work to Government.
5. CoRWM shall undertake its work in an open and consultative manner. It will engage with stakeholders and it will publish advice (and the underpinning

evidence) in a way that is meaningful to the non-expert. It will comply, as will sponsoring departments, with the Government Chief Scientific Advisor's Guidelines on the Use of Scientific and Engineering Advice in Policy Making² as well as other relevant Government advice and guidelines. Government will respond to all substantive advice. Published advice and reports will be made available in respective Parliaments/Assemblies, as will any Government response. CoRWM's Chair will attend Parliamentary/Assembly evidence sessions as and when required.

6. With the agreement of CoRWM's sponsoring Ministers, other parts of Government, the NDA and the regulatory bodies may request independent advice from CoRWM. Relevant Parliamentary/Assembly Committees may also propose work to sponsoring Ministers, for consideration in the work programme. CoRWM's priority role is set out in paragraph 2 although sponsoring Ministers may also ask the Committee to provide advice on other radioactive waste management issues as necessary.
7. In delivering its annual work programme, and where there is a common interest, the Committee will liaise with regulators and any bodies established to advise Government and the regulators.
8. CoRWM shall consist of a Chair and up to fourteen members, one of whom will be appointed by Ministers as Deputy Chair on the recommendation of the Chair. Members will not be mandated representatives of organisation or sectoral interests and the skills and expertise which will need to be available to the Committee will vary depending on the programme of work. For example, the relevant skills may include: radioactive waste management, nuclear science, radiation protection, environmental law, environment issues, social science (including public and stakeholder engagement), geology/geochemistry/hydrogeology, finance/economics, civil engineering/underground construction technology, geological disposal facility performance/safety issues, materials science, environmental impact assessment, local government, planning, regulatory processes and ethics. Sponsoring Ministers may review the membership of the Committee, and the skills and expertise required.
9. Appointments will be made following the Office of the Commissioner for Public Appointments (OCPA) code of practice. Appointments will usually be for two to four years and sponsoring Ministers retain the right to terminate appointments at

² www.bis.gov.uk/assets/bispartners/goscience/docs/g/10-669-gcsa-guidelines-scientific-engineering-advice-policy-making.pdf

any time in light of individual members' performance, changes in CoRWM's work requirements, or completion of the work required of CoRWM.

10. The Committee, as agreed in the annual plans, may co-opt additional expertise to form or support temporary sub-groups set up to examine specific and defined problems.

Programme of Work

11. To support its work, CoRWM will need to familiarise itself with Government policy in this area, including ongoing meetings with relevant government departments and the NDA. The outline framework within which CoRWM is then expected to work is:

- (i) *recognising the policy framework within which it will operate including the roles and responsibilities of Government and the NDA in relation to CoRWM's own advisory role;*
- (ii) *scrutinising Government and NDA proposals, plans and programmes to implement geological disposal and other radioactive waste management issues on which Government might seek advice as agreed in CoRWM's work plan;*
- (iii) *formulation of advice and reporting to Government based on the best available evidence and informed by the views of stakeholders and the public;*

12. Each year, CoRWM will prepare its proposed work programme for the next three years, in conjunction with Government, the NDA and regulators, taking account of work by other advisory bodies (see paragraph 7 above). The programme will include details of specific areas of work, reports which it intends to produce, the proposed use of sub-groups and any other activities or events, including proposals for public and stakeholder engagement. CoRWM will submit its proposed three-year work programme to its sponsoring Ministers for discussion and agreement.

13. In familiarising themselves with the relevant background and issues, Members will make themselves aware, and take account, of previous engagement and reports in the Managing Radioactive Waste Safely programme, the UK Radioactive Waste Inventory and the nature of current and expected future UK holdings of nuclear materials. CoRWM will take account of existing technical

assessments and research into radioactive waste management in the UK and elsewhere. In particular, it is recognised that CoRWM will need to engage with NDA given that the Committee's advice will directly impinge on the long-term responsibilities of NDA. CoRWM will also take account of other relevant policy developments.

14. The Chair will submit a report to Ministers by 30 June each year on the delivery of the agreed work programme. This will be made available in the UK and Scottish Parliament, the National Assembly for Wales and the Northern Ireland Assembly.

Access to Other Sources of Expertise

15. Members of CoRWM itself will not have all the skills and expertise necessary to advise Government. The Committee will need to decide how best to secure access to other appropriate sources of expert input during the course of its work. Within this, it will have option of setting up expert sub-groups containing both Members of CoRWM itself and other appropriate co-opted persons. A member of CoRWM will chair any sub-group of this nature and ensure its effective operation, as well as provide a clear line of responsibility and accountability to the main Committee, and hence to Ministers. This approach will enable the Committee to draw on a broad range of expertise in the UK and elsewhere.
16. The number of such sub-groups will be kept to the minimum necessary. Their role will be that of providing advice for the main Committee to consider and assess as it sees fit, and managing any activity which CoRWM delegates to them. It will be for the main Committee to assess and decide upon the advice it receives from such sub-groups. CoRWM may also utilise other appropriate means of securing expert input, such as sponsored meetings and seminars. The Chair will ensure that sub-group work and all other activities are closely integrated.

Public and Stakeholder Engagement

17. CoRWM must continue to inspire public confidence in the way in which it works. In order to secure such confidence in its advice it will work in an open and transparent manner. Hence, its work should be characterised by:
 - a published reporting and transparency policy;
 - relevant public and stakeholder engagement as required;
 - clear communications including the use of plain English, publishing its advice (and the underpinning evidence) in a way that is meaningful to the non-expert;

- making information accessible;
- encouraging people to ask questions or make their views known and listening to their concerns;
- providing opportunities for people to challenge information, for example by making clear the sources of information and points of view on which the Committee's advice is based;
- holding a number of its meetings in public.

Responsibilities of the Committee and its Members

18. CoRWM will have a corporate responsibility to deliver its advice to sponsoring Ministers in accordance with agreed work plans. It will be for Ministers, with appropriate reference to their respective Parliaments and Assembly, to take decisions on the advice it receives and to give directions to the NDA as necessary on any subsequent changes required in the delivery of geological disposal of the UK's higher activity radioactive waste.
19. All members will need to be effective team workers, with good analytical skills and good judgement besides a strong interest in the process of decision-making on difficult issues. A number of them will need experience of project management, advising on scientific and technical issues directly relating to radioactive waste management, public and stakeholder engagement, excellent drafting and communication skills, or business experience and knowledge of economics.
20. The Chair, in addition, will be capable of successfully and objectively leading committee-based projects, grasping complex technical issues, and managing a diverse group effectively and delivering substantial results, presenting progress and outcomes in public. He or she will be a person with appropriate stature and credibility.

Role of the Chair

21. The Chair will be responsible for supervising the CoRWM work programme and ensuring that the Committee's objectives are achieved. The Chair will be responsible for advising Ministers promptly if he or she anticipates that the Committee will not complete its agreed work programme indicating what remedial action might be taken. He or she will be the main point of contact with the public and the media, in presenting progress and answering questions. The Chair will meet Ministers on appointment, and then at least annually along with other members as appropriate. Notes of these meetings will be published. The Chair will ensure CoRWM submits its annual written report to Ministers, by 30 June of

each year. The Chair may be required to present the position of CoRWM to Parliament or Assembly committees and representatives as appropriate. The report will set out, among other things, CoRWM's progress with the agreed work programme, advice deriving from it and costs incurred. Ministers will also appoint a Deputy Chair who can assist the Chair as the latter sees fit.

Role of Members

22. Members will work, under the Chair's supervision, to the programme agreed with sponsoring Ministers, so as to ensure its satisfactory delivery. Members will have a collective responsibility to ensure achievement of CoRWM's objectives and delivery of its work programme. Individual Members may be appointed by the Chair to undertake specific, active roles, for example chairing sub-groups or in representing CoRWM in meetings with the public, organisations who are contributing to the work, or the media. All members will abide by CoRWM's Code of Practice and will be subject to individual performance appraisal as laid down by the Cabinet Office guide (see next paragraph).

Standards

23. CoRWM is set up by, and answerable to Ministers and is funded by the taxpayer. It must therefore comply with the Cabinet Office guide "[Public Bodies: a Guide for Departments](#)".

24. These and other relevant procedural requirements are set out in CoRWM's Code of Practice which Members will agree to, prior to appointment.

Resources

25. Sponsoring Ministers will provide CoRWM with a secretariat and budget to enable it to carry out its agreed programme of work. The Chair and Members will have a collective responsibility for delivering the work programme within the agreed budget, although the Chair may request sponsoring Ministers for adjustment to this budget should this be considered necessary.

Payments

26. The Chair and Members will be paid for their work for CoRWM at agreed daily rates. They will also be fully reimbursed for all reasonable travel and subsistence costs incurred during the course of their work.

ANNEX D: DECC Comment on CoRWM's Contribution to the Revision of the GDF Siting Policy

Dear Laurence
cc All CoRWM members

First, I'd like to thank you for the constructive and comprehensive comments that CoRWM have provided on the draft White Paper and I appreciate the time that you all put in to providing a consolidated set of comments within a short space of time. Please find attached the latest draft of the White Paper, which has been updated after consideration of your comments and further development. I will also outline below how we have taken on board your comments. I am also attaching the draft Government Response to the Siting Consultation which addresses the views and comments received during the consultation and how we have considered them in taking the policy forward.

I hope the summary below reflects clearly the Overall Comments from the committee that we have taken on board and, where we haven't taken these on board, an explanation of why. We are not seeking any further drafting comments on these points, but would welcome any new comments or concerns generated by this further iteration, or any technical or factual inaccuracies.

The list below outlines how we have addressed the specific points that you raised in the Overall Comments section in the paper CoRWM Comments on the DECC White Paper "Implementing Geological Disposal" and refers to your numbered points. A comment on certain detailed drafting points follows this.

1. In careful consideration of your comments and further development we have focused the document to make sure it addresses all of the key issues.
2. A communications strategy is being developed in parallel to the policy and will not be outlined in the policy itself. We can discuss the communications policy separately if this is something you wish to focus on in your work programme.
3. On using the terminology 'voluntary process' or "voluntarism", while we are minded to move away from language whereby the onus is on the community to 'step forward' and Government and the developer have a passive role, we recognise that abandoning the wording altogether may give the wrong impression that a key principle from the policy has somehow been abandoned – which is certainly not the case. We have therefore included reference to a voluntary process at relevant points in the document in addition to using the phrase 'willingness to participate'.
4. Similarly, for the terminology "Right of Withdrawal" we were minded to move away from this phrase due to the legal connotations of a 'right' which immediately brings into question legislative constraints. Communities' engagement in the siting process, from which they can withdraw at any time, is in no way legally binding and so the previous terminology was unhelpful. However, we understand your point that on the

surface it may seem that we are moving away from the principle of communities being able to withdraw - which is certainly not the case. Therefore, we have updated the document to include reference to the ongoing 'right of withdrawal' at relevant points. On both points 3 and 4, it is important to note that the audience for this document is the whole country, not the minority of people who have been steeped in the terminology of the previous siting process and discussions in Cumbria.

5. With regard to the development of the policy to define a community and decision making within that community, we are minded that Government should lead on this matter. Our Ministers are minded that Government must take responsibility and lead on the development of policy. This is clearly a policy matter and not a technical matter where the advice of advisory committees is called upon from Government. We can use this opportunity to as a way of building trust in the process and in Government by ensuring the policy is developed in an transparent way taking on board the views of experts, including CoRWM alongside other voices.

6. On geological screening, the policy will outline that this exercise will go ahead – essentially there are greater benefits of going ahead than not going ahead with screening. However we fully recognise your concerns with the document as it was drafted previously and have attempted to update it to clearly explain the expected limitations of any screening exercise. Bruce Cairns can go through the details of the proposal with you at the teleconference on this topic.

7. In terms of the expert group that will be developing proposed guidance, we are minded that this needs to be led by the developer, who will also be producing the safety case application. However, we recognise that the screening must follow a robust and transparent process. You will see from the paper that we propose that CoRWM be involved in the expert group to ensure this is taken forward. The proposals will also be subject to independent review, led by the GeoSoc.

8. We recognise the need to be more explicit about the importance of the safety case and have expanded on it in the White Paper. We would also like to point out that there will be other opportunities to do this in communication material produced at a later point that is likely to have a wider readership. The White Paper is a high level policy document, not the totality of our communication efforts.

9. Whilst we are sympathetic with your view on the inventory being limited by the safety case alone, we believe that the only way to deliver a credible policy, from a social and political perspective is to specify a limit at this stage. The inventory of any GDF will of course be limited by the specific safety case, but that alone does not address the consistent calls for clarity about what we are asking communities to consider.

10. We have redrafted the section referring to spent fuel and nuclear materials which should, we hope, make it clearer that these are not currently designated as wastes but do need to be taken into account.

11. As there is new policy relating to Planning, but no changes relating to regulation, we believe it is not necessary to have a separate section on regulation in this policy document. We have however expanded the information on regulation. Again, there will be other opportunities to communicate the role of the regulators.

12 and 13. Many thanks for your comments on SEA, we are currently seeking legal advice on developing the SEA and will be have discussions with you in due course. We also note and thank you for the advice you have given previously on SEA.

The Committee also provided a number of detailed technical amendments. We have endeavoured to address these, in liaison with RWM, in the redraft. In some instances, suggested amendments have not been taken on board, in an effort to balance the technical accuracy of the document with the requirements of communicating clearly and concisely to a non-technical audience. For example, the Committee suggested amendments to the document's definitions of HLW and ILW. While undoubtedly more comprehensive, the definitions in the White Paper originated in the 2008 White Paper, and are used in the RWM glossary and UKRWI documentation, and so we are minded to retain the 'simplified' formulation.

This need to bear in mind the non-technical audience has influenced the redraft, and our response to CoRWM's detailed comments, in a number of other places.

Best regards
Rachel

ANNEX E CoRWM Response to Triennial Review Questions

Question 1: Do the key functions performed by CoRWM continue to be necessary and appropriate for the successful management of higher activity radioactive wastes?

Response:

At this critical time in the “implementing Geological Disposal” programme, CoRWM believes that the key functions it performs continue to be necessary and appropriate for the successful management of higher activity radioactive waste.

These key functions continue to be necessary for a variety of reasons. There have been a number of attempts to find and implement a solution for the disposal of higher activity waste over the last 50 years and all have so far failed due to a combination of factors including a lack of transparency, poor public engagement and resulting public anxiety about the safety of current and future generations. There remains a low level of public trust in the nuclear industry and hence in Government to manage radioactive waste.

The Committee believes that for the policy on the disposal of higher activity radioactive waste to be successfully implemented the Government needs access to independent advice and needs to be seen to be obtaining trusted independent advice. This was the finding of the 2012 Triennial Review of CoRWM and the Committee believes nothing has changed in this respect. Those who responded to the 2012 Review stressed the importance of retaining the functions of CoRWM, citing its independent role and its influence in building and maintaining public and stakeholder confidence in the programme for managing radioactive waste.

The Committee believes that there is strong evidence that CoRWM’s role of providing independent and authoritative advice adds value to the work of other bodies and organisations involved in radioactive waste management. The Input CoRWM made to the White Paper “Implementing Geological Disposal” was recognised by the DECC as being substantive,, including on key elements of the structure of the revised process, being incorporated in the document.

The Annex to this document provides examples to illustrate the effect CoRWM had on the development of the DECC white paper “Implementing Geological Disposal” and other contributions CoRWM has made.. The examples include:

- CoRWM’s advocacy of a continuous process of engagement without stages and with minimal decision points.
- The Representative Authority.
- The emphasis on the Safety Case
- Re-statement of CoRWM’s position on Geological Disposal
- Support for the Scottish Government

The 2012 Triennial review concluded that support for and validation of CoRWM's role was reflected in the findings of the Cabinet Office Public Bodies Review in 2010 which concluded that CoRWM should be retained as an advisory NDPB because of its important role in providing independent scrutiny and advice to Government on the long-term management of higher activity radioactive wastes. The Review team also considered the findings of the House of Lords Select Committee on Science and Technology's inquiry into CoRWM, which assessed how the Committee had performed in the two years since 2008. That inquiry also considered whether CoRWM's remit was appropriate and assessed its impact on the implementation of the Government's MRWS programme. One of the findings of the inquiry was that the existence of an independent and effective scrutiny body played an important role in maintaining public trust and confidence in the Government's strategy for radioactive waste disposal. The report stated that: 'CoRWM's scrutiny role is important, both in holding the Government to account and in maintaining public trust and confidence'.

Again the Committee believes that nothing has changed and these observations remain valid.

The 2012 Triennial Review, (supported by the findings of the House of Lords Select Committee on Science and Technology report), found "that it is essential to the success of the MRWS programme that a trusted, independent voice is seen to be a key part of the implementation process. Communities that have voluntarily come forward to enter discussions with Government about a disposal facility siting process clearly value CoRWM's independent role and seek the Committee's advice in responding to technical, ethical and public engagement challenges relating to their ongoing participation." A representative of one of the communities told the 2012 Triennial Review Team that "a body to independently scrutinise the MRWS process is vital, particularly to the success of the MRWS programme". They went on to say that "We have always found that the advice [CoRWM has] given has been helpful, timely and useful and we would hope that this would continue in the future".

It is clear that many in the UK Government and the Governments in Wales and Scotland and the Northern Ireland Executive, the nuclear industry, local governments and the public value the functions that CoRWM undertakes. It is difficult to see how the successful delivery of UK Government's policy for storage and geological disposal would not be put at risk without a body such as CoRWM.

Question 2: Do the key functions performed by CoRWM continue to be necessary for the successful implementation of the Geological Disposal Facility Programme in particular?

Response:

CoRWM believes that the key functions it performs continue to be necessary and appropriate for the successful implementation of the Geological Disposal Facility Programme.

Many of the reasons for this belief are the same as given above in relation to Question 1.

In relation to the suggestion that perhaps the independent scrutiny and advice provided by CoRWM is not necessary given the nuclear safety, security and environment regulators, the Committee notes that in the 2012 Triennial Review, it was reported that:

“A number of respondents mentioned the fact that as CoRWM’s role goes beyond that of the independent regulators, the Committee offers a usefully broader as well as an independent perspective. “One operator stated: ‘CoRWM are an independent body that provides public confidence over and above that provided by the regulators. The functions of CoRWM are a valuable activity’.”

In addition it should be stressed that the roles of CoRWM and those of the Regulators, whilst superficially similar, are fundamentally different. The Regulators are in essence “law enforcers” and hence their powers extend only to the implementation of the law relating to nuclear facilities as expressed in licensing powers and regulations. They do not have any powers to regulate or scrutinise Government policy or indeed NDA’s policy and strategies, while giving advice to some parties could prejudice their statutory duties. CoRWM, on the other hand, has the remit, given to it by the UK Government and those of the devolved administrations, to scrutinise Government and NDA policies in relation to the management of Higher Activity Waste in the UK. This allows CoRWM to scrutinise the role of the regulators and provide independent advice on the adequacy and effectiveness of the regulatory framework.

The Committee believes that whatever independent advice the Government obtains from the regulators it will be significantly limited by the legal vires of their regulatory powers. It will not be able to replace the broader policy advice and scrutiny that is provided by CoRWM.

As shown above in Question 1 stakeholder engagement and openness and transparency are essential in relation to the delivery of a GDF. CoRWM’s membership and ways of working have been recognised as providing the Government and the public with an expert body that can engage with stakeholders in an open and transparent way. This is essential in building trust. Without the trust of the public and other stakeholders it is unlikely that a GDF can be delivered based upon voluntarism.

In their role as observers of the West Cumbria Managing Radioactive Waste Safety Partnership, both those in favour and those opposed to proceeding to Stage 4 of the Managing Radioactive Waste Safely (MRWS) process, have acknowledged the role that CoRWM played in providing balanced information on and interpretation of, the Government’s Higher Activity Waste (HAW) policy.

Question 3: If you consider that CoRWM’s functions remain valid, are these

functions best delivered by a Non-Departmental Public Body (NDPB)? Please consider the following alternative options in giving your answer:

- Abolish the function
- Move out of Central Government (e.g. to voluntary or private sector)
- Bring in house (e.g. into the Department of Energy and Climate Change)
- Merge with another body
- Delivery by a new Executive Agency
- Continued delivery by an NDPB

Response:

CoRWM believes that CoRWM's functions remain not only valid but essential for the successful delivery of the UK Government's policy on Geological Disposal and for the delivery of the policies of the Devolved Administrations.

CoRWM believes that the best way to deliver these functions is through a Non-Departmental Public Body for the reasons outlined below.

CoRWM is part of the UK's governance arrangements for the management of HAW but CoRWM is not an executive part of Central Government.

Abolish the function

Given the responses to Questions 1 and 2 the abolition of CoRWM's functions is not a credible option. The 2012 Triennial Review came to the same conclusion.

Move out of Central Government (e.g. to voluntary or private sector)

CoRWM believes that it would be extremely difficult to deliver its functions outside of Government for a number of reasons including transparency and independence of advice and trust in the integrity of the scrutiny process. It would be difficult to persuade the public and other interested stakeholders that advice and scrutiny provided by the private sector or a voluntary organisation that may have a particular agenda, was truly independent and could be trusted. Private sector companies and voluntary organisations need financing in one way or another and the funder could be seen to have a vested interest in the type and quality of scrutiny and advice provided.

There is also the issue of access to Government "thinking" during policy development. Currently CoRWM has access to, or is asked for informal advice on, policy development documents. If CoRWM's current functions were to be carried out by organisations outside, rather than at arm's length from, Government it is difficult to see how far Government would be willing to share its thinking during the development phase of its policy making. As shown above, CoRWM's input during the Government's policy development phase has been particularly effective and appreciated. Use of an outside body could put this important aspect of independent advice and scrutiny at risk.

Another factor to be considered is the range of interests and quality of the Members of any advisory body. CoRWM has extensive collective knowledge of the management of UK's HAW of the past decade. Currently CoRWM has a Chair and 11 Members, all eminent experts and including 7 University Professors. The range of expertise includes:

- Nuclear Safety and Security Regulation
- Safety and Risk Assessment
- Environmental Regulation
- Nuclear and Radiochemistry
- Nuclear Fuel Cycle Operations
- Environmental Management and Planning
- Geological Disposal of Radioactive Waste and Groundwater Modelling
- Lower Crustal Processes and Geological Mapping
- Civil Engineering and Hydrogeology
- Mining Engineering and Mining Operations Management
- Environmental Law
- Local Government and Town and Country Planning
- Nuclear and Mechanical Engineering
- Public-Stakeholder Engagement

The Committee believes that it would be very difficult for a private sector company or voluntary organisation to provide this range or level of expertise. The 2012 Triennial Review came to the same conclusion.

Bring in house (e.g. into the Department of Energy and Climate Change)

As shown above it would be very difficult if not impossible for DECC to employ the number of people with the necessary expertise and experience to deliver CoRWM's functions. There would also be the issues of "trust" and "independence". For CoRWM's functions to be delivered effectively, they must be undertaken at arm's length from Ministers. Bringing the scrutiny and advice role within DECC would both undermine both the independence of the advice and would raise legitimate questions about transparency.

In addition, the Committee believes that Ministers would be exposed if they did not have access to truly independent expert advice and the only advice they could rely upon was provided by the civil servants in DECC.

The Committee believes that it would not be feasible or desirable to bring CoRWM's function into DECC. The 2012 Triennial Review came to the same conclusion.

Merge with another body

It is difficult to see with which other body CoRWM could be merged with. The Nuclear Safety Advisory Committee no longer exists and it had a narrower remit. The Defence Nuclear Safety Committee would not be an appropriate host because of its role and remit and its focus on Defence with its implications regarding transparency.

The 2012 Triennial Review considered the Nuclear Liabilities Financing Assurance Board, The Nuclear Liabilities Fund, The Civil Nuclear Police Authority and the Nuclear Decommissioning Authority. For good reasons the 2012 Review dismissed them all.

Having looked at the possible hosts, the Committee has come to the conclusion that there is currently no other suitable body with which CoRWM could be merged.

Delivery by a new Executive Agency

CoRWM has no executive functions and hence this is not a credible option. This was the conclusion of the 2012 Review.

Continued delivery by an NDPB

The Committee believes that the conclusions of the 2012 Triennial review remain valid i.e.

“This option would see CoRWM continuing to perform its scrutiny and advice functions. It is a tried and tested model which has the support of stakeholders, Government and the House of Lords Select Committee on Science and Technology. As a Non-Departmental Public Body, CoRWM offers a range of expertise and scrutiny independent of Government, the nuclear industry and regulators. It is this independence and transparency which makes CoRWM such an influential body trusted by stakeholders and the wider public alike.

The continued existence of CoRWM as an advisory NDPB ensures the continuity of the scrutiny and advice function. Any disruption to the MRWS programme – for example by attempting to implement a new delivery model - would cause delay to the programme to deliver geological disposal and would usher in a period of uncertainty where Government policy and the activities of the NDA and the regulators would go unchallenged.”

Question 4: What do you see as the benefits and risks of delivering the functions of CoRWM in these alternative ways? In particular, do you view any of these methods of delivery as beneficial, and why?

Response:

As shown above the most appropriate way to deliver CoRWM’s functions is as an NDPB. There are few if any benefits in any of the alternatives and all have considerable risks compared to the valuable role CoRWM currently plays. The main risks are loss of public and stakeholder trust, lack of independence, lack of transparency, and potential exposure of Ministers to poor policy decisions.

There is also a risk associated with creating a replacement for CoRWM. Any new body would need to develop its credibility. The next few years are likely to be crucially important to implementation of the Government's policy on geological disposal and making changes to what is seen to be a trusted advisor could be seen as an unnecessary risk to take.

There is also the risk associated with cost. Currently CoRWM costs around £300,000 per year and for this amount the Government gets around 600 days of work from 12 eminent and experienced people who are recognised national and international experts in their field. Access to 600 days of similar expertise from the private sector would cost considerably more and easily in excess of £1,000,000 per year. CoRWM is incredibly good value for money.

Question 5: If you consider that an advisory NDPB is the right delivery mechanism for the functions of CoRWM, what improvements could be made to support the effective and efficient delivery of CoRWM's remit?

Response:

At the administrative level the work of CoRWM could be improved by having a more independent secretariat so that staff felt more associated with the Committee rather than the Department.

The incorporation of the previously independent CoRWM Website into the UK Government's website platform has been a problem over the past 18 months for a number of reasons, including public and stakeholder perceptions of CoRWM's independence, limitations on material communication style, visibility and access. The Committee believes that a separate website for CoRWM outside the UK Government's website platform is critical, only enhance public perception of CoRWM's independence, but also give CoRWM more flexibility in the way it presented its activities and enable it to be more responsive.

It is impossible to access CoRWM's document archive, now comprising more than 3000 documents extending back over a decade, from the website. Previously, all published CoRWM documents were publically available from the CoRWM web site which had an effective search function. In principle, some at least of the CoRWM archive is available through the National Archives but even members are unable to find documents, and the search facility is ineffective. Since the CoRWM archive constitutes an irreplaceable part of the evidence base on which Government policy is founded, and represents an investment of some £ millions of public money, it is vital to rectify these problems.

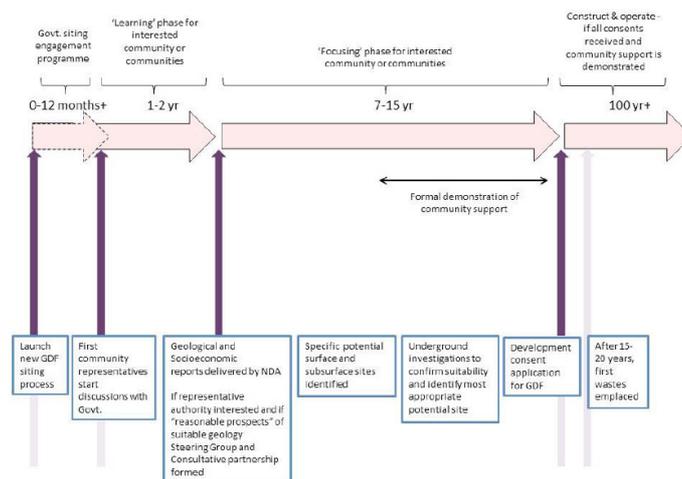
CoRWM believes that it would be beneficial to the delivery of the "Implementing Geological Disposal" policy for CoRWM's Terms of Reference to be amended to enable it to provide advice to other stakeholders in the process such as Regulators, Local Authorities, Country Councils, the "Community" and the Community Representatives" when they are defined.

ANNEX Examples of CoRWM’s impact to the White Paper and other Contributions

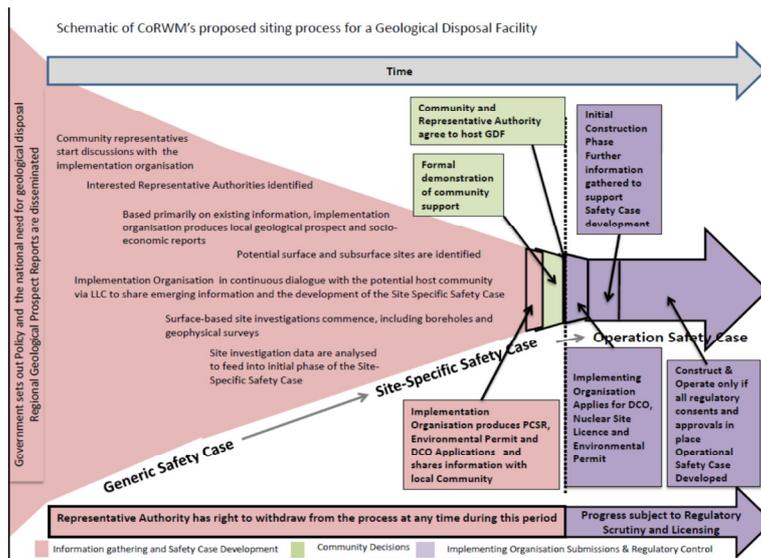
Example 1 The Revised Siting Process

Throughout the drafting of the DECC white paper CoRWM consistently advocated a more continuous process of engagement without stages and with minimal decision points. The following version of the siting process is from DECC’s draft consultation document. It is clear there are specific stages

Figure 1: Schematic of the overall sequence of the proposed, revised siting process



The figure below is CoRWM’S suggested illustration of the siting process as given in its response to the Consultation:



Below is the graphical representation of the siting process published in the White Paper.



It can be seen that CoRWM had a significant influence in the transformation from the initial proposal.

Example 2 The Representative Authority

CoRWM recognised the great sensitivity in the choice and definition of the representative authority. While CoRWM was not the only entity to comment on this issue, the change from DECC's position in the Consultation document to the final position in the White Paper is consistent with CoRWM's input on this key aspect of the siting process.

DECC's Consultation Draft

"As a result of this consideration, it is proposed that there should be one representative level of local government that holds the Right of Withdrawal (on behalf of the community that it represents), and has the final decision on proceeding, subject to demonstration of community support. It is proposed that this level should be the relevant District Council in England."

CoRWM's Response

"CoRWM is supportive of the concept of local decision-making and believes that designated decision makers should be locally based. CoRWM therefore believes that the proposal for the decision maker to be at the District Council level is understandable. However any new White Paper should include all the alternatives list the pros and cons of each option and provide a detailed explanation of why decision-making at the District level is the preferred option. Recognition of the roles of the County Council and Parish Councils should be given. In particular, the fairly vague terms, such as 'prominent role' should be made more explicit."

The DECC White Paper

"Following publication of this White Paper, the UK Government will convene a community representation working group. This group will address the challenging and complex issues that have been raised in relation to community representation and engagement at potential GDF sites. UK Government is committed to addressing these issues because the GDF siting process is reliant upon working co-operatively with communities."

"7.13. The activities of the community representation working group are likely to include, but will not be limited to:

- Developing approaches to defining 'communities' in areas interested in learning more about a GDF, and options for effective community representation;*
- Defining roles and responsibilities for community representatives and an understanding of how those roles could evolve alongside the GDF siting process;*
- Developing options for ensuring that all levels of local government have a voice in the GDF siting process;*
- Providing greater clarity around the point at which a test of public*

support might be considered appropriate, and the method by which such a test could be carried out;

Example 3 The Emphasis on the Safety Case

DECC's consultation draft did not ignore the Safety Case concept but it was not a focus of its proposed siting process, mentioning the Safety Case only 6 times.

CoRWM recognised the importance of the safety case approach and the need to focus attention during the siting process on the safety case for the GDF and rather than solely on geology.

CoRWM's Response

*"CoRWM believes that whilst the radioactive waste disposal facility is referred to as a "Geological Disposal Facility", geology should not be seen in isolation and the suitability of a site or sites for radioactive waste disposal must be determined by the robustness of the facility "Safety Case". **CoRWM would stress that this Safety Case is required to demonstrate to independent nuclear safety, nuclear security and environmental regulators that the GDF is safe, the radioactive material is secure and that the environment is adequately protected.** The concept and role of the Safety Case should be clearly defined in any future White Paper"*

CoRWM also specifically focused on the need to consider the Safety Case in the context of geologic screening.

CoRWM's Response

"CoRWM believes that geological information cannot be viewed in isolation from the GDF Safety Case, as it is the Safety Case that will demonstrate the suitability of a site for the disposal of radioactive waste and not the "geology" on its own. The nature, content and level of geological information presented during the siting process is very important but geology is only one of many factors that contribute to the development of a successful Safety Case."

The final DECC White Paper mentions the Safety Case 25 times and included the following statements on geologic screening acknowledging the critical role of the safety case as well as a special 'call out' box defining the Safety Case and its role in the development of a GDF.

"Carrying out national geological screening

5.1. The underground environment in which a GDF is engineered provides an important element of the multi-barrier containment system. Developing a

detailed understanding of the sub-surface characteristics of a potential site is therefore of great importance in developing a safety case for any proposed facility. The ultimate safety of any GDF proposal will rest on a range of factors – not just the basic geological setting (e.g. rock type, faults and fractures), but a detailed understanding of features such as the hydrogeology, geochemistry, and how the developer proposes to design, engineer and operate a facility within that setting.

5.2. All the relevant factors are brought together in what is known as a 'safety case'. This will be a series of detailed documents created, owned and updated by the developer throughout the lifetime of GDF design, construction and operations. For a GDF, there will be a number of safety cases required, covering operational safety, environmental safety, and transport. A safety case may also relate to a particular stage of development (e.g. site investigations, commissioning, operations, closure, post-closure etc.). The various safety case documents will be considered by the independent regulators in their assessment of the safety, security and long-term environmental protection aspects of a GDF as they assess whether to licence or authorise the facility to operate."

Example 4 Restatement of CoRWM's Position on Geological Disposal

In June 2013, CoRWM issued a statement reiterating its 2006 recommendation that geological disposal is the best available approach to the long-term management of higher activity radioactive material categorised as waste when compared with the risks associated with other methods of management. This statement was provided during the Government's period of evidence gathering prior to the September 2013 consultation and the development of the White Paper.

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/225113/CoRWM_statement_on_geological_disposal.pdf

In addition to influencing the development of the UK Government's policy on geological disposal, CoRWM has also influenced policy development in Scotland and Wales.

Example 5 Support to the Scottish Government

CoRWM has contributed to the Scottish Government's preparation of the strategy to implement its 2011 HAW Policy through attendance at the Scottish Government Higher Activity Waste Project Board at which CoRWM is an observer and the provision of informal advice on draft documents

Example 6 Support for the Welsh Government

CoRWM has contributed to the Welsh Government's development of its policy on radioactive waste disposal. It provided advice on the Call for Evidence and assisted

Welsh Government in addressing some of the issues raised. CoRWM's comments were subsequently included in the consultation on the Review of Welsh Government Policy on the Management and Disposal of Higher Activity Radioactive Waste. CoRWM has also advised on the preparation of the Welsh Government's policy statement on the management and disposal of radioactive waste and on the consultation on processes for implementing geological disposal.

ANNEX F Meetings held between 1st April 2014 and 31st March 2015

Date	Meeting	Attendance Capacity
30 April 2014	Meeting with NDA & CoRWM Closed Meeting	Participant
30 April 2014	Public Meeting	Participant
01 May 2014	Sellafield Site Visit and meeting with Sellafield Ltd	Participant
02 May 2014	Open Plenary	Participant
06 May 2014	Public Chairs Forum Conference	Participant
08 May 2014	Nuclear Issues Group	Participant
8-9 May-14	RWMD TAP	observer
13 May 2014	Geological Disposal Programme Board (GDPB)	observer
20 May 2014	Westminster Energy, Environment & Transport Forum Keynote Seminar: Nuclear energy in the UK	Participant
21 May 2014	CoRWM Sponsors Meeting	Participant
19 June 2014	Annual Report Drafting Meeting	Participant
24/25 June 14	Nuclear Waste Research Forum (NWRf)	observer
01 July 2014	Visit to Dounraey Site	Participant
01 July 2014	Public Meeting	Participant
02 July 2014	Open Plenary	Participant
08 July 2014	Geological Disposal Programme Board (GDPB)	observer
16 July 2014	CoRWM Sponsors Meeting	Participant
25 July 2014	CoRWM Chair meeting with RWM Chair	Participant
20 August 2014	RWM Transition	Participant
04 September 2014	Visit to Wylfa Site	Participant

04 September 2014	Meeting with Welsh Government and NRW	Participant
04 September 2014	Public Meeting	Participant
05 September 2014	Open Plenary	Participant
09 September 2014	CoRWM Sponsors Meeting	Participant
10 September 2014	Geological Disposal Programme Board (GDPB)	observer
10 September 2014	CoRWM Chair meeting with RWM Chair	Participant
12 September 2014	Natural Resources Wales Meeting	Participant
12 September 2014	RWM - Geological Screening	Participant
15/16 September 2014	World Nuclear New Build Congress (UK) 2014	Participant
15 October 2014	NDA Research Board	observer
17 September 2014	GDF users groups	observer
27/28 Oct -14	Follow up to Dounreay site	Participant
29-30 Oct-14	RWMD TAP	Participant
04 November 2014	Closed Meeting	Participant
05 November 2014	Open Plenary	Participant
05 November 2014	CoRWM Sponsors Meeting	Participant
11 November 2014	Geological Disposal Programme Board (GDPB)	observer
25 November 2014	Planning and providing the ONR with legal vires to licence a GDF	Participant
24 November 2014	Geological Screening Meeting (GDF Work Package 1) with RWM	Participant
12 January 2015	Wylfa - revisit	Participant
20 January 2015	RWM & Western Regional Group	observer
27 January 2015	RWM & Southern Wales Regional Group	observer

04 February 2015	Meeting with respondents to RWM consultation	observer
04 February 2015	CoRWM Closed Meeting	Participant
05 February 2015	CoRWM Plenary	Participant
10 February 2015	Whitehall Policy Professionals	Participant
12 February 2015	RWM & Local Government Stake holders & Nuleaf	Observer
16 February 2015	East Midlands Regional Group	Observer
18 February 2015	CoRWM & GDF Team - CRWG	Participant
19 February 2015	SG 5	Participant
25 February 2015	RWM & Yorkshire Regional Group of the Geological Society	Observer
27 February 2015	Comments on Triennial Review	Participant
09 March 2015	CoRWM Closed meeting - Work Plan	Participant
10 March 2015	CoRWM Open Plenary - Sign off Work Plan	Participant
10 March 2015	CoRWM Meeting with RWM on Geological Screening	Participant
20 March 2015	Meeting with NDA - SG8 - Spent Fuel and Nuclear Materials	Participant
24/25 March 2015	Berkeley Site Visit	Participant

ANNEX G Visits to Nuclear Sites during 2014-15

Date	Meeting	Attendance Capacity
01-May-2014	Sellafield Site Visit and meeting with Sellafield Ltd	Participant
01-Jul-2014	Visit to Dounraey Site	Participant
04-Sep-2014	Visit to Wylfa Site	Participant
27/28 Oct -14	Follow up to Dounreay Site	Participant
12-Jan-2015	Wylfa - revisit	Participant
24/25 March 2015	Berkeley Site Visit	Participant

Annex H List of Acronyms

AGR	Advanced gas cooled reactor (A type of reactor with graphite core and Uranium oxide fuel in steel cladding with a graphite sleeve)
CoRWM	Committee on Radioactive Waste Management
DECC	Department of Energy and Climate Change
EA	Environment Agency (England's Environmental Regulator)
GDF	Geological disposal facility
GDIB	Geological Disposal Implementation Board (set up by DECC and chaired by a DECC Minister)
GDSG	Geological Disposal Steering Group (a UK Government group that reports to GDIB)
HAW	Higher Activity Waste
HAWIS	HAW Implementation Strategy
IAEA	International Atomic Energy Agency (a United Nations agency)
ILW	Intermediate level waste
LoC	Letter of Compliance (previously Letter of Comfort)
MOD	Ministry of Defence
MRWS	Managing Radioactive Waste Safely (the UK programme for the management of higher activity wastes), now referred to as the GDF Programme
NDA	Nuclear Decommissioning Authority
NEA	Nuclear Energy Agency (part of the Organisation for Economic Cooperation and Development)

NERC	Natural Environment Research Council
NGO	Non-Governmental Organisation
NRW	Natural Resources Wales (Welsh Environmental Regulator)
NWRF	Nuclear Waste Research Forum (a group convened by NDA)
NWF	Nuclear Waste Fund (in Sweden)
OECD	Organisation for Economic Co-operation and Development
ONR	Office for Nuclear Regulation - the regulator of safety, security and safeguards at nuclear facilities and transport of radioactive materials.
PSE	Public and stakeholder engagement
RATE	Radioactivity and the Environment (a NERC research programme)
R&D	Research and development
RWMD	Radioactive Waste Management Directorate (of NDA), from 1 April 2014 became RWM Limited.
RWM Ltd.	Radioactive Waste Management Limited, a wholly owned subsidiary of the NDA charged with delivering Geological Disposal, created on 1 April 2014.
SEA	Strategic Environmental Assessment
SEPA	Scottish Environment Protection Agency
SKB	Svensk Kärnbränslehantering AB (Swedish Nuclear Fuel and Waste Management Company)
SLC	Site licence company (a company that runs an NDA site, under contract to the NDA, and holds the nuclear site licence)
SF	Spent Fuel

