CALL FOR EVIDENCE – MANAGING RADIOACTIVE WASTE SAFELY: REVIEW OF THE SITING PROCESS FOR A GEOLOGICAL DISPOSAL

Evidence of the Blackwater Against New Nuclear Group (BANNG)

BANNG Paper 19

Purpose of this Response

The Blackwater against New Nuclear Group (BANNG) has both a general and specific interest in the siting process for managing radioactive wastes. In general terms BANNG is especially concerned about two key issues. The first of these is the siting of interim storage facilities for long-lived intermediate level wastes which is an integral part of the long-term management leading ultimately to a geological disposal facility (GDF). The second is the management of spent fuel that will arise from a new build programme. More specifically BANNG is concemed with the implications of these two issues – long-term storage and new build wastes – for the Bradwell site.

The former Bradwell power station closed in 2002 but ILW in the form of the reactor cores and fuel element debris will remain *in situ* or in store on the site until the end of this century, possibly longer if no repository is forthcoming. And there is the possibility of ILW from Sizewell A and /or Dungeness being transferred to Bradwell under options being considered by the NDA. BANNG is opposed to this option for a number of reasons (which will be stated in our comments on the NDA's paper on options for siting ILW stores). BANNG is also opposed to the construction of a new build station on the Bradwell site, not least because it would mean the long-term storage of spent fuel at a low-lying coastal location vulnerable to coastal processes, storm surges and sea-level rise under conditions of climate change.

BANNG has responded both generally and specifically on these issues to various consultations from Government, NDA, nuclear industry, House of Commons Energy and Climate Change Committee. We would draw your attention especially to BANNG papers numbered 1, 2, 4, 5, 9, 13, 15, 17 which DECC will have received and which may be obtained from the BANNG secretariat.[1] We wish to reaffirm our concerns about the current plans and our opposition to further development of the Bradwell site. However, our main purpose here is to reflect on the broader issue of the MRWS process for managing the nation's highly active wastes (ILW, spent fuel, HLW) and to make suggestions for its improvement.

BANNG believes the voluntary process is fundamental to a successful siting process. But we consider that success can only be achieved through an open, measured and coherent process that takes full account of what is scientifically and practically feasible in the present state of knowledge. At this present time it is our view that the focus of attention should be on legacy wastes and upon securing safe and secure *storage* of wastes as a necessary stage in an integrated process which may ultimately lead to deep disposal.

Main Principles for Site Selection Process

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The MRWS siting process is based on the recommendations of the CoRWM1 report (2006) together with its implementation proposals set out in *Moving Forward* (2007a). The recommendations were underpinned by an extensive Public and Stakeholder Engagement (PSE) programme which provided necessary public confidence and trust. The CoRWM proposals were essentially adopted in the Government White Paper Cm 7386 (2008). However, both in its interpretation of the recommendations and in implementing the process the Government subsequently made some significant variations on the original CoRWM proposals. In particular, the Government put emphasis on achieving geological disposal as quickly as possible rather than the more measured approach to disposal set forward by CoRWM. Secondly, new build wastes were introduced into the potential inventory whereas the CoRWM recommendations applied to legacy wastes only. We consider these variations of emphasis and substance were primarily responsible for the decision in Cumbria not to proceed further in the siting process. We set out our analysis of the problems encountered with the process and proposals for improvement below.

Problems with the process

Too much emphasis on disposal

CoRWM had crafted a set of interdependent recommendations which set out geological disposal as the 'best approach' in the light of present knowledge. Geological disposal was not seen as the only approach and it had to be put in the context of a measured programme of safe interim storage, research and development and monitoring of alternative approaches. In implementing the process the emphasis has been almost wholly on finding a site for a GDF as the 'right policy' (Call for Evidence Introduction point 4) to be achieved as quickly as possible. BANNG believes the original intention of CoRWM should be reaffirmed. **Within the present state of knowledge deep geological disposal is considered the best approach for the long-term management of highly radioactive wastes but must be pursued in the context of emphasis on the need for continuing and safe long-term interim storage and research and development into disposal, storage and other alternatives.**

Too little emphasis on storage

The emphasis on disposal was to the neglect of storage. However, should a GDF be delayed or fail to materialise storage becomes, for the foreseeable future, the only option for managing the wastes. In any event the condition of much of the waste currently in store at Sellafield is a major problem that has been frequently recognised. It was clear during the debates in Cumbria that disposal, far from being the solution for Cumbria's problems, was a distraction from the problem of clean-up which requires priority, resources and time. Therefore, we believe that **emphasis must be placed on safe and secure long-term storage and clean-up especially at Sellafield and that appropriate resources and community benefits should be directed to that end.**

Key requirements for a successful siting process

Screening out unacceptable areas

A primary requirement before the voluntary siting process begins is to define the broad area of search by screening out areas unsuitable either for geological or other reasons. This was a key recommendation in CoRWM's implementation report (CoRWM, 2007a, p.20) though it appears to have been overlooked. A set of criteria should be established similar to the geological, social and environmental criteria detailed in the German AkEnd report (2002). Thus, areas that are clearly unsuitable on geological grounds would be eliminated as would areas considered unsuitable in terms of landscape or environmental quality, protected areas or areas close to large populations. Areas that may be more vulnerable on security grounds should also be avoided. Invitations to participate in a siting process would then be issued to communities in the remaining areas potentially available for siting a repository. **Criteria for screening out areas unsuitable for siting a repository should be identified, debated and applied prior to the inauguration of a voluntary siting process.**

Maintain the voluntarist approach

A key recommendation by CoRWM1 was that site selection should be based on voluntarism as the way to achieve public trust, confidence and acceptability. The volunteer principle has been applied in various ways elsewhere, for example in Scandinavia, Canada, Switzerland and several other countries and is now being applied in the post-Yucca conditions in the USA. We note that Govemment continues to hold the view that voluntarism is the best means for selecting a site for a GDF. The key to voluntarism is that there is an expressed willingness on the part of a community to participate in a programme of site selection backed by a right to withdraw from the process up to the point when development begins. In the case of Cumbria a voluntary process was undertaken although it was, perhaps, flawed in certain respects. However, we do not believe the process 'failed' because it did not proceed to the next stage. Rather, the decision not to proceed by Cumbria County Council could be taken as confirmation that the process was, indeed, voluntary. **The core principles of voluntarism, that are Partnership, Participation, Packages (both to support engagement and to provide benefits to enhance communities) and the Right to Withdraw, should be reaffirmed as the basis for any process of site selection for long-term radioactive waste management.**

Main features of an improved process

Need to focus on clean-up and safe storage of legacy wastes at existing sites

Given that storage is an integral part of long-term management and the possibility that a GDF may not materialise for a considerable time, if indeed at all, the safety, security and siting of stores requires greater priority in any revised MRWS process. Most of the spent fuel is stored or reprocessed at Sellafield and is likely to remain there for the foreseeable future. **Therefore, a primary requirement is to provide resources and unremitting commitment to effective clean-up and safe and secure storage at the Sellafield site.**

Need for an integrated approach to storage

There is also a substantial commitment of ILW wastes in the form of graphite cores or fuel element debris (FED) at existing nuclear sites which is likely to remain until the end of this century and beyond. To this will be added ILW wastes from AGRs and Sizewell PWR as they are decommissioned over the years to come. So far there has been little policy debate

about the location of these stores beyond options put forward in the present NDA options exercise. The assumption is that all these wastes will ultimately be accommodated in the GDF. Over the long-term the conditions at the potential sites become a significant consideration.

The future management methods and siting options for these wastes are unclear and unconsidered especially if a GDF does not appear. The options include the possibility of regional stores for these wastes. BANNG believes the long-term storage of ILW wastes and possibly spent fuel at nuclear sites is an issue of public interest, especially for those communities who may have to host them for an indefinite period. A siting process based on principles of voluntarism for long-term storage as well as for disposal is necessary. CoRWM foreshadowed this possibility: 'It is clear that CoRWM's recommendations must be applied at least to new central or major regional stores at new locations if CoRWM's recommendations are to inspire public confidence' (CoRWM, 2007a, p.10).

The storage of existing and future arisings of ILW should be subject to an integrated process of site selection based on consideration of future site conditions, costs, radiation exposure and environmental impacts. The process should undertake public and stakeholder engagement with relevant communities and application of the voluntary principle including compensation and benefits for affected communities.

Focus on legacy wastes.

The CoRWM proposals applied to legacy wastes, that is those wastes already created or which could be anticipated as arising from the existing nuclear programme. This did not include wastes from new build which CoRWM argued introduced different technical, social and ethical issues requiring a separate process of public engagement. It should be noted that if new build occurs then spent fuel will be added to the inventory at power station sites and would need to be subject to the siting process indicated above. CoRWM took no position on new build but stated its report did not offer a green light to the further development of nuclear energy. CoRWM's proposals for legacy wastes had achieved public support and confidence based on an extensive PSE programme The introduction of new build into the MRWS process has led to uncertainty about the inventory, the time-scales for implementation and the technical issues to be considered. Indeed, it seems clear that the nuclear industry and Govemment together regard achieving a site for a repository as soon as possible as a means for justifying the claim that they are 'satisfied that effective arrangements will exist to manage and dispose of the waste from new nuclear power stations' (DECC, 2010, p.18). To the contrary, **in order to sustain public confidence the process of siting for a possible GDF must be confined to legacy wastes only in the first instance. New build wastes should be subject to a separate process of public involvement and political legitimation.**

Clarify the Decision Making Process.

The siting process as envisaged by CoRWM calls for staged decision making with key decisions being taken democratically on the basis of recommendations by a siting partnership, consisting of a broadly based membership of stakeholder and public interest groups. The idea was that participative democracy would be embodied in the Partnership which would seek to ensure public support and approval for recommendations that would be put to representative authorities (in this case local authorities) for endorsement or ratification. BANNG considers that the process operated in the case of Cumbria had several defects. One,

was that the local authorities had a considerable influence in the Partnership in terms of membership and chairmanship. Another was the problem of assessing and interpreting community support (a notoriously difficult area). Third, was the failure of the Partnership to make recommendations for the endorsement of the Decision Making Bodies (DMBs). And, fourth, was the concentration of decision making in the executives (cabinets) of the relevant local authorities. A fifth was that the DMBs were left to make their own decision rather than to ratify the recommendations of the partnership. **The principle of staged decision making through participation in partnership and ratification through representative democratic authorities should be reaffirmed. The membership of partnerships, the definition of relevant communities, the evaluation of community support and the role of decision making bodies should be clarified.**

Defining communities

The definition of community is clearly a very difficult problem. CoRWM considered the issue at some length in its report on implementing a partnership approach (2007b). The problem became manifest when community views and preferences were being assessed in Cumbria. A basic problem is the distinction between those communities which provide formal 'consent' for siting proposals (in this case local authorities as DMBs) and those which would actually be most affected by the outcome (especially potential host communities). There is also the difficulty of evaluating consent, given the many different communities and the problem of representation, measurement and interpretation. **The process of democratic site selection through partnership must endeavour to achieve consensus on whether and when to proceed. However, in order to achieve consent there needs to be careful definition of community in the sense of where the authority to proceed lies and where the power of veto can be exercised. There needs to be a broad public debate on these matters.**

Community benefits and enhancement

Community support and benefits packages are crucial to successful implementation. Community support should be seen as a necessary incentive to enable communities to participate in the process through information, research, opinion surveys and deliberative forms of engagement. Once an area has been identified as a potential host for either a storage site or an underground repository a benefits package will be necessary both to compensate and enhance the community. The purpose will be to enhance well-being, 'those aspects of living which contribute to the community's sense of identity, development and positive self-image' (CoRWM, 2007a, p.12). The basic premise must be that a community is not made worse off through blight, negative image or stigma; rather, it should be enabled to develop community facilities, infrastructures and opportunities that improve its identity and economy. **Community enhancement must be seen as an integral part of a process designed to encourage participation and compensate and enhance communities who volunteer to host a site for storage or disposal.**

Recommendations for Improvements to the Site Selection Policy

From our analysis of the site selection policy in principle and in practice, we would present the following views and recommendations.

1. The fast track approach to finding a repository site should be abandoned. The process for finding a site for a GDF should be more measured taking the necessary steps and time needed to achieve a decision based upon public and stakeholder confidence and support.
2. Geological disposal and storage should be seen as separate but related and interdependent issues. Storage should be considered as both a prelude to disposal but also as a separate approach.
3. Before the voluntary siting process begins there should be a screening process undertaken to eliminate from consideration those areas deemed geologically unsuitable as well as those of high landscape or cultural value, areas of ecological protection and highly urbanised areas. Screening criteria should be the subject of public and stakeholder debate.
4. The voluntary process for siting stores and a possible repository for legacy wastes based on partnership, participation and packages should be reaffirmed. The right to withdraw up to the point of development must be guaranteed.
5. The clean-up and management of existing wastes in long-term safe, secure and robust stores should be a matter of urgent priority.
6. Consequently, there should be a separate process for siting stores for ILW (and possibly new build) based on the principles of voluntarism and partnership.
7. The GDF should not be seen as a means of legitimating new build. Any wastes arising from new build introduce distinctive issues and should be subject to a separate process.
8. The membership of siting partnerships should be balanced and representative of the wider community. Local authorities, the nuclear industry and Government, which are responsible for approving and implementing proposals, should have observer status so as not to prejudice their decision making roles.
9. An independent body to oversee the whole process as proposed by CoRWM should be considered.
10. The siting partnership should be responsible for ensuring public participation and support for proposals. The partnership should make clear recommendations to the DMB as the elected body responsible.
11. The DMB should normally ratify the recommendations of the partnership at each key stage in the process. The ratification should be by the full membership of the DMB, not just by its executive.
12. In order to establish an effective and acceptable siting process. there should be at the outset discussion and agreement of key concepts and definitions such as community, decision making body, interim storage, screening criteria, survey methods and so on.
13. Packages to encourage community participation and to enhance communities willing to host sites should be defined and built in as an integral part of the voluntary process.
14. It is axiomatic that at all stages and all levels there is a commitment to the principles of participation, openness and transparency.

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on behalf of the Blackwater Against New Nuclear Group (BANNG)

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