BANNG

Blackwater Against New Nuclear Group

Consultation on National Policy Statement for Geological Disposal Infrastructure

Response of the Blackwater Against New Nuclear Group (BANNG)

BANNG Paper No. 36

Nature of this response

This response will be relatively brief. BANNG has provided a much fuller response to the simultaneous consultation on *Working with Communities* which covers some of the key issues relevant to this consultation (see BANNG Paper 35). We would especially draw attention to the early part of that response which covers key issues in the context of the NPS for Geological Disposal Infrastructure. These are:

1. The issue of national priorities in radioactive waste management and BANNG's view that the main priority must be safe management of the existing legacy with the search for a suitable site for a GDF a less pressing concern.

2. The issue that the NPS should be restricted to legacy wastes for which the total inventory is knowable and not for new build wastes for which the inventory is unknowable and for which the time-scale for implementation stretches far into the future.

3. The issue of the intergenerational equity arising from the long time-scales and the uncertainties not only of physical conditions but also of societal stability and institutional continuity in the far future.

4. The issue of the need for adequate time for decision making. The process of designing and finding a suitable and acceptable location for a GDF is necessarily a long, possibly intergenerational, process and must not be hurried and certainly not a process that should be accelerated in an effort to deliver a new build programme.

BANNG has also responded to earlier consultations on the Managing Radioactive Waste Safely (MRWS) programme. In particular we have commented on the desk-based identification and assessment of potential candidate sites for geological disposal (Paper 13, 2011); geological disposal in West Cumbria (Paper 15, 2012); radioactive waste management and new build (Paper 17, 2012); call for evidence on MRWS (Paper 19, 2013); review of the siting process for a GDF (Paper 23, 2013); implementing geological disposal, working with communities (Paper 27, 2015). Each

of these rehearses BANNG's support for the voluntary process, partnership and community support while emphasising the need to exclude new build to ensure a process that is workable and potentially viable in terms of community willingness to participate. These responses may be found on our website, banng.info.

Our comments relate to the full NPS document rather than the shorter consultation document and are mainly confined to the broad issues set out above. They are set out in terms of the order of chapters in the draft NPS rather than as responses to specific consultation questions.

Time-scales

We note that a full characterisation programme for borehole investigation would be of the order of 10 to 15 years. This suggests a long time-scale of implementation, a point made in our submission on Working with Communities in respect of the GDF. Indeed, the consultation on Working with Communities states that 'Finding a suitable location for a geological disposal facility is a complex, long-term process that will take many years' (3.26). The operational lifetime is estimated to be approximately 150 years (NPS, 1.5.2). Depending on how long it takes to find a suitable site, on this basis a GDF would not reach a point of potential closure until towards the end of the next century, and possibly beyond.

We draw two conclusions from the long time-scales involved. One is that the process cannot and should not be hurried. It will be a long time before a site is identified and longer still before development commences. There is absolutely no certainty that a site will be found or that a repository will ever be built. There is certainly no justification for the government's fond belief that 'effective arrangements will exist to manage and dispose of the waste from new build nuclear power stations' (2.1.10 in the document). **BANNG concludes that the uncertainties are so considerable that a new build programme should be abandoned on the grounds that effective arrangements for the management of the wastes are unlikely to exist to deal with unknowable volumes and radioactivity arising from the programme.**

Our second conclusion relates to the need to take ample time to ensure a safe solution and an acceptable site. This requires a disposal concept that is capable of presenting the lowest possible risk of being breached within a time-scale of tens of thousands of years. And it requires a site where the geology provides adequate containment and the community is willing to host a facility and, more importantly, to ensure the safety and security of the facility for future generations. **The time-scales extend down the generations and, in terms of sustainability and intergenerational equity, the risks to future environments and human welfare must be minimised. Much more consideration of the safety case and the impacts on human society will be needed before a commitment to the development of a GDF can be made.**

Government Policy

The first CoRWM set out an interdependent set of recommendations. The support for geological disposal was qualified in two distinct ways.

The first was that it was qualified, among other things, by the need to: commit to an intensified period of research into the long-term safety of geological disposal; to ensure a robust programme of interim storage and commitment to safe and secure management against the risk of delay or failure of the repository programme; to leave open the possibility of other options that might emerge as practical alternatives to disposal.

The second was that the recommendations explicitly only applied to legacy wastes. On this the Committee commented that 'new build wastes would extend the timescales for implementation, possibly for very long but essentially unknowable future periods. Further, the political and ethical issues raised by the creation of more wastes are quite different from those relating to committed – and, therefore, avoidable – wastes' (CoRWM, 2006, p. 15).

BANNG fully supports CoRWM's recommendations as still relevant to the search for a GDF. It especially supports the emphasis on interim storage as the immediate priority, the openness to consideration of alternatives and the application only to legacy wastes.

We would dispute the claim that 'some form of geological disposal facility will remain necessary' (2.1.6). We cannot know whether a GDF will ever materialise or alternative forms of management be developed. What we do know is that, for the foreseeable future, storage of wastes will be the method for managing wastes.

We would strenuously disagree with the statement that the CoRWM recommendations 'were also appropriate for the wastes from new nuclear power stations'. As we established above CoRWM was at pains to say that its recommendations were for legacy wastes alone and that, 'Should a new build programme be introduced, in CoRWM's view it would require a quite separate process to test and validate proposals for the management of the wastes arising' (CoRWM, 2006, p.15). **We consider the government's appropriation of CoRWM's recommendations to support a new build programme disingenuous and deceitful, a distortion of a careful, modulated and publicly supported approach.**

Further, we are concerned with the statement that 'despite some differences in characteristics, waste and spent fuel from new nuclear power stations would not raise such different technical issues compared with new nuclear waste from legacy programmes as to require a different technical solution' (2.1.9). Again, we ask, how can we know? When the technical solution of dealing with legacy wastes is not yet developed and verified, it is unwise to assume that a repository can deal with wastes in a form that has yet to be specified. In any case, the scale of the new build programme, if it develops, is unknown and, consequently the inventory is unknowable. It may very well be that more than one repository is needed to deal with the volumes and radioactivity of the total inventory. **If the problems besetting development of one repository are formidable, the problems facing the development of two repositories may well be insurmountable.**

There are questions over the inventory arising for legacy wastes, let alone new build. It is not yet clear whether plutonium will be declared a waste though the size of the

stockpile at circa 140 tonnes suggests that a large proportion will be. It is not even clear whether spent fuel will be destined for disposal since the possibility (however unlikely) of a new venture into reprocessing prevents its definition as a waste. The uncertainty over the future inventory both of legacy and new build to be disposed adds to the problem of defining the scale and number of repositories. The document recognises that the categories and volumes of wastes will 'change significantly' (2.3.16). **The possibility of new nuclear power stations with a total capacity of 18GW merely elevates the defining and planning of a repository into an illusory exercise.**

The Need for a GDF

In chapter 3 the document is at pains to justify the government's nuclear policy and thereby the need for a repository to be available as soon as possible. We have pointed out that, even at its most accelerated, the process for finding and developing a site will be intergenerational and that interim storage is effectively the solution for the foreseeable future. The document states that interim storage is not a 'permanent solution'. This poses the question, 'what is permanent'? Certainly interim storage is likely to be the means for management for the foreseeable future, the period of the next century and more. Disposal is not yet proven and an acceptable site is yet to be found and, even so, it cannot be regarded as a permanent solution because it does not yet exist, despite the claim that it 'will exist'.

It is claimed that indefinite storage will be a burden on the future. That is undeniable but it behoves the present generation to ensure the burden is mitigated as far as possible. Creating more wastes will increase the size and the timescale of the burden. It is this that is unethical.

The chapter ends with a paean in favour of new build as a necessary component in meeting the challenge of climate change. New nuclear power is not a given, nor is it necessary. The wastes it will create are an unethical imposition on future generations who may have to find ways of dealing with the problem of wastes stored in vulnerable locations in the worsening conditions of climate change. A repository offers no comfort as a solution to the problem of managing our radioactive waste safely for the foreseeable future.

Prepared on behalf of the Blackwater Against New Nuclear Group (BANNG) by Professor Andrew Blowers, OBE
Chair of BANNG, Co-Chair, BEIS/NGO Nuclear Forum, Former member of Committee on Radioactive Waste Management (CoRWM)

18 April 2018