



BANNG
Blackwater Against New Nuclear Group



NDA DRAFT STRATEGY JANUARY 2016

RESPONSE FROM THE BLACKWATER AGAINST NEW NUCLEAR GROUP (BANNG)

(BANNG Paper No. 28)

Nature of this Response

The Blackwater Against New Nuclear Group (BANNG) is a long-established citizens' based organization primarily concerned to oppose the development of new nuclear power reactors and long-term radioactive waste management facilities at the Bradwell site in Essex. Over the years we have produced many consultation responses and other documents covering a myriad of issues including matters of radioactive waste management, decommissioning, clean up and socio-economic impacts, areas which are at the heart of the NDA's mission. We have raised public consciousness about the impacts of new nuclear energy on the Blackwater estuary and have undertaken a range of activities including public meetings, meetings with councils, MPs, ministries and regulators, petitioning and various manifestations of opposition. We believe we have compiled a thoroughly researched and evidence based set of principles and arguments to support our campaign and the fruits of this will be found on our website. Our supporters are drawn primarily from the Blackwater area but are also found in other parts of Essex, the UK and overseas.

In responding to the NDA Draft Strategy we intend to focus mainly on the specific issues affecting the Bradwell site. We note, however, that the Strategy is couched mainly in strategic and generic terms while our concerns are necessarily specific. One of the problems is that the strategy presents a flexible and integrated approach to the vast array of issues for which the NDA is responsible. While this is, perhaps, inevitable it does allow a range of interpretations which, at the local and specific level, can lead to an implementation strategy that is pragmatic and liable to considerable change and shifting priorities and policies. At its worst this may amount to no strategy at all though we recognize that a wholly inflexible strategy conceived within highly specific time frames would be equally undesirable. We do feel that the implementation of the strategies needs to be more clearly specified and thought through. There are many instances in our experience where strategy applied in the Bradwell case appears to be incoherent, subject to fundamental change where the implementing bodies appear to be making it up as they go along. We shall indicate examples of this during the course of this response.

In your Introduction you indicate that you are happy to receive comments on how the strategy or its implementation can be improved and that you wish comments to be based on argument and evidence rather than simple support or opposition. As to argument and evidence you will find detailed expositions of this in our previous papers especially those concerning FED discharges into the Backwater, transfer of ILW and(refs.). In this response we shall make comments on issues as they arise in the document drawing attention where relevant to the implications for Bradwell and the Blackwater.

Preface

In the Preface the Strategy notes that the NDA was established to ensure that the UK's nuclear legacy sites are decommissioned and cleaned up safely, securely, cost-effectively and in ways that protect people and the environment. BANNG observes that the way FED dissolution discharges into the Blackwater estuary were introduced on the back of claims from Magnox and the NDA such as 'they will be aqueous discharges of a clean salt solution' contradicts this aspiration/claim completely.

Strategy Overview

Lessons from 2011. We note the claim that 'strategy development has entailed extensive engagement with stakeholders since 2011' (p. 15). Indeed, there was a strategy document issued by Magnox notably on the strategy for ILW transfers and storage but to describe the process as 'extensive engagement' would be an exaggerated claim. In BANNG's experience it amounted to consultation requiring response to a specific proposal rather than engagement involving stakeholders and the public involved in the development of the policy.

Site Decommissioning and Remediation. We note and applaud the preference for continuous decommissioning and completion as soon as practicable. We also recognize that, in some cases, deferred decommissioning will be preferable, for example in the case of graphite cores (to which we will return). However, we feel that the concepts of continuous and deferred are too vague and there needs to be a clear idea of what is entailed and for how long and why in order to gain public approval and confidence. In the case of the Bradwell site promises of early site clearance were unfulfilled and the extension of FED dissolution and the import of ILW from other sites has already prejudiced the entry of the site into care and maintenance. An apparent strategy has transmuted into incremental and pragmatic policy making. Failure to be more open, consistent and clear has been a recipe for undermining public trust in the site operators and, by implication, the NDA.

Integrated Waste Management. BANNG supports this concept in principle but cautions, once again, that the flexibility implied in terms of methods of management, boundary classification and siting strategies could lead to a lack of clarity and consistency and potential conflicts in implementation. The outcome

could become a process of creeping incrementalism. It will be important that the variables involved changing over time are sufficiently integrated to enable a siting strategy to emerge that is both optimal and publicly justified. In order to achieve this we feel strategies will need to be justified and reviewed in terms of such principles as sustainability, self-sufficiency, intergenerational and intragenerational equity. Indeed, an integrated waste management strategy should be principles led and not simply justified through a cost/benefit calculus based on risk assessment and discounting.

Critical Enablers. Public and Stakeholder Engagement. BANNG has commented in many of its papers on the inadequacies of PSE and the need for strategies of involvement in policy making. We have been frustrated by both the lack of genuine engagement and the inadequacy of the methods adopted. We are aware that the NDA, DECC and the regulators have spent much effort in trying to establish more effective means of engagement and, to a degree, this effort is bearing fruit. However, the continuing reliance of the NDA and Magnox on Site Stakeholder Groups (SSGs) does not facilitate the widest participation. The constitution, membership and purpose of these groups needs to be critically examined and reformed to ensure that public participation is intensive and extensive and enables involvement in strategy making. This present exercise in consultation on the NDA Strategy is a good example of a very limited, elitist and inaccessible approach to participation.

It is important to stress that, in any PSE, it is important to demonstrate genuine interest and support by responding fully and in a timely way to concerns which are raised. Attempts to deal with awkward questions by giving evasive answers or buck passing does nothing but create mistrust.

Site Decommissioning and Remediation

Sellafield ponds and silos. BANNG recognises the urgency to reduce the 'intolerable risks' (p.23) associated with the legacy ponds and silos at Sellafield and supports the view that these must be given the highest priority for clean up and remediation.

Decommissioning Issues especially Magnox reactors. In this section we note (p. 24) that the strategy is to decommission sites as soon as reasonably practicable, a commendable objective which, as in the case of the Bradwell site, has been prejudiced by the FED dissolution process and the proposed transfer of ILW from other sites.

The decommissioning of Magnox reactors is a major concern for BANNG. As things stand the spent fuel has been transferred to Sellafield and the FED is being dissolved leaving the residues to be boxed and stored on site. There are controversies surrounding this strategy which are referred to elsewhere and are presented in detail in our previous submissions to consultations. The graphite cores are clearly part of 'deferred decommissioning' and it is intended to leave them in passive store weather protected by cladding until the end of this century. Beyond that the policy is unclear largely because of the uncertainties. These

include: the technological challenges involved in safely dismantling these very substantial structures; the uncertainty about how to condition and transport the waste arising; and the absence, at present, of any long-term and permanent disposal solution. Once again the GDF is the Holy Grail but precisely where, what and whether it will be developed is unclear. And, in any case, it seems unlikely that graphite wastes will be an early priority for any GDF despite the claims for 2060 made in the Strategy.

The NDA Strategy is silent on these issues, a silence that can only be interpreted as a lack of any idea what can or will be done with the graphite cores beyond the passive phase of storage. BANNG believes it is imperative that this question is given much greater attention and priority.

On the issue of the sequence of Magnox reactor dismantling (p.27) we note that the focus will be on 'those sites with a high land value or sites likely to yield the greatest learning for other sites'. At least as important will be sites which pose the greatest risk to environment and safety. The criteria for deciding priorities should be a matter for public engagement and not simply a case of which is the cheapest option.

Although the NDA is undertaking a review of timing and sequencing of Magnox reactors (p. 27) it is unclear what specific issues this covers, in particular whether it will undertake a detailed review of the long term strategy for graphite cores as we have suggested above. And we would also emphasise that the safety and security of the local community should be among the benefits to be considered both during the deferral period and post dismantlement.

Availability of GDF. We note that it is now concluded that a GDF will not be available until 2060 (until now 2040 has been the yardstick) and that the pace of progress in decommissioning will be constrained 'by the lack of waste management infrastructure such as the geological disposal facility (GDF)'. It is to be doubted that a GDF will become available as early as 2060 if, indeed, it becomes available at all. The NDA strategy has become foolishly dependent on the GDF even though neither concept nor site is in sight and progress in most other countries is agonisingly slow. In such an uncertain situation it would surely be prudent to set out a contingency plan at the very least exploring the potential options. Among these must be continuing long term storage. This will have implications for storage capacity, availability of sites and, indeed, the new build policy. It will be irresponsible to continue to store spent fuel and other dangerous materials on deteriorating coastal sites into the far future when physical conditions at the sites may become intolerable and societal capacity for dealing with the problem indeterminate.

Land Quality Management. Risk to people and the environment is an enduring consideration and the aim of remediation is to break the pathway between the contaminant and people and the environment. Such fine ideals may look less promising when put into practice as the example of introducing the unnecessary and polluting practice of FED dissolution into the Blackwater demonstrates.

BANNG considers there should be a much more rigorous adherence to the principles than has hitherto been the case in our experience.

Land Use. The former Bradwell station, Bradwell A, now about to enter care and maintenance is adjacent to the site owned by EDF and currently identified as a site for new nuclear reactors. Although the new nuclear project is outside NDA's remit, the integrated waste strategy has implications for the relationship between the two sites in the long term. Although Bradwell A will be among the first Magnox sites entering care and maintenance, there will be a continuing and possibly indefinite presence on the site of ILW stores, graphite reactor cores, boilers and other redundant facilities and wastes. BANNG believes it would be perverse to extend the concept of integrated waste management to incorporate decommissioning and waste management on both sites. There are, of course, no plans (yet) to do so but the idea that Bradwell is already a waste management site might be used to help justify and legitimate the choice of Bradwell for new build. It is important that the NDA deals with the nation's legacy wastes and policies should be developed to that effect. In the case of Bradwell the vulnerabilities of the site to coastal processes, storm surges and sea level rise in the long term must be considered as part of the consideration for the management of graphite cores, etc. There should be no question of perpetuating the storage of wastes on the Bradwell site because at the adjacent site it is proposed to store spent fuel and other wastes well beyond the end of the century. Rather, the NDA should urge that Bradwell is an unacceptable site for the long-term management of wastes and that it should be returned to normal land use as soon as possible and certainly before the end of the century.

Integrated Waste Management

Flexibility, the GDF and the need for alternative strategies. As noted earlier the NDA's 'flexible approach to long-term management' (p.55) while necessary in the face of many variables changing over long time-scales, can, in some instances, result in a lack of coherence, consistency and credibility during implementation of strategy. At the same time flexibility can be prejudiced by constraining assumptions. The most obvious of these is the reliance on the presumed availability of a GDF by the mid-century. This is a tenuous position on which to base fundamental policies for the long-term. At present the uncertainties surrounding the GDF in terms of siting, design, safety concept, host rock, inventory, capacity, alternatives and timing may suggest its realization is improbable certainly within the time-scales currently envisaged and it is quite conceivable that a GDF (let alone more than one) will not become available within the time-scales of realistic predictability. The GDF exists, at present, more in the realm of fantasy than reality. The uncertainty over such a fundamental plank of the NDA strategy suggests it is imperative that alternatives and contingencies are identified and planned for. In other words instead of one strategy, however flexible, there needs to be at least a strategy B to accommodate the various possible eventualities of long-term management.

Higher Activity Wastes

It is noted that a stand-alone HAW strategy will be published in 2016 and that the current planning assumption is that stored waste in England and Wales will be transported to a GDF while that in Scotland it will be managed in near surface facilities. Thus, there are already alternative strategies within Great Britain. In looking at alternatives to an imminent GDF it would seem sensible to consider long-term near surface storage as an appropriate alternative to the one-trick-pony policy of a GDF come hell or high water (as it may well do in certain locations). This would imply extending the siting process for a GDF into a consideration of siting a near surface storage facility. BANNG believes this to be a logical way forward which accounts for uncertainties over the GDF, recognises that long-term storage is the method of management for the foreseeable future and an approach likely to be more credible, far easier and cheaper to implement. We note that the NDA intends to explore long-term disposal options in support of UK and Scottish government policies and urge it to include long-term storage as a credible approach to a solution for the management of HAW.

Consolidation

Need to stop FED dissolution forthwith. BANNG has opposed the policy of consolidation in several earlier responses to consultations, in our discussions with the Environment Agency and our interactions with Magnox Ltd. The Draft Strategy speaks of 'optimising the waste management lifecycle by reducing the number of storage and treatment facilities', progressing the mission sooner than declared in lifetime plans and 'optimising the number and location of of ILW storage and Fuel Element Debris (FED) Facilities in Magnox Limited'. Yet there is recognition that there is limited scope for consolidation in the context of the overall ILW inventory. There seems a clear implication here that FED dissolution at Bradwell was unnecessary in terms of optimization. We have argued that it was unnecessary also given the perfectly acceptable storage solution which has now been adopted for all sites. Given subsequent decisions not to proceed elsewhere with dissolution, it appears that Bradwell and more especially the Blackwater estuary was used as the site for an experiment which turned out badly in terms of cost, technology and public concern. Despite this Magnox, with the NDA's approval, have persisted in discharging into the estuary and have been extremely parsimonious in releasing information as to when discharges are occurring, for how long and what are the radioactive components of the discharges. Discharges were due to be completed by the end of 2015; it now appears that, for unexplained reasons, they will continue until at least 2019 assuming the requisite permits are granted by the EA.

BANNG considers the NDA, the body responsible for the strategy, have failed to stop the dissolution process once it became obvious that it was failing and that there was no longer any intention to use dissolution elsewhere. It is not good enough to hide behind the operator leaving them to continue an operation that imposes unnecessary risk to human health and the marine environment in a very sensitive area. BANNG urges the NDA to stop this process immediately, to provide a full explanation of what has happened and to issue an apology to the communities for the potential harm and anxiety that this process has caused.

Consolidation and ILW transfers. BANNG is also opposed to the transfer of ILW between sites and the putative creation of regional waste stores. This breaches the concept of self-sufficiency and is prompted pragmatically and fortuitously by spare capacity and cost saving. However, it increases risks both through transport and the increase in radioactivity that larger volumes in one location brings. Far from being a strategy it is a tactical response to unforeseen circumstances. In the case of Bradwell the policy of self-sufficiency was clear and the county council, in granting permission for an ILW store, was at pains to ensure its use was to be restricted to Bradwell originating wastes. It was FED dissolution that reduced the volumes of solid residues destined for storage thereby opening up space for the import of ILW from Dungeness and Sizewell (permit pending). This is another example where flexibility untroubled by principles enables what is effectively a complete change of policy rendering unviable the idea of a consistent strategy being pursued. More importantly, it creates a precedent for Bradwell becoming a regional store and the possibility that this role could be expanded in future.

The implementation of a flexible policy of consolidation has led to contradiction in the case of Bradwell. On the one hand the dissolution of FED expresses a policy of self-sufficiency; on the other the opportunity thereby created to import solid ILW from elsewhere creates the potential of a regional waste management facility. BANNG considers that the NDA needs to set out its principles and intentions for a policy of consolidation that is premised on self-sufficiency. There should be a full PSE covering the principles, methods and siting strategy that provides a clear demonstration how the concepts of integrated waste management and consolidation work together in practice.

Liquid and Gaseous Discharges.

Throughout our response we have referred specifically to the Bradwell site where relevant and to the issue of FED dissolution and ILW transfers in particular. It appears to us that in pursuing these policies at Bradwell the NDA is in breach of the strategy it sets out in various places in the Report and in the section on Liquid and Gaseous Discharges in particular.

1. It is stated that 'unnecessary introduction of radioactivity into the environment is undesirable' (p.66). We entirely agree but question how the discharge of dissolved FED into a shallow and sensitive estuary can be justified when an alternative, namely storage, imposing far less risk is being utilised both at Bradwell and elsewhere.
2. The strategy claims to observe the 'precautionary principle'. However, in the Bradwell case the absence of complete scientific proof of harm cannot justify discharges which are, as indicated above, unnecessary. Absence of evidence is not evidence of absence.
3. The strategy claims a preference for 'concentrate and contain' over 'dilute and disperse' where there would be a definite benefit in reducing environmental pollution. In the Bradwell case the preference has not been followed despite the clear environmental and health benefits in doing so.

The Bradwell case provides a clear example of where the principles enshrined in the NDA draft Strategy have been ignored or contradicted in practice. Concentrate and contain has been swept aside at Bradwell in favour of a clear case of dilute and disperse, allowing FED dissolution discharges of radioactivity (15% of the total) into the Blackwater and the atmosphere. This is a shallow restricted estuary which has a very low 10 day tidal refresh period. There are shallows and mud flats extending well beyond the estuary mouth which further inhibit any pollution dispersion into the wider Thames estuary. The Blackwater has multiple areas of conservation and protection classifications, protected species and is also a Marine Conservation Zone classification. This all counts for nothing.

The estuary discharge point is located in the immediate vicinity of locations where native oyster cultivation, fishing, sailing, pleasure beaches, beach huts and swimming can all be found. Protests calling for those collectively responsible to cease this avoidable pollution and its associated risks to environment and health have fallen on deaf ears.

It should be understood by those reading this response that there has not been any public consultation on the introduction of this process. On the contrary local stakeholders were originally told by NDA and Magnox at LCLC meetings it was a benign process leading to only 'aqueous salt solution discharges' and so they saw no reason to object to it (see Appendix 1:

The truth of discharges and the resulting 15% release of radioactivity only came to light on release of the NDA document 'Optimising the number and location of FED Treatment (Dissolution) Facilities in Magnox Limited, Credible Options, Main Paper, May 2013.' At this time it was proposed to create shared FED dissolution facilities. We are advised that this plan has now been abandoned with the result that only Bradwell, the most unsuitable location, will host the 'rapid' nitric acid process as it still struggles to come anywhere near its predicted levels of performance well beyond the originally promised cessation date of October 2015. Dissolution completion is currently 2019.

This 'Best Available Technique' is clearly no longer still the best available.

Critical Enablers

Public and Stakeholder Engagement

At various points in this response we have made reference to the paucity or absence of adequate public and stakeholder engagement. We have written at length on this issue in some of our consultation responses which will be found on our website. Here we wish to make four points which we feel are pertinent in the context of the Draft Strategy:

1. There has been little attempt made at real PSE, rather consultation has taken the form of the traditional statement of policy calling for responses.

2. The purpose of consultation seems more aimed at confirming decisions already taken and providing a public imprimatur to achieve legitimation.
3. Some other agencies notably the Environment Agency (and, to an extent, DECC) have made efforts to develop processes of public engagement that are inclusive, broadly representative, accessible and encourage involvement in policy making, not merely reactions to policy proposals. We would encourage the NDA to review its practices.
4. The NDA and the contractors which carry out its work seem overly reliant on the Site Stakeholder Groups. We would argue that this model, perhaps relevant in former times, is now utterly outmoded, unrepresentative, too closely identified with the operators and lacking in democratic integrity. We would urge the NDA to review and reform its processes of consultation and participation.

Please see Appendix 1 on Public Trust and Confidence.

Bradwell

It appears from the time line for the Bradwell site (p.105) that Care and Maintenance is timed for 2016. This appears to be contradicted by the continuation of FED dissolution and ILW storage and transfer which will end in 2019 at the earliest. The site end state is reached near the end of the century. It is indicated that structures and infrastructures will be made safe or removed *where necessary*. It would be helpful to know if it is intended to decommission the reactor cores and clear the site at this time. That is certainly what we have been led to believe.

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

***Professor Andrew Blowers, OBE,
Chair***

***(with contributions from Barry Turner, Vice-Chair, and Varrie Blowers,
Secretary)***

15 February, 2016

Appendices:

Appendix 1 – Public Trust and Confidence

(Extract from BANNG's response (BANNG paper No. 26, September, 2015) to the application by Magnox for an extension to the timescale for the discharging of liquid effluent from the fuel element debris treatment process (FED) into the estuary from 12 months to a further 24 months)

Appendix 2 - List of BANNG Responses to Government and Other Consultations on Nuclear and Other Papers

References

BANNG (2013) Optimising the Number and Location of FED Treatment (Dissolution) Facilities in Magnox Limited – Credible Options. Nuclear Decommissioning Authority, May, 2013. Response of the Blackwater Against New Nuclear Group (BANNG), June (BANNG Paper No. 20)

BANNG (2013) Optimising the Number and Location of Interim Intermediate Level Waste (ILW) Storage Facilities on Magnox Limited and EDF Energy Sites in England and Wales – Credible Options. Nuclear Decommissioning Authority, May, 2013. Response from the Blackwater Against New Nuclear Group (BANNG), June (BANNG Paper No. 21)

BANNG (2014) Comment paper on the preferred option of the Nuclear Decommissioning Authority (NDA) for optimising the number and location of: Interim intermediate level waste (ILW) storage facilities on Magnox Limited and EDF Energy sites; and FED treatment (dissolution) facilities in Magnox Limited, Comments from the Blackwater Against New Nuclear Group (BANNG), January (BANNG Paper No. 24)

APPENDIX 1 - PUBLIC TRUST AND CONFIDENCE

(Extract from BANNG's response (BANNG paper No. 26) to the application by Magnox for an extension to the timescale for the discharging of liquid effluent from the fuel element debris treatment process (FED) into the estuary from 12 months to a further 24 months (September, 2015), giving examples of misleading and contradictory information and lack of public consultation).

BANNG would like to draw the attention of the EA to what it believes has been the misleading information given to the public about the discharges from Bradwell.

Information given to the Bradwell Local Communities Liaison Council (LCLC) on the nature of the discharges:

The Bradwell LCLC members are local councillors whose remit is to report back to their constituencies on items raised at meetings, i.e. report back to the public. Members of the public also attend the meetings.

BANNG believes that confusing information has been given to the LCLC over the years about the nature of the discharges into the Blackwater estuary. Information found in a selection of LCLC Minutes from the past few years describes the discharges as 'benign'. For example:

4 December, 2011:

- (Item 2220) '**benign liquid**' would be discharged into the estuary;
- (item 2223) 'The content of the **benign effluent** was questioned.....the **abatement process would trap the radioactivity and any heavy metals, leaving essentially clean water containing Magnesium salts.....confirmed that this effluent would be benign**';

4 December, 2012:

- (item 2330) '**an aqueous discharge of a clean salt solution**' would be put in the estuary;

11 June, 2013:

- (item 2486) 'dissolution produces an effluent stream that is passed through the ADAP **to remove waste and activity**'.

Such misinformation may have led to the original local acceptance of the dissolution process. When the Nuclear Decommissioning Authority (NDA) produced its Credible Options consultation paper with reference to location of FED dissolution treatment plants (see below), Bradwell was excluded as a result of this acceptance.

Information on the discharges taken from Nuclear Decommissioning Authority (NDA) Papers:

The NDA's consultation document *Credible Options for Optimising the Number and Location of FED Treatment (Dissolution) Facilities in Magnox Ltd. – Credible Options, (May, 2013)*, gives a different story. The document states that the FED dissolution process retains more than 85% of the radioactivity in residues but that **'it does lead to some discharges of radioactive and non-radioactive by-products to the environment'** (pp. 4 & 5).

In fact, the NDA's paper entitled *FED discharges to UK coastal waters - NFLA request under FOI Act'* of April, 2014 (obtained under Freedom of Information by the Nuclear Free Local Authorities) outlines the radionuclides expected to be discharged, among others Tritium, Strontium, Plutonium and Americium. Discharge of heavy metals was also expected, e.g. Boron, Cadmium, Lead, Mercury, Zinc and the maximum allowed daily discharge of nitric acid.

There does not seem anything 'benign' (as normally understood by the public) about the discharges revealed in these papers.

Information provided on the prolonged outage

Little information has been given for the outage and what has been provided has not been entirely clear:

29 October, 2014:

- the Chair of BANNG attended the NDA's National Stakeholder Meeting and was informed by the Chief Executive of the NDA that the dissolution plant was experiencing '**challenges**' and that discharges had ceased shortly after they had begun on 23 June;

21 November, 2014 at the meeting of BANNG representatives with David Griffiths (Nuclear Regulation Group South Team Leader, EA) and Karl Littlewood (Nuclear Regulator, Nuclear Regulation Group South, EA), it was stated that:

- the FED treatment plant was currently not operational after a planned inspection found problems with the process, there were **leaks** within the modular equipment and there were **fundamental problems**;
[**Note:** Karl Littlewood had, in fact, been asked by David Griffiths to discuss with the Site Operator the adoption of a Plan B, i.e. encapsulation of the FED]

4 December, 2014 at the LCLC meeting:

- (item 2553), responding to a query, Scott Raish, the Site Manager, 'advised that the commencement of the outage was delayed from late July to early October to enable a surety about what needed to be improved';

4 March, 2015 at the LCLC Special Meeting:

- (item A1b) 'Mr Moore added that **the process had not been operating to full design output** and that modifications, particularly to the abatement plant, had been undertaken to increase output going forward.' [Note: at this meeting it was also stated that the discharges had recommenced on 3 March]

At several meetings of the LCLC and in various pieces of correspondence with BANNG it has been claimed that the outage was planned. This seems far-fetched given the length of time that the outage lasted. The quote above from Mr. Raish seems to suggest that there was an outage because of problems (July to October) and then there was a planned outage (from October to March) to deal with the problems.

BANNG is concerned at the paucity of information and the misleading information provided for the public on the nature of the process, its outputs and the outage. There has been little attempt at engagement with a public that has justified concerns about the discharges.

BANNG believes that when it became apparent that there were fundamental problems with the dissolution process, a public statement should have been made by Magnox. In spite of the high level of public concern about the dissolution process, the public was kept in the dark. Throughout the whole process there has been a lamentable lack of openness and transparency.

Information on timing, number and constituents of the Bradwell discharges:

Despite many attempts, it has not proved possible for BANNG to gain information from Magnox on the timing number and constituents of the discharges that have taken place. All that is known is that discharges started in June, 2014 but stopped shortly after because of the discovery of fundamental problems. It was reported that the discharges recommenced on 3 March, 2015 but the situation remains very unclear.

Once again contradictory information has recently been given on the frequency of the re-started discharges:

3 June, 2015 at the LCLC meeting:

- (item 2610 from the draft Minutes) Mrs. V. Blowers asked for confirmation of the frequency of discharges currently, Chair advised that this had been covered exhaustively previously and was once daily half an hour after high tide. Mr. P Haley confirmed that this remained as previously reported at a maximum of one per day.

25 August, 2015 at the BANNG/EA meeting :

- it was noted that the discharges were not taking place on a daily basis but several times a month.

BANNG believes that the public has every right to know how many discharges have taken place, the frequency of discharging and constituents of the discharges now and in the future.

Information on the use of the dissolution plant elsewhere:

Confusing information has also been given about the future of the dissolution plant. The original NDA plan had been to remove the plant or parts of the plant from Bradwell for use at other Magnox sites.

21 November, 2014, at the BANNG/EA meeting, it was stated that:

- FED dissolution would not take place at any other Magnox sites.

4 December, 2014 at the LCLC meeting:

- (Item 2558) 'Mr Moore reminded attendees that no other options had been approved and that, whilst cost savings may drive the intention to deploy alternative options, FED dissolution may have to be used if it continued to be the only approved option.'

4 March, 2015 at the LCLC Special Meeting:

- (item A11) the meeting was advised by Mr. Ireland that the original plan had been to re-use some of the Bradwell dissolution plant in a plant at Hinkley Point A. 'Further analysis has shown that FED waste at Hinkley Point A site is ILW. It is proposed that encapsulating this in 6m³ concrete boxes will be more cost effective than processing by dissolution'.

[**Note:** the majority of the FED at Bradwell is ILW.]

BANNG believes that a categorical statement is required to the effect that the plant will NOT be used elsewhere and that packaging and storage are the preferred options for the other Magnox sites.

Information about the entry of the Bradwell site into Care and Maintenance (C & M):

The public has been given several dates for the entry of the site into C & M but more recently that this would take place at the end of 2015. However, an extension to the dissolution process will mean that the site does not enter C & M until 2018 [*subsequently changed to 2019*]. Given what has happened in the past, this can be regarded only as an aspiration and not a certainty. There is no guarantee that more problems will not arise which would mean the discharges being continued for even longer and entry to C & M could recede even further.

BANNG believes that as a result of what appear to be fundamental problems experienced with the dissolution plant and the uncertainties about how long it will be necessary to continue the discharges into the Blackwater estuary, the opportunity should be taken now to stop discharging and to package and store the FED, as it has been told will be happening at other Magnox sites.

Information on current consultation.....is it public, targeted or not necessary?

The status of the current consultation is unclear:

7 August, 2015:

- the Rt. Hon. Priti Patel, MP, received the information about the current consultation and was told by Charles Beardall of the EA, 'We have also invited the general public....' to comment.

18 August, 2015

- in response to a question enquiring if the consultation was going to be advertised in the Mersea Island Courier and referring to the public consultation in the form of a drop-in event that took place when the permit was for 12 months, a BANNG supporter was told by Ian Alexander-Barnes of the EA: 'We have taken the decision not to publish the proposal in the local press but to publicise it on our website and then to notify people we know have an interest in the matter directly. We considered this form of targeted approach to be the most effective in this case.'

25 August, 2015 at the BANNG/EA meeting it was stated that:

- there was no need for the Agency to hold any consultation.

The different information given about the nature of the current consultation gives the impression of an unwillingness to engage with the public on a matter about which the EA and Magnox are fully aware there is a high level of concern. The EA organised a public consultation in the form of a drop-in session at West Mersea (in which Magnox and others took part) in July, 2014, as a result of the high level of public anxiety expressed at the BANNG Public Meeting, held on 23 June, 2014. This anxiety has not diminished.

BANNG believes that it behoves the EA to hold a proper public consultation on the application to extend the period of discharges, in view of: the continuing high level of public anxiety about and interest in the discharges; the misleading and unclear information that has been put into the public sphere about the nature of the discharges, the reasons for the outage and about what the current consultation constitutes; and the lack of public information about the timing, number and constituents of the discharges into an estuary where large numbers of people live, work and spend their leisure time.

APPENDIX 2 - List of BANNG Responses to Government and Other Consultations on Nuclear and Other Papers

BANNG (Blackwater Against New Nuclear Group)(2008) Consultation on the Strategic Siting Assessment Process and Siting Criteria for New Nuclear Power Stations in the UK, Response on behalf of BANNG, November
(BANNG Paper No. 1)

BANNG (2009a) 'Have Your Say' Government Consultation on Nomination of Sites for New Nuclear Power Stations, Response to the Consultation by BANNG, May
(BANNG Paper No .2)

BANNG (2009b) The Justification of Practices Involving Ionising Radiation Regulations 2004, Consultation on the Nuclear Industry Association's Application to Justify New Nuclear Power Stations, Response to the Consultation from Blackwater Against New Nuclear Group (BANNG), March
(BANNG Paper No. 3)

BANNG (2010a) Consultation on Draft National Policy Statements for Energy Infrastructure: Draft Overarching National Policy Statement for Energy (EN-1); Draft National Policy Statement for Nuclear Power Generation (EN-6) and Associated Documents, Response of the Blackwater Against New Nuclear Group (BANNG), February (BANNG Paper No. 4)

BANNG (2010b) House of Commons Energy and Climate Change Committee, Inquiry into Energy National Policy Statements, Evidence on Behalf of the Blackwater Against New Nuclear Group, January
(BANNG Paper No. 5)

BANNG (2010c) Environment Agency Generic Design Assessment AP1000 Nuclear Power Plant Design by Westinghouse Electric Company LLC: UK EPR Nuclear Power Plant Design by Areva NP SAS EDF; Consultation Document, Response by Blackwater Against New Nuclear Group (BANNG), October
(BANNG Paper No. 6)

BANNG (2010d) The Justification of Practices Involving Ionising Radiation Regulations 2004. Consultation on the Secretary of State's Proposed Decisions as Justifying Authority on the Regulatory Justification of the New Nuclear Power Station Designs Currently Known as the AP1000 and the EPR, response to the Consultation by the Blackwater Against New Nuclear Group, February
(BANNG Paper No. 7)

BANNG (2010e) The Energy Act 2008, Consultation on the Financing of Nuclear Decommissioning and Waste Handling Regulations, Consultation on a Methodology to Determine a Fixed Unit Price for Waste Disposal and Updated Cost Estimates for Nuclear Decommissioning, Waste Management

and Waste Disposal, Response of the Blackwater Against New Nuclear Group (BANNG), June (BANNG Paper No. 8)

BANNG (2011a) Planning for New Energy Infrastructure, Consultation on Revised Draft National Policy Statements for Energy Infrastructure, Response of the Blackwater Against New Nuclear Group (BANNG), January (BANNG Paper No. 9)

BANNG (2011b) The Energy Act 2008, Consultation on Revised Funded Decommissioning Programme Guidance for New Nuclear Power Stations and Consultation on an Updated Waste Transfer Pricing Methodology for the Disposal of Higher Activity Waste from New Nuclear Power Stations, Response from the Blackwater Against New Nuclear Group (BANNG), March (BANNG Paper No. 10)

BANNG (2011 c) Management of the UK's Plutonium Stocks, Consultation on the long-term management of the UK-owned Separated Civil Plutonium, Response from the Blackwater Against New Nuclear Group (BANNG), May (BANNG Paper No. 11)

BANNG (2011d) Japanese Earthquake and Tsunami: implications for the UK nuclear industry interim report by HM Inspector of Nuclear Installations May 2011, Comment on Behalf of the Blackwater Against New Nuclear Group (BANNG), August (BANNG Paper No. 12)

BANNG (2011e) Managing Radioactive Waste Safely: desk-based identification and assessment of potential candidate sites for geological disposal, Public Consultation, Response of the Blackwater Against New Nuclear Group (BANNG), September (BANNG Paper No. 13)

BANNG (2012a) Essex County Council's Waste Disposal Document: Preferred Approach, Public Consultation, Response of the Blackwater Against New Nuclear Group (BANNG), January (BANNG Paper No. 14)

BANNG (2012b) Geological Disposal of Radioactive Waste In West Cumbria? Public Consultation, Response of the Blackwater Against New Nuclear Group (BANNG) (BANNG Paper No. 15)

BANNG (2012c) Application for Development Consent by NNB Genco (EDF Energy) for Hinkley Point C Nuclear Generating Station and Associated Development, Written Representation on behalf of the Blackwater Against New Nuclear Group (BANNG), May (BANNG Paper No. 16)

BANNG (2012d) Paper presented to the DECC/NGO Nuclear Forum, 'Radioactive Waste Management and New Build – Problems and Policies', October (BANNG Paper No. 17)

BANNG (2013) Sizewell C Proposed Nuclear Development Stage 1 Pre-Application Consultation, Initial Proposals and Options Consultation Documents, Response of the Blackwater Against New Nuclear Group (BANNG) (BANNG Paper No. 18)

BANNG (2013) Call for Evidence on Managing Radioactive Waste Safely – Review of the Siting Process for a Geological Disposal Facility, Response by the Blackwater Against New Nuclear Group (BANNG), June (BANNG Paper No. 19)

BANNG (2013) Optimising the Number and Location of FED Treatment (Dissolution) Facilities in Magnox Limited – Credible Options. Nuclear Decommissioning Authority, May, 2013. Response of the Blackwater Against New Nuclear Group (BANNG), June (BANNG Paper No. 20)

BANNG (2013) Optimising the Number and Location of Interim Intermediate Level Waste (ILW) Storage Facilities on Magnox Limited and EDF Energy Sites in England and Wales – Credible Options. Nuclear Decommissioning Authority, May, 2013. Response from the Blackwater Against New Nuclear Group (BANNG), June (BANNG Paper No. 21)

(There is no Paper No. 22)

BANNG (2013) Review of the Siting Process for a Geological Disposal Facility. Response from the Blackwater Against New Nuclear Group (BANNG) (December) (BANNG Paper No. 23)

BANNG (2014) Comment paper on the preferred option of the Nuclear Decommissioning Authority (NDA) for optimising the number and location of: Interim intermediate level waste (ILW) storage facilities on Magnox Limited and EDF Energy sites; and FED treatment (dissolution) facilities in Magnox Limited, Comments from the Blackwater Against New Nuclear Group (BANNG), January (BANNG Paper No. 24)

BANNG (2015) Manifestoes and Briefing documents for Prospective Parliamentary Candidates on new nuclear build at Bradwell, FED dissolution and transfer of ILW to Bradwell from Dungeness and Sizewell (February) (BANNG Paper No. 25)

BANNG (2015) Application by Magnox for an extension to the timescale for the discharging of liquid effluent from the fuel element debris treatment process (FED) into the estuary from 12 months to a further 24 months; Application by Magnox for an option to switch the existing discharges to a new outfall structure when it becomes necessary due to blockages caused by siltation in the existing structure; A radioactive substances application to allow the switch to the new outfall structure when necessary, Response

from the Blackwater Against New Nuclear Group (BANNG) (September)
(BANNG Paper No. 26)

BANNG (2015) Call for Evidence – Implementing Geological Disposal:
working with communities. Response from the Blackwater Against New
Nuclear Group (BANNG) (September) (BANNG Paper No. 27)

BANNG (2016) NDA Draft Strategy January 2016. Response from the Blackwater
Against New Nuclear Group (BANNG) (February) (BANNG Paper No. 28)