



BANNG
Blackwater Against New Nuclear Group



Planning Application Ref. No. ESS/15/16/MAL from Magnox (to vary condition 3 (restriction on importation) of planning permission ESS/43/12/MAL to temporarily suspend condition 3 to allow the importation of packaged intermediate-level waste from Magnox sites Sizewell A and Dungeness A into the Bradwell site's existing interim storage facility for the period up to 2023)

Objections to the Planning Application from the Blackwater Against New Nuclear Group (BANNG)

BANNG Paper No. 30

PREAMBLE - INFORMATION ABOUT BANNG

The Blackwater Against New Nuclear Group (BANNG) is a Citizens Based Organisation primarily concerned about potential developments of new nuclear reactors and associated radioactive waste storage at the Bradwell site in Essex.

BANNG is also concerned about issues relating to decommissioning at Bradwell: the dissolution of FED and the resulting radioactive discharges into the Blackwater estuary and the atmosphere; and the proposal to transfer ILW from elsewhere for storage at Bradwell, which is the subject of these objections. We have responded to consultations on both these issues (BANNG Papers Nos. 20, 21, 23, 24, 26).

BANNG's support is drawn mainly from communities around the Blackwater estuary but we also have support from people concerned about Bradwell in other parts of Essex and beyond. Since its formation, BANNG has sought to raise public awareness and knowledge about the implications of new reactors at Bradwell through public events and the face-to-face gathering of 10,000 signatures for a Petition that was presented to the Minister for Energy. We have also sought to raise public awareness about the dissolution of FED and the proposed transfer of ILW from elsewhere to Bradwell. We have maintained close contact with local councils, MPs, media and other organisations and have participated in meetings with Government officials, regulatory bodies (particularly with the Environment Agency regarding FED dissolution) and national groups concerned about nuclear issues. BANNG Core Group members and other supporters attend meetings of the Bradwell Local Communities Liaison Council.

The primary aim of the Group is to seek to protect the people and environment of the River Blackwater estuary and its surrounding area, now and in the future, from the risks and dangers of radioactivity by preventing the further development of nuclear activity in the estuary. BANNG has responded to many Government nuclear consultations. For information a list of BANNG responses and other papers is attached as Appendix A.

BANNG'S OBJECTIONS TO THE PLANNING APPLICATION

BANNG wishes to object to the variation to planning permission ESS/43/12/MAL proposed in planning application ESS/15/16/MAL referred to above.

By applying for this variation Magnox is contradicting strategic policies and principles set down by the Nuclear Decommissioning Authority (NDA). By approving an extension Essex County Council would be reversing a firmly established policy that the Bradwell site should be used for Bradwell wastes only. We will elaborate on these points below.

The grounds for objecting are set out below.

Lack of consultation on a controversial issue

At the outset, BANNG would like to state that we believe the import of further Intermediate-Level Waste (ILW) to Bradwell is a controversial issue for the communities of the Blackwater estuary on which they are not being properly consulted and engaged.

Although Maldon District Council and some Parish Councils are being notified of the application, it is disappointing, if not cynical, that only properties within 250 metres of the application boundary are being formally notified, especially as there are virtually no properties that close to the Bradwell site. But not all the communities affected by Bradwell lie within the Maldon District Council area. Essex County Council must be aware that there are many residents of communities around the Blackwater estuary who are deeply concerned about what is happening during the decommissioning process at Bradwell. Yet they are being offered no proper consultation. They are simply expected to play host to nuclear wastes being stored at Bradwell and to accept radioactive discharges into their environment.

On 31 January, 2014, Essex County Council responded to the NDA's consultation on Optimising the number and location of Intermediate-Level Waste (ILW) storage facilities on Magnox Ltd. and EDF Energy Sites; and FED Treatment (dissolution) Facilities in Magnox Ltd. (the ECC response forms Appendix C but is being sent as a separate attachment). With regard to any new Planning Application that would be lodged by Magnox, the response states in the final paragraph: 'Early pre-application discussions and community engagement is recommended....'. Although it is well known that the pre-application discussions

took place, the same cannot be said for 'community engagement'. Drop-in sessions can in no way be described as community engagement.

Context for Planning Application

In order to put the current Planning Application into context, it may be helpful for members of the County Council who will be deciding on the matter to understand what has been taking place at Bradwell in the recent past. This will also help to explain the anxieties and concerns of local residents and should enable the Committee to take a long-term, overall view of what is happening and of what may happen at the Bradwell site. In the recent past policies concerning the treatment and storage of nuclear wastes at Bradwell have been incoherent and subject to fundamental change. As we say above, there has certainly been little effort at wider public consultation and engagement.

It was planned that the former Bradwell power station would enter its Care & Maintenance (C & M) phase in 2015, which means that all operations, except those necessary to maintain the safety of the site, would have ceased. However, due to the use of what amounts to an experimental dissolution process for the fuel element debris (FED) and the severe challenges experienced with it, the C & M phase has slipped, from 2015 to 2017, to 2018 and now to 2019 – and even this date cannot be certain.

Members of the County Council may not be aware that the dissolution of FED with nitric acid results in discharges of both radionuclides and heavy metals into the shallow Blackwater estuary and Tritium into the atmosphere (please see the chart attached as Appendix B). As is well known, the estuary has a slow refresh rate extending over 10 days, meaning that wastes carried out on one tide tend to return with the next.

The concerns and anxieties of local residents have not been heeded in relation to the radioactive discharges arising from the dissolution of FED. The NDA has told the Bradwell Local Communities Liaison Committee that the FED at the site is predominantly ILW.

BANNG strongly believes that the dissolution of FED should be stopped forthwith and the remaining FED wastes should be packaged and placed in the store constructed for the purpose. The store should be for Bradwell wastes only, as originally intended, and not for wastes that would be imported if the variation to the planning permission is allowed.

The FED dissolution plant was to have been used at other Magnox sites but this will not now happen due to the serious problems encountered at Bradwell. FED at other sites will now be packaged and stored. This is what should have happened and should still happen at Bradwell.

The radioactive discharges arising from FED dissolution and the proposed import of ILW to Bradwell would be in contradiction of current policies

The NDA, which is ultimately responsible for the Bradwell site, states that 'unnecessary introduction of radioactivity into the environment is undesirable' (NDA Draft Strategy, January, 2016). The radioactive discharges into the estuary relate to a policy of 'dilute and disperse' rather than the NDA's preferred policy of 'concentrate and contain' which is achieved by on-site storage.

Further, the import of ILW from other sites would contravene another accepted principle: that of 'self-sufficiency' whereby each site stores its own wastes wherever possible.

BANNG believes that the Bradwell ILW store should continue to be for Bradwell waste only in line with the accepted principle of 'self-sufficiency' and that the FED should be dealt with in line with the NDA's stated policy of 'concentrate and contain', i.e. it should be packaged and stored as will now happen at other sites.

The transfer would set a precedent

The proposed import of wastes would establish Bradwell as a long-term, regional nuclear waste store creating a precedent for possible future transfers to the site, including highly radioactive wastes from any new build project.

Bradwell is a nuclear waste store for the indefinite future

There is already a large volume of Bradwell-produced radioactive wastes stored at Bradwell in both the Low-Level Waste (LLW) store and the ILW store. Further, the graphite reactor cores (ILW) remain on site and there is, as yet, no acceptable method of long-term management for these beyond passive storage.

There is now the immediate prospect of further wastes on site arising from ILW imported from Dungeness A and Sizewell A and the future prospect of highly radioactive spent fuel and other highly active wastes from any new build programme at the adjacent site.

Bradwell and its environs are in danger in the future of becoming a national sacrifice zone and BANNG believes that this is a prospect that should concern all Essex County Councillors.

Prospects for a Geological Disposal Facility (GDF)

While it is proposed that all the nation's highly active radioactive wastes will eventually be placed in a GDF, there is, at present, no acceptable site, no agreed design and no agreed timescale for such a facility. The revised estimated date of 2060 now being talked about is simply another guess. In any event, a GDF, if built, is unlikely to receive Bradwell's wastes until well into the next century. It is, however, conceivable that a GDF will never materialise.

Radioactive wastes already on site at Bradwell, and in prospect, may remain indefinitely on a low-lying coast which is vulnerable to inundation, storm surges and sea-level rise as a result of climate change. They will be left to populations in the far future, who may have neither the skills nor resources to manage them and when conditions may be more challenging.

Increase in the amount of radioactivity at Bradwell

Not only would the amount of radioactive waste at the Bradwell site increase if the ILW transfer were to go ahead but, more importantly, so would the amount of radioactivity .

Claim that transfer of ILW to Bradwell from other sites would save tax-payers' money

Magnox have sought to justify the application on the grounds that it would make savings in public money in the region of £30M. However, to put this into context, BANNG believes that more than three times this amount has already been spent on the troubled FED dissolution plant - which, as explained above, will now only be used at this one and most unsuitable site.

The duty of Essex County Council is to protect the public and the environment from unnecessary risk.

What justification could Essex County Council make for suspending condition 3 of planning permission ESS/43/12/MAL?

In its response of 31 January, 2014 to the NDA's consultation referred to above, Essex County Council makes it very clear that the planning permission for the Bradwell ILW store is for storage of ILW from the site only. The fourth paragraph of the permission states (the emphasis in bold is the Council's):

'In relation to the ILW store at Bradwell, I draw your attention to the limitations and restrictions imposed on the planning permission, namely it is a restricted to the temporary storage of ILW arising from the Bradwell decommissioning only. The proposal and subsequent permission was based on the building being of a size, solely to serve the material arising on site and specifically excluded importation for storage, which would have been in conflict with the Adopted Waste Local Plan (WLP) (policy W5A).

If the Optimisation strategy continues as proposed, a new planning application will be required to amend the original permission, which could be a departure from the adopted WLP and in particular policy W5A (which excludes nuclear or radioactive waste disposal (except for low level clinical waste).'

It is difficult to see what possible justification there could be for such a U-turn given that the suspension of the variation would incur unnecessary risk from radioactivity to workers and the public from importing wastes, whilst still perpetuating the gross risk to the marine environment from continued FED dissolution.

Circumstances have not changed in any fundamental way and, therefore, Essex County Council should logically re-affirm their previous position.

Why is a temporary suspension of condition 3 of planning permission (ESS/43/12/MAL) being requested?

It is difficult to understand why only a temporary suspension is being sought. It is clearly intended to utilise the remaining space in the store and, therefore, 'temporary' is a gratuitous and cosmetic device to give the impression of a minor adjustment rather than a more fundamental change.

Unnecessary risk for future generations

BANNG believes that there is an issue of inter-generational equity here. It is bad enough that future generations will have to look after the Bradwell-generated nuclear wastes but to impose wastes from other sites is unacceptable. It is immoral to place future generations at unnecessary risk.

BANNG believes that:

- the situation that pertains with regard to storage of radioactive wastes at Bradwell should not be made worse;
- radioactive discharges into the estuary and atmosphere should cease;
- the transfer of nuclear wastes from elsewhere should not take place.

BANNG urges Essex County Council to refuse this Planning Application.

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

Varrie Blowers,
Secretary

12 May, 2016

APPENDIX A

LIST OF RESPONSES MADE BY THE BLACKWATER AGAINST NEW NUCLEAR GROUP (BANNG) TO GOVERNMENT AND OTHER CONSULTATIONS ON NUCLEAR ISSUES 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 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)

BANNG (2016) Draft Magnox: Socio-Economic Plan, 2016 – 18. Response from the Blackwater Against New Nuclear Group (BANNG), February (BANNG Paper No. 29)

BANNG (2016) Planning Application Ref. No. ESS/15/16/MAL from Magnox (to vary condition 3 (restriction on importation) of planning permission ESS/43/12/MAL to temporarily suspend condition 3 to allow the importation of packaged intermediate-level waste from Magnox sites Sizewell A and Dungeness A into the Bradwell site's existing interim storage facility for the period up to 2023). Objections to the Planning Application from the Blackwater Against New Nuclear Group (BANNG), May (BANNG Paper No. 30)

APPENDIX B

NDA FED discharges to UK coastal waters- NFLA request under FOI Act (April, 2014)

1. List of expected constituent/individual radionuclides in the proposed liquid radioactive waste discharge stream.

Radionuclides	
Tritium (H3)	Yttrium (Y 90)
Carbon (C 14)	Silver (Ag 108m)
Chlorine (Cl 36)	Cadmium (Cd 113m)
Calcium (Ca 41)	Samarium (Sm 151)
Iron (Fe 55)	Europium (Eu 154)
Cobalt (C 60)	Europium (Eu 155)
Nickel (Ni 59)	Thallium (Tl 204)
Nickel (Ni 63)	Plutonium (Pu 240)
Krypton (Kr 85)	Plutonium (Pu 241)
Strontium (Sr 90)	Americium (Am 241)

2. Estimated quantities of each consistent radio nuclide in the liquid waste stream (Bqs/ l)

Table 1. Environmental Permitting Regulations 2010

Discharge to River Summary	(approximately month campaign)		
	18		
Parameter	Consent (TBq/year)	Predicted TBq/year	Predicted Tbq Total(18months project)
Tritium	7	6.55	9.82
Cs137	0.7	1.62E-05	2.43E-05
Other	0.7	0.28	0.42

3. List of expected heavy metals in the proposed liquid waste discharge stream

Heavy metals
Boron
Cadmium
Chromium
Copper
Iron
Lead
Mercury
Nickel
Zinc

4. Estimated quantities of each heavy metal in the liquid waste stream (µg/l)

Table 2. Environmental Permitting Regulations 2010

Substance	Limit Total Concentrations (µg/l) Surface Waters
Cadmium	0.4
Lead and its compounds	14.4
Mercury and its compounds	0.1
Nickel and its compounds	40

Other metals expected in the liquid discharges will be at levels such that the Environmental Quality Standards (EQS) will not be exceeded for the Blackwater Estuary.

APPENDIX C

Response, dated 14 January, 2014, from Essex County Council to the NDA's consultation on Optimising the number and location of Intermediate-Level Waste (ILW) storage facilities on Magnox Ltd. and EDF Energy Sites; and FED Treatment (dissolution) Facilities in Magnox Ltd.

Please note this Appendix is being sent as a separate attachment.

