



**The decision on the application to  
carry out a decommissioning project  
at Dungeness A power station under  
the Nuclear Reactors (Environmental  
Impact Assessment for  
Decommissioning) Regulations 1999**

A report prepared by the Health and Safety Executive



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A report prepared by the Health and Safety Executive

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## FOREWORD

This document reports on the Health and Safety Executive's decision to grant consent for a decommissioning project at Dungeness A power station to the licensee, Magnox Electric Ltd, under the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999. Dungeness A is the sixth nuclear power station at which consent has been granted for a decommissioning project, the others being Hinkley Point A, Bradwell, Calder Hall, Chapelcross and Sizewell A.

The process of considering potential environmental impacts has involved extensive public consultation, and there has been a great deal of interest shown by national bodies and local groups alike. I believe that the process has been open and inclusive and I sincerely thank everyone who has been involved in this important work, especially those who took the time to send comments on the documentation provided by the licensee.

All of us, and particularly the local population, have a keen and vested interest in the effective control of potential environmental impacts during the decommissioning of the Dungeness A power station. We have attached conditions to the Consent to require the licensee to provide us with a copy of its environmental management plan and its subsequent revisions. Importantly, there is also a requirement for the licensee to keep the public informed on progress on a regular basis through making their environmental management plans available for public inspection. Experience so far has shown that this provides an effective means of managing potential environmental impacts.

During our decision-making process we have strived to be open and transparent. Openness and transparency will continue to be a key factor in managing environmental impacts throughout the coming decades of this decommissioning project. I hope that you will find this report helpful and that it gives you a clear understanding of the basis for our decision.

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## SUMMARY

European Council Directive 85/337/EEC[1], as amended by Council Directive 97/11/EC[2] and Council Directive 2003/35/EC[3], sets out a framework on the assessment of the effects of certain public and private projects on the environment and on public participation in respect of drawing up certain plans and projects relating to the environment. The Directive is implemented in Great Britain for decommissioning nuclear reactor projects by the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999 (EIADR99)[4], as amended by the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) (Amendment) Regulations 2006 (EIADR06)[5].

The intention of the Directive and Regulations is to involve the public through consultation in considering the potential environmental impacts of a decommissioning project, and to make the decision-making process on granting consent open and transparent.

The Regulations require the licensee to undertake an environmental impact assessment, prepare an environmental statement that summarises the environmental effects of the project, and apply to the Health and Safety Executive (HSE) for consent to carry out a decommissioning project. There is an optional stage where the licensee may request from HSE an opinion on what the environmental statement should contain (called a pre-application opinion).

The former licensee of Dungeness A Power Station, Magnox Electric plc requested a pre-application opinion and provided information in a scoping report in September 2004. HSE undertook a public consultation on the scoping report and provided its pre-application opinion in December 2004. The current licensee Magnox Electric Ltd, applied to HSE for consent to carry out a decommissioning project and provided an environmental statement in October 2005. HSE undertook a public consultation on the environmental statement. Both public consultations involved around 110 individuals in 70 organisations. Following the consultation on the environmental statement, HSE requested and received evidence from the licensee in June 2006. HSE was able to make a decision to grant consent to carry out a decommissioning project at Dungeness A Power Station under the Regulations in July 2006, and attached conditions to the Consent.

HSE took relevant factors into account when reaching its decision to grant consent. In brief, these were: the adequacy of the information provided in the environmental statement and supporting evidence; the conclusion that environmental benefits would far outweigh detriments; the prediction that there would be no significant effects on the environment of other countries; and the recognition that some issues would be adequately covered elsewhere, such as through other regulatory regimes.

The conditions attached to the Consent relate to mitigation measures to prevent, reduce and, if possible, offset adverse environmental effects of the project. In brief, Magnox Electric Ltd must prepare an environmental management plan that identifies mitigation measures, reports on their implementation and effectiveness, and any changes to such measures in light of experience. HSE must be notified by the licensee in advance of any significant change to a mitigation measure to control any major adverse effects on the environment. A copy of the environmental management plan and its subsequent revisions must be sent by the licensee to HSE and be made available to the public.

<b>CONTENTS</b>	<b>Page</b>
FOREWORD .....	iii
SUMMARY .....	iv
CONTENTS .....	v
INTRODUCTION.....	1
BACKGROUND.....	1
Legislative framework for nuclear safety .....	1
Nuclear Installations Act 1965.....	1
Other legislation dealing with nuclear and radiological hazards.....	2
Effects of decommissioning on other countries.....	2
Regulators and others working together .....	2
Legislative process under EIADR.....	3
Application for consent to carry out a decommissioning project.....	3
Public consultation on an environmental statement .....	4
Public consultation on further information .....	4
Evidence to verify information in the environmental statement .....	4
Change or extension to a decommissioning project.....	4
Effects of decommissioning on other countries.....	4
Granting consent and attaching conditions .....	5
Transparency of HSE’s decision on an application .....	5
APPLICATION TO CARRY OUT A DECOMMISSIONING PROJECT .....	5
The consultation process .....	5
Request for a pre-application opinion.....	5
Public consultation on the environmental statement.....	6
Request for evidence to verify information within the environmental statement..	6
Organisations involved in the consultation process.....	7
Topics raised by consultees on the environmental statement – an overview .....	7
Request for evidence – including topics raised by consultees .....	7
Topics not pursued for evidence or further information - topics raised by consultees	8
REASONS FOR GRANTING CONSENT .....	9
Decision to grant consent.....	9
Information provided.....	9
Environmental benefits and detriments and consideration of measures to control adverse environmental effects (mitigation measures) .....	10
Effects on other countries.....	11
Issues covered elsewhere – town and country planning .....	11

Issues covered elsewhere – health, safety and environment legislation .....	11
Issues covered elsewhere – The relation of government policy, quinquennial review process (QQR) and European initiatives to EIADR and the Dungeness A environmental statement .....	12
Government policy .....	12
QQR.....	13
European Commission initiatives .....	13
Dungeness A environmental statement .....	13
CONDITIONS ATTACHED TO THE CONSENT .....	14
Content of the conditions.....	14
Reasons for the conditions.....	14
Condition 1 .....	14
Condition 2.....	14
Condition 3.....	15
Condition 4.....	15
Condition 5.....	16
Condition 6.....	16
REFERENCES.....	17
GLOSSARY OF TERMS AND ABBREVIATIONS.....	19
ANNEX 1    Pre-application Opinion.....	21
ANNEX 2    Consultees on the environmental statement.....	44
ANNEX 3    Consultees who responded on the environmental statement .....	49
ANNEX 4    Letter requesting evidence to verify information in the environmental statement .....	50
ANNEX 5    Evidence to verify information in the environmental statement .....	52
Reasons for requesting evidence to verify information in the environmental statement.....	52
Reasons for not seeking further clarification.....	52
ANNEX 6    Reasons for topics not pursued for evidence or further information .....	53
ANNEX 7    Consent and Conditions.....	58
ANNEX 8    Summary of environmental benefits and detriments and mitigation measures .....	61

## INTRODUCTION

1. European Council Directive 85/337/EEC[1], as amended by Council Directive 97/11/EC[2] and Council Directive 2003/35/EC[3], sets out a framework on the assessment of the effects of certain public and private projects on the environment and on public participation in respect of the drawing up of certain plans and projects relating to the environment. It is known as the Environmental Impact Assessment (EIA) Directive.
2. The EIA Directive is implemented in Great Britain for development projects relevant to the nuclear industry by the Town and Country Planning (Environmental Impact Assessment) (England and Wales) (Amendment) Regulations 2000 [6] (TCPA(EIA)2000) and the Environmental Impact Assessment (Scotland) (Amendment) Regulations 2002[7]. These Regulations include developments such as installations for the processing and storage of radioactive waste. The competent authorities for these Regulations are the relevant local planning authorities.
3. The Directive is implemented in Great Britain for decommissioning nuclear reactor projects by the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999 (EIADR99)[4] as amended by the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) (Amendment) Regulations 2006 (EIADR06)[5]. The competent authority for EIADR<sup>1</sup> is the Health and Safety Executive (HSE).
4. The licensee of Dungeness A power station, Magnox Electric Ltd, applied to HSE for consent to carry out a decommissioning project under EIADR in October 2005.
5. This document reports on HSE's decision to grant consent for a decommissioning project at Dungeness A power station. It describes the content of the conditions attached to the Consent, the main reasons and considerations for the decision, and a description of the main measures that Magnox Electric Ltd will take to control any major adverse effects of the project on the environment.

## BACKGROUND

### **Legislative framework for nuclear safety**

#### ***Nuclear Installations Act 1965***

6. The Health and Safety at Work etc Act 1974 (HSWA74)[8] is primarily a statute for securing, amongst other things, the health and safety of persons at work and protecting others against the risks to their health and safety in connection with the activities of persons at work. HSWA74 places duties on employers and employees, establishes the Health and Safety Commission and HSE, and provides for health and safety regulations. HSWA74 also

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<sup>1</sup> EIADR - Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999 as amended by the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) (Amendment) Regulations 2006. This term is used generally in the text of this report.

provides for the appointment of inspectors and defines the powers available to them. There are also provisions relating to the disclosure of information and to offences. In relation to nuclear installations, it incorporates the licensing parts of the Nuclear Installations Act 1965 (NIA65)[9] as relevant statutory provisions.

7. NIA65 is the main piece of legislation used to regulate the safety of nuclear installations. It was amended in 1974 when HSE was created to allow for, amongst other things, the substitution of HSE as the licensing authority. Under NIA65, no site may be used for the purpose of installing or operating any nuclear reactor or prescribed nuclear installation unless a nuclear site licence has been granted to a corporate body by HSE and is for the time being in force.
8. Under NIA65, HSE may at any time attach to a licence such conditions as appear necessary or desirable in the interests of safety, or with respect to the handling, treatment and disposal of nuclear matter. These conditions give HSE powers to directly regulate the licensees' activities using licence instruments. In addition, the goal setting nature of the licence conditions requires each licensee to develop compliance arrangements which best suit its business needs provided they demonstrate that safety is being managed adequately.

#### ***Other legislation dealing with nuclear and radiological hazards***

9. A range of other legislation dealing with nuclear and radiological hazards applies to nuclear licensed sites in addition to NIA65. Radiological protection under routine and emergency situations are regulated under the Ionising Radiations Regulations 1999 (IRR99)[10] and Radiation (Emergency Preparedness and Public Information) Regulations 2001 (REPPPIR)[11], respectively, and enforced by HSE. Radioactive discharges are regulated under the Radioactive Substances Act 1993 (RSA93)[12] and enforced by the Environment Agency (EA) in England and Wales, and Scottish Environment Protection Agency (SEPA) in Scotland.

#### ***Effects of decommissioning on other countries***

10. Decommissioning is one of the activities for which the European Commission requires a submission by governments of Member States under Article 37 of the Euratom Treaty. The submission identifies the potential impacts on Member State countries of the decommissioning strategy of a particular nuclear installation.
11. EIADR contain arrangements for consultation with other States party to the Agreement on the European Economic Area (EEA) if a decommissioning project is likely to have significant environmental effects on those States (see paragraph 24); EIADR do not require a submission to the European Commission.

#### ***Regulators and others working together***

12. Regulators and others work together on matters of mutual interest, and in particular, there are administrative arrangements between HSE and EA, SEPA and the Food Standards Agency (FSA). When considering discharge authorisations, for example, EA and SEPA consult HSE and FSA, and FSA undertakes monitoring of terrestrial and aquatic food.

13. Regulators and others also work together in other areas. The lead on the submission under Article 37 of the Euratom Treaty, for example, is with the Department for Environment, Food and Rural Affairs (DEFRA) for nuclear installations in England and Wales, and with the Scottish Executive for nuclear installations in Scotland. The Article 37 submission is prepared by EA or SEPA, as appropriate, in consultation with HSE and FSA. The Nuclear Decommissioning Authority (NDA) has the responsibility for the liabilities arising from past and future government civil nuclear programmes<sup>2</sup> and HSE liaises with NDA on issues of mutual interest regarding the decommissioning of reactors.

## **Legislative process under EIADR**

### ***Application for consent to carry out a decommissioning project***

14. The intention of the EIA Directive and EIADR is to involve the public through consultation in considering the potential environmental impacts of a decommissioning project, and to make the decision-making process on granting consent open and transparent.
15. On 6<sup>th</sup> April 2006 the EIADR99 was amended by the EIADR06. The purpose of the amendment regulations was to correct two typographical errors that were identified by the Joint Committee on Statutory Instruments; to achieve greater administrative clarity and efficiency; and to implement the (relevant) amendments made to the EIADR99's parent directive; the European Council Directive 85/337/EC[1], as amended by Council Directive 97/11/EC[2], by Council Directive 2003/35/EC[3].
16. EIADR99 came into force in November 1999. Since then, any licensee wishing to begin to decommission a nuclear power station or other nuclear reactor (as defined) must apply for consent to carry out a decommissioning project under EIADR, undertake an environmental impact assessment and prepare an environmental statement that summarises the environmental effects of the project.
17. When planning to undertake an environmental impact assessment and preparation of an environmental statement, there is an optional stage where the licensee may request from HSE an opinion on what the environmental statement should contain (called a pre-application opinion). In such a case, the licensee must provide information (such as in the format of a scoping report) on which HSE will base its opinion.
18. When preparing its opinion, HSE must consult and take into account the views of the consultation bodies identified in EIADR, which are the local planning authority, local highway authority, any principal council for the area (if it is not the local planning authority), and a range of environmental organisations and agencies, namely: the Countryside Agency (formerly the Countryside Commission), English Nature (formerly the Nature Conservancy Council for England) and EA in England; Countryside Council for Wales and EA in Wales; and Scottish Natural Heritage and SEPA in Scotland. HSE may also consult and take into account the views of other organisations and members of the public.

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<sup>2</sup> Arising from installations formally owned by BNFL and UKAEA

19. The environmental statement must provide the information in Schedule 1 to EIADR that is reasonably required and which the licensee can reasonably compile. In brief, the environmental statement should contain a description of the following: the project (including aspects such as physical characteristics and expected emissions); main alternatives (options) studied by the licensee; aspects of the environment likely to be significantly affected (such as water and air); likely effects on the environment (such as short-, medium- and long-term effects and cumulative effects); and measures envisaged to prevent, reduce and where possible offset any significant adverse environmental effects. The environmental statement must also contain a non-technical summary of the information provided.

#### ***Public consultation on an environmental statement***

20. Once the licensee has undertaken an environmental impact assessment, applied for consent and provided an environmental statement, a public consultation must be carried out on the environmental statement. The consultation includes the consultation bodies and other organisations that HSE may wish to consult, but also local people since the licensee must publicise the environmental statement in at least one newspaper local to the site, make copies of the environmental statement available for public inspection at one or more locations near the site, and invite people to write to HSE with their views.

#### ***Public consultation on further information***

21. If HSE is of the opinion that further information is necessary before it can make its decision, then HSE may request such information from the licensee. In such a case, public consultation is carried out on the further information under arrangements similar to those described above.

#### ***Evidence to verify information in the environmental statement***

22. HSE may ask the licensee to produce evidence to verify any information in the environmental statement. Evidence is not subject to public consultation.

#### ***Change or extension to a decommissioning project***

23. If there is a change or extension to any decommissioning project that may have significant adverse environmental effects, the licensee must apply to HSE for a determination as to whether an environmental impact assessment is required. This requirement is relevant irrespective of whether the project began after or before EIADR came into force (that is, whether consent for the project was granted under EIADR, or whether the project began before November 1999 when such consent was not required). If HSE decides that such an assessment is necessary, the part of the project that might have a significant adverse environmental effect must stop and any other part that the HSE may direct. The licensee must apply for consent to carry out that change or extension to the project and provide an environmental statement on the project to support the application. A public consultation must be carried out on that environmental statement.

#### ***Effects of decommissioning on other countries***

24. EIADR contain arrangements for consultation with other States party to the agreement on the EEA if a decommissioning project is likely to have

significant environmental effects on those States. The consultation is through the Secretary of State with the lead for the EIA Directive. These arrangements apply to both new decommissioning projects and to changes or extensions to existing projects requiring environmental impact assessment.

### ***Granting consent and attaching conditions***

25. At the end of the public consultation on the environmental statement including further information or evidence (if requested), HSE must take into account the views of consultees and, if appropriate, responses from EEA States, when making its decision on whether or not to grant consent for a decommissioning project under regulation 8(3) of EIADR. If HSE decides to grant consent, HSE may attach conditions to the consent as may appear to it to be necessary or desirable in the interests of limiting the impact of that project on the environment under regulation 8(4) of EIADR.

### ***Transparency of HSE's decision on an application***

26. At the end of the process when HSE has made its decision on whether or not to grant consent for a new decommissioning project to start or a change or extension to an existing project, HSE must: inform the licensee and the Secretary of State of the decision under regulation 11(a); inform the public by publishing a notice in a local newspaper under regulation 11(b); and make available a statement (a report) for public inspection under regulation 11(c) of EIADR. This report must contain: the content of HSE's decision and, if consent is granted, the content of any conditions attached to that consent; the main reasons and considerations on which the decision is based; and a description, where necessary, of the main measures that the licensee will take to avoid, reduce and, if possible, offset any major adverse effects of the decommissioning project on the environment. Also under regulation 11(c) of EIADR, HSE must provide information regarding the right to challenge the validity of the decision and the procedures for doing so. The mechanism in place for EIADR to challenge decisions made by HSE, is via the Judicial Review process.

## **APPLICATION TO CARRY OUT A DECOMMISSIONING PROJECT**

### **The consultation process**

#### ***Request for a pre-application opinion***

27. The former licensee Magnox Electric plc wrote to HSE in September 2004 to request a pre-application opinion on what the environmental statement for Dungeness A power station should contain. Magnox Electric plc provided information in the format of a 'Pre-Application Opinion Report'. HSE consulted the consultation bodies and other organisations (including all members of the Local Community Liaison Committee (LCLC<sup>3</sup>)) on that report during November - December 2004. HSE's pre-application opinion was sent to Magnox Electric plc in December 2004. The pre-application opinion was copied to consultees in January 2005, namely, the consultation bodies and

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<sup>3</sup> The Local Community Liaison Committee has now been replaced at Dungeness A power station by an independently chaired Site Stakeholder Group (SSG)

other organisations consulted by HSE (including LCLC members who provided comments). The pre-application opinion was made available on HSE's web site, and a copy is appended as Annex 1. Appendix 2 to Annex 1 lists the consultees who responded on the scoping report and who were content for their responses to be made publicly available. Copies of the licensees 'Pre-application Opinion Report', and HSE's pre-application opinion and responses to the consultation (where consultees were content for their responses to be made publicly available) are available at public libraries close to site until July 2007, and HSE's Knowledge Centre and Local Area Office (see Appendices 6 and 7 to Annex 1).

### ***Public consultation on the environmental statement***

28. The current licensee, Magnox Electric Ltd wrote to HSE to apply for consent to carry out a decommissioning project at Dungeness A Power Station and provided an environmental statement in October 2005. HSE consulted the same bodies and organisations on the environmental statement that were involved in the consultation on the scoping report. In addition, Magnox Electric Ltd publicised the environmental statement in the local press (Kentish Express, Kentish Gazette, Romney Marsh Herald, Folkestone Herald, Hythe Herald and Dover Express) to involve local people. HSE publicised the consultation on the environmental statement on its web site, which had a direct link to Magnox Electric Ltd web site. Magnox Electric Ltd made copies available for public inspection at five locations near the site, and HSE made copies of the Environmental Statement available at the library of its office nearest to the site (East Grinstead, Appendix 6 to Annex 1), public libraries close to the site (Appendix 7 to Annex 1) and HSE's Knowledge Centre (Bootle, Appendix 6 to Annex 1).
29. The public consultation period ended in February 2006. The consultees are listed in Annex 2. The consultees who responded and were content for their comments to be made publicly available are listed in Annex 3. Copies of these responses were sent to the licensee, and can be inspected at public libraries close to site, HSE's Knowledge Centre and Local Area Office (see Appendices 6 and 7 to Annex 1).

### ***Request for evidence to verify information within the environmental statement***

30. HSE was of the opinion that evidence to verify information in the environmental statement was necessary. HSE wrote to Magnox Electric Ltd in May 2006 to request evidence relating to monitoring and review processes to direct the implementation of mitigation measures. A copy of HSE's letter requesting evidence is appended as Annex 4. Magnox Electric Ltd's response was received in May 2006. The request for evidence is discussed in Annex 5.
31. HSE was of the opinion that further information was not necessary before it could make its decision. Annex 6 provides an explanation as to why further information was not requested for specific topics.
32. Copies of the environmental statement, and evidence, are available for public inspection at public libraries close to the site and HSE's Knowledge Centre (see Appendices 6 and 7 to Annex 1) for a period of one year from the date of the Consent granted by HSE (that is, until July 2007)

### **Organisations involved in the consultation process**

33. HSE considered the environmental statement (including evidence) for Dungeness A power station. HSE's consideration included holding discussions with Dungeness A power station's HSE site inspectors, stakeholders and also independent consultants contracted to HSE, as well as taking into account written comments received during the public consultations.
34. The organisations and agencies with expertise in planning and environmental matters (the consultation bodies) reviewed the environmental statement as appropriate, and HSE took account their findings.
35. HSE also took account of the views of the other organisations it consulted and which provided comments (see Annex 3). These organisations have expertise, knowledge or interest in nuclear, and planning and environmental matters.

### **Topics raised by consultees on the environmental statement – an overview**

36. Some consultees provided comments on topics that were relevant to the environmental impact assessment process under EIADR and for which sufficient evidence was not presented in the environmental statement. These topics were pursued through HSE's request for evidence.
37. Some consultees provided comments on topics that were relevant to the decommissioning process but which did not necessarily require detailed consideration under the environmental impact assessment process under EIADR. For example, some topics are covered by related health, safety and environment legislation where compliance with that legislation will ensure that environmental impacts will be minimal. Other topics were the subject of wider government policy on decommissioning. These topics were not pursued for the purposes of further information or evidence.
38. Some of the responses contained information that was of importance or interest to other organisations, and these responses were copied to those organisations for information (where consultees were content for their comments to be made publicly available).
39. Some responses indicated a desire for continued involvement in discussions regarding various aspects of the decommissioning project. The licensee has undertaken to continue discussions with respondents on issues about which respondents have specific concerns. The evidence provided by Magnox Electric Ltd also demonstrates a commitment to further discussion.

### **Request for evidence – including topics raised by consultees**

40. HSE requested evidence to verify information in the environmental statement relating to monitoring and review processes to direct the implementation of mitigation measures. Specifically this related to: the management of shingle habitat affected by the decommissioning project, the population of the sussex emerald moth on site, groundwater on site and any possible future exposure of the outfall and intake culverts. This topic was raised by some of the consultees. The topic had been dealt with to some degree in the environmental statement, but HSE's view was that evidence was required to verify the information provided.

41. Full details of the request for evidence are included in HSE's letter to Magnox Electric Ltd that is appended as Annex 4. A brief explanation of why HSE considered that this evidence was necessary is provided in Annex 5.

**Topics not pursued for evidence or further information – topics raised by consultees**

42. Consultees raised a number of topics that were relevant to the decommissioning process but which did not necessarily require detailed consideration under the environmental impact assessment process under EIADR. Consultees also raised a number of topics that HSE considered had been dealt with reasonably in the environmental statement, when the very long timescale of the project and resulting uncertainties are taken into account. Consequently, HSE decided not to pursue such topics for the purposes of further information, and an overview of the main topics raised is given below (see paragraphs 43 to 50).
43. An area of concern for some consultees related to the effects (both direct and indirect) of reduction in workforce at Dungeness A. The environmental statement described the assessed effects and discussed a range of mitigation measures that will be implemented. The ability of the licence to directly avoid or reduce these impacts has been identified as limited.
44. An area of concern for some consultees was the apparent inconsistency between the timetable for decommissioning in the environmental statement and the aspiration in the NDA's strategy to accelerate decommissioning. Some consultees expressed the view that site clearance should be undertaken earlier to avoid leaving a legacy for future generations, whereas some consultees expressed the view that any earlier decommissioning might result in increased risk. The environmental statement presented options for decommissioning that resulted in different timetables for decommissioning and then described and justified the option selected. The environmental impacts considered did not change the overall outcome of the option selection process. However, this process did not include consideration of potential changes arising out of the NDA strategy (see paragraphs 69 to 72) and any future change (as a result of the NDA strategy or other reason) would be subject to regulation 13.
45. Some consultees expressed concern regarding information on waste treatment and disposal (including radioactive waste). The environmental statement provided information on wastes and potential radioactive emissions (including indicative figures), but noted that authorised discharges will continue to be made under RSA93 and regulated by EA.
46. Arrangements for security during the decommissioning project were a concern for some consultees. Security is the responsibility of the Office for Civil Nuclear Security in the Department of Trade and Industry (DTI) and the two mile air exclusion zone around the site is the responsibility of the Civil Aviation Authority (CAA). NIA65 covers other possible incidents and accidents and the licensee's emergency arrangements.
47. Some consultees expressed concern regarding disturbance to nesting sites for black redstarts. These birds nest within the power station and the impact of decommissioning would be a permanent negative effect of key significance. As identified in the environmental statement, this impact would be reduced to

not significant by the provision of suitable mitigation. This includes appropriately designed nesting boxes prior to the commencement of site works, minimisation of habitat loss where reasonably practicable and employee awareness programmes for identification of active nest sites.

48. With regard to ecology consultees were also concerned with the impact of dust deposition on vegetation and the sussex emerald moth. The dust mitigation measures are designed to mitigate dust at source and Magnox Electric Ltd have provided further assurances in discussion with consultees that if dust monitoring identifies dust deposition in the vicinity of vegetation or moths then further measures will be employed, and reported in the environmental management plan.
49. The other main topics raised by consultees had, in HSE's view, either been adequately covered in the environmental statement, or would be adequately regulated and enforced under planning legislation or related health, safety and environment legislation, such that environmental impacts would be not significant.
50. A summary of the key topics raised by consultees which were relevant to the decommissioning process but which were not pursued for the purposes of evidence or further information are listed in Annex 6 with a brief explanation of why HSE took this view.

## **REASONS FOR GRANTING CONSENT**

### **Decision to grant consent**

51. HSE granted consent to carry out a decommissioning project at Dungeness A power station under EIADR99 in July 2006, and attached conditions to the Consent. A copy of the Consent and conditions is appended as Annex 7.
52. HSE took relevant factors into account when reaching its decision to grant consent. In brief, these were as follows.
  - a. HSE's view of the adequacy of the information provided in the environmental statement and evidence.
  - b. HSE's conclusion that environmental benefits would far outweigh detriments.
  - c. HSE's acceptance of the licensee's determination that the assessed impacts of the project would not be likely to have significant adverse effects on the environment in another EEA State.
  - d. HSE's recognition that some issues would be adequately covered elsewhere. These issues were: town and country planning matters; compliance with health, safety and environment legislation; and decommissioning timetables relating to government policy.

### **Information provided**

53. In HSE's view, the environmental statement and evidence provided all the information that was reasonably required and that Magnox Electric Ltd could reasonably compile. The issues of importance in the early parts of the project were dealt with in some detail, whereas issues of relevance to the latter parts

of the project were of necessity dealt with in terms of broad outlines, and this is reasonable given the long duration of the project.

54. The environmental statement described a flexible approach to decommissioning where necessary, by providing information on a range of potential approaches for a particular issue. This gave confidence that Magnox Electric Ltd had not foreclosed unnecessarily, at this early stage, possible appropriate approaches to the decommissioning process. In such cases, Magnox Electric Ltd used “worst case” impacts in assessments, providing assurance that, whichever approach is adopted, any potential impacts are likely to be less than those determined by the assessment.

#### **Environmental benefits and detriments and consideration of measures to control adverse environmental effects (mitigation measures)**

55. In HSE’s view, the environmental statement (including evidence) showed that the predicted environmental benefits overall far outweighed any adverse environmental effects of the project. The environmental statement summarised all the environmental impacts of the decommissioning project, describing their magnitude in terms of major, moderate, slight or negligible impacts, and their significance in terms of key significant, significant or not significant. The non-technical summary of the environmental statement summarised the key significant impacts.
56. There were eight areas where *significant adverse impacts* were identified. These were air quality and dust, ecology, landscape and visual, geology hydrogeology and soils, noise and vibration, socio-economic factors, surface water, and traffic and transport. These effects varied in duration and significance (see Annex 8). Mitigation measures have been identified in the assessment, together with the commitment in the evidence to engage with relevant regulators and organisations in developing a monitoring and review process to direct the implementation of the mitigation measures, these mitigation measures reduce the areas with significant impacts from eight to six. Within these areas the significance of impacts is reduced with the implementation of mitigation measures, (for further detail see Annex 8).
57. There were five areas where temporary key significant adverse impacts were identified following mitigation. These were air quality and dust, ecology, geology hydrogeology and soils, noise and traffic and transport. The air quality and dust issue related to a potential dust impact, which may arise from the use of explosives during care and maintenance preparations and final site clearance. It is not certain at this stage if explosives will be used, but if so, the work will be regulated under NIA65. Mitigation measures suggested include publicising the blasting and implementing good blasting practice. The ecology impacts relate to habitat loss, incidental damage and dust deposition on species, these impacts are reduced to not significant with a range of mitigation measures, (described in Annex 8). The noise issue relates to potential impacts at nearby residential properties during final site clearance, depending on the effectiveness of mitigation measures. The traffic and transport issue relates to road safety on Harden Road during care and maintenance preparations and final site clearance. Magnox Electric Ltd have undertaken to implement a travel plan as a mitigation measure, this is

intended to assist in reducing the number of trips generated by the station throughout the entire decommissioning project.

58. Five topic areas showed *long-term, positive impacts* of varying magnitude. These were landscape and visual, noise and vibration, surface water quality and drainage, ecology, geology hydrogeology and soils, and traffic and transport. Impacts to archaeology and cultural heritage were assessed as not significant. However, the licensee has undertaken to continue discussions with English Heritage regarding the Royal Commission on the Historical Monuments of England Survey at Dungeness A power station. Also the NDA are considering establishing a National Nuclear Archive.
59. Further details on environmental effects and measures to control environmental effects are provided in Annex 8

### **Effects on other countries**

60. Based upon the information provided in the environmental statement, HSE is of the opinion that the assessed impacts of the project would not be likely to have significant adverse effects on the environment in another EEA State.

### **Issues covered elsewhere – town and country planning**

61. Where there are new structures to be built or substantial alterations to buildings, then these developments will require planning consent. This will be obtained from the local planning authority, i.e. projects that will require planning consent at Dungeness A include the construction of the radioactive waste storage building; and re-cladding of the reactor buildings. Where necessary, these will be regulated under the Town and Country Planning Act 1990 (TCPA90)[13] and enforced by the relevant local planning authorities. HSE will be consulted on any associated applications for planning permissions by the relevant local planning authorities. Temporary installations to process and or store radioactive waste might also require environmental impact assessment under the TCPA(EIA)2000[6]. In such cases where environmental impact assessment is required the public will also be consulted before any decision is made.
62. Another area where permissions may be necessary is for any in-fill materials that are used and have to be brought onto the site. This will be regulated under TCPA90 and relevant associated legislation and enforced by the relevant local planning authorities.
63. It follows, therefore, that Magnox Electric Ltd can begin work on all parts of the decommissioning project so long as the work undertaken does not require additional permissions under town and country planning legislation.
64. HSE and the local planning authorities have had and will continue to have discussions on the interface between EIADR, NIA65, TCPA90 and other town and country planning legislation, as necessary.

### **Issues covered elsewhere – health, safety and environment legislation**

65. The environmental statement described links to related health, safety and environment legislation. This included legislation covering: occupational health and safety; nuclear safety; radioactive contamination and discharges; and treatment of non-radioactive contamination and wastes (involving materials such as asbestos).

66. HSE is satisfied that control of such health, safety and environment matters is achieved and will continue to be achieved through regulation and enforcement of existing legislation. Compliance with relevant legislation should ensure that adverse environmental impacts would be minimal. The majority of the legislation is enforced by HSE and EA, and there are administrative arrangements in place between HSE and EA on working together on matters of mutual interest (see paragraphs 12 and 13).
67. It follows, therefore, that Magnox Electric Ltd can begin work on all parts of the decommissioning project so long as the work undertaken does not require additional permissions under related health, safety and environment legislation.
68. HSE and EA have had and will continue to have discussions on the interface between EIADR, NIA65, RSA93 and other health, safety and environment legislation, as necessary.

**Issues covered elsewhere – decommissioning timetables: The relation of government policy, quinquennial review process (QQR) and European initiatives to EIADR and the Dungeness A environmental statement**

***Government Policy***

69. Government policy on decommissioning the UK's nuclear facilities was previously summarised in paragraphs 120 to 131 of the White Paper "Review of Radioactive Waste Management Policy: Final Conclusions" (CM2919)[14]. The document stated that decommissioning should be undertaken as soon as is reasonably practicable, taking account of all relevant factors. All nuclear operators should draw up strategies for decommissioning redundant plant and include justification of the timetables proposed.
70. In November 2003, the government published a consultation document on the proposal to update and revise its nuclear decommissioning policy. Following consultation, a revised government policy statement "The Decommissioning of the UK Nuclear Industry's Facilities"[15] was published September 2004, and replaces the previous statement contained in paragraphs 120 to 131 of Cm2919.
71. The revised decommissioning policy covers all (existing and new) UK nuclear industry facilities. This includes power stations, other reactors, research facilities, fuel fabrication and reprocessing plants and laboratories on sites licensed under NIA65. Each nuclear operator is expected to produce and maintain a decommissioning strategy and plans for the site, including its future use.
72. The Government White Paper, "Managing the Nuclear Legacy – A Strategy for Action" (Cm 5552)[16] was published in July 2002, and subsequently the Nuclear Decommissioning Authority (NDA) was established by the Energy Act 2004 [17], to take responsibility for the liabilities arising from past and future government civil nuclear programmes. The NDA is responsible for setting agreed decommissioning timetables for these programmes (in consultation

with both the regulators and the licensees), and ensuring that the licensees carry out programmes effectively.

### **QQR**

73. An environmental statement under EIADR needs to describe the options for decommissioning, including decommissioning timetables. Information about licensee's decommissioning timetables is also provided by the quinquennial review (QQR) process; to ensure that operators' decommissioning strategies remain soundly based as circumstances change, HSE was requested (as per the requirements of Cm2919) to review these strategies every five years in consultation with EA or SEPA. The revised government decommissioning policy indicates that, except where equivalent arrangements are put in place (e.g. by the NDA), strategies should continue to be subject to regular periodic reviews, at least every five years, by HSE in consultation with the environment agencies. EIADR would only play an important role if environmental impacts were affected by those timetables.
74. The former licensee of Dungeness A power station, Magnox Electric plc's decommissioning strategy was sent to HSE in April 2000 and HSE published its QQR in February 2002. The decommissioning strategy is discussed in the environmental statement submitted by Dungeness A, paragraphs 5.1 - 5.14. In this review, HSE identified issues, which it considered Magnox Electric plc, now Magnox Electric Ltd should address. These included: the principles of sustainable development; intergenerational equity; justification of the timetable proposed; why a shorter timescale for deferral is not reasonably practicable; and engaging a wide range of its external stakeholders in dialogue on each of the original decommissioning options to inform itself as to the acceptability of the scoring and weighting decisions.
75. It is possible that decommissioning timetables might change in the future, perhaps in response to the QQR process or activities of the NDA (see paragraph 44). If such a change to a decommissioning timetable resulted in a change to a decommissioning project, which may have significant adverse environmental effects, then the requirements of Regulation 13 of EIADR would apply.

### **European Commission initiatives**

76. Regulations implementing Council Directive 2001/42/EC [18] on the assessment of the effects of certain plans and programmes on the environment (known as the Strategic Environmental Assessment (SEA) Directive) came into force 21 July 2004[19]. The purposes of the SEA and EIA Directives are related in that both deal with environmental assessment, but the SEA Directive deals with strategic plans and programmes whereas the EIA Directive deals with specific projects (such as under EIADR).

### **Dungeness A environmental statement**

77. The environmental statement described options for decommissioning, including the safestore strategy, options for decommissioning timetables and the future re-use of the land. A range of environmental impacts (including radioactive and non-radioactive wastes, waste minimisation, noise and vibration, transport, ecology, surface water quality and visual impacts) were considered during the process to develop the decommissioning strategy.

Consideration of the environmental impacts did not change the overall outcome of the strategy selection process.

78. The environmental statement stated that the duration of the care and maintenance preparations phase would be around 15 years, following this is the care and maintenance phase when the site will be maintained in a mainly quiescent state, then final site clearance phase of around 8 years, which would start 85 - 105 years after cessation of generation. It is possible that the decommissioning timetable might change in the future, perhaps in response to the QQR process, the SEA Directive or activities of the NDA. Such a change might result in, for example, a reduction in the care and maintenance period.
79. However, it should be noted that if a change to the decommissioning timetable resulted in a change to the project that may have significant adverse effects on the environment, then Magnox Electric Ltd must apply to HSE for a determination as to whether the project should be subjected to an environmental impact assessment. If so, Magnox Electric Ltd would have to apply for consent to carry out that change to the project, and prepare an environmental statement for public consultation under EIADR.

## **CONDITIONS ATTACHED TO THE CONSENT**

### **Content of the conditions**

80. HSE has attached conditions to the Consent. A copy of the Consent and conditions is appended at Annex 7. In brief, Magnox Electric Ltd must prepare and implement an environmental management plan that identifies mitigation measures, describes their implementation and effectiveness, and any changes in light of experience. A copy of the environmental management plan and its subsequent revisions must be sent to HSE and made available to the public. HSE must also be notified in advance of any significant changes to mitigation measures to prevent, reduce and where possible offset any major adverse effects on the environment.
81. Regulation 16 of EIADR provides HSE with sufficient powers under HSWA74 to effectively enforce these conditions.
82. The licensee will make a copy of the environmental management plan available for public inspection at public venues close to the site.

### **Reasons for the conditions**

83. In order to successfully control environmental impacts, mitigation measures will be necessary in a number of areas. This is why HSE attached conditions to the Consent that cover mitigation measures.

### **Condition 1**

84. Condition 1 requires Magnox Electric Ltd to start the project within five years of consent being granted. The project is dismantling or decommissioning work on the power station to which EIADR relate.

### **Condition 2**

85. Condition 2 requires Magnox Electric Ltd to prepare an environmental management plan to describe mitigation measures necessary to prevent,

reduce and where possible offset any significant adverse effects on the environment. The plan must be implemented, and dismantling or decommissioning work can only be carried out in accordance with the plan.

### **Condition 3**

86. Condition 3 requires the environmental management plan to be prepared within 90 days of the date of the Consent. The plan must cover the mitigation measures for the work activities to be carried out. There are essentially three types of work activities, which are as follows.
  - a. Work activities with associated mitigation measures (as identified in the environmental statement and supporting evidence).
  - b. Future work activities with a range of options for implementation with associated mitigation measures.
  - c. Future work activities that have not yet been assessed for the need for mitigation measures due to future uncertainties.
87. Most of the work activities have associated mitigation measures in the environmental statement (including evidence). Condition 3a requires these mitigation measures to be listed in the environmental management plan.
88. Some future work activities have a range of options for implementation, such as options for the management of the offshore structures. In such cases, the options have associated mitigation measures in the environmental statement (including evidence), and when the option is chosen in the future, the appropriate mitigation measures should be implemented. Condition 3b requires these work activities and the options for their implementation to be listed in the environmental management plan.
89. Some future work activities can only be assessed for the need for mitigation measures to control environmental impacts during the later stages of the decommissioning project, such as impacts on wildlife during construction of temporary buildings to facilitate site clearance, or the impact on wildlife on the offshore structures. In such cases, mitigation measures to protect wildlife would be dependent on the wildlife present at that future time. Condition 3c requires these work activities to be listed in the environmental management plan. Although the need for mitigation measures for such work activities cannot yet be assessed, it seems likely that measures would be similar to those for similar work activities during the earlier stages of the project.

### **Condition 4**

90. As the project progresses, condition 4 requires the environmental management plan to be updated. Where options for implementation of work activities have been selected from the list of work activities and options compiled under condition 3b, condition 4a requires these selected options and associated mitigation measures to be included in the plan, along with reasons for their selection.
91. Where the need for mitigation measures to control environmental impacts during the later stages of the decommissioning project have been assessed from the list of work activities compiled under condition 3c, condition 4b requires these mitigation measures to be included in the environmental management plan, along with reasons for their selection.

92. Condition 4c requires the environmental management plan to describe the effectiveness of mitigation measures over time. Condition 4d requires the plan to describe significant changes to mitigation measures in light of experience, along with reasons for those changes. The plan will be, therefore, a living document that will be periodically reviewed and revised throughout the whole of the decommissioning project.

#### **Condition 5**

93. Condition 5 requires Magnox Electric Ltd to send the environmental management plan and its subsequent revisions to HSE periodically. The timeframe for sending the plan to HSE is on an annual basis, or such longer period of time as HSE may agree. In the first part of the works phase it is likely that this timetable will be followed, but as experience is gained and effectiveness of mitigation measures demonstrated, the period of time between subsequent documents may well increase. During the care and maintenance period, this period of time is likely to be much longer, perhaps every five to ten years. Timeframes for the site clearance phase are likely to be similar to those for the works phase.
94. Condition 5 also requires Magnox Electric Ltd to make copies of the environmental management plan available to the public. This is to keep the local population informed on progress with mitigation measures.

#### **Condition 6**

95. Condition 6 requires Magnox Electric Ltd to give HSE advance warning of any significant changes to mitigation measures to control major adverse effects on the environment. Significant changes to mitigation measures might become necessary to control major adverse environmental effects in the future.

## REFERENCES

1. Council Directive 85/337/EEC: O J No. L 175, 05/07/1985, Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment
2. Council Directive 97/11/EC: O J No. L 73, 14/03/1997, Council Directive 97/11/EC of 3 March 1997 amending Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment
3. Council Directive 2003/35/EC: OJ No. L 156, 17/2003, on public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 97/11/EC
4. Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999, SI 1999 No. 2892 -; HMSO 1999, ISBN 0-11-085395-4
5. Nuclear Reactors (Environmental Impact Assessment for Decommissioning) (Amendment) Regulations 2006, SI 2006 No. 657 -; HMSO 2006, ISBN 0-11-0742427
6. Town and Country Planning (Environmental Impact Assessment) (England and Wales) (Amendment) Regulations 2000, SI 2000 No. 2867; HMSO 2000, ISBN 0-11-0186907
7. Environmental Impact Assessment (Scotland) (Amendment) Regulations 2002, SI 2002 No. 324; HMSO 1999, ISBN 0-11-059107-0
8. Health and Safety at Work etc Act 1974, HMSO 1974, ISBN 0-10-543774-3
9. Nuclear Installations Act 1965, as amended S.I. 1974/2056 and S.I. 1990/1918, HMSO 1978, ISBN 0-11-801107-3
10. Ionising Radiations Regulations 1999, SI No. 3232, HMSO 1999, ISBN 0-11-0856147
11. Radiation (Emergency Preparedness and Public Information) Regulations 2001, SI No. 2975, HMSO 2001, ISBN 0-11-029908-6
12. Radioactive Substances Act 1993, HMSO 1993, ISBN 0-10-541293-7
13. Town and Country Planning Act 1990, MHSO 1990, ISBN 0-10-5408905
14. Department of the Environment, *Review of Radioactive Waste Management Policy: Final Conclusions*, Cm 2919, HMSO 1995, ISBN 0-10-129192-2

15. 'THE DECOMMISSIONING OF THE UK NUCLEAR INDUSTRY'S FACILITIES'; DTI/Pub 7574/0.2k/09/04/NP. URN 04/1598

16. Department of Trade and Industry, *Managing the Nuclear Legacy – A Strategy for Action*, Cm 5552, HMSO 2002, ISBN 0-10-155522-9

17. Energy Act 2004, HMSO 2004, ISBN 0-10-542004-2

18. Directive 2001/42/EC of the European Parliament and of the Council on the assessments of certain plans and programmes on the environment

19. The Environmental Assessment of Plans and Programmes Regulations 2004, SI No. 1633, HMSO 2004, ISBN 0-11-049455-5

## GLOSSARY OF TERMS AND ABBREVIATIONS

DTI	Department of Trade and Industry
EA	Environment Agency
EEA	European Economic Area
EIA	Environmental Impact Assessment
EIADR	Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations. This term is used generally in the text of this report.
EIADR99	Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999
EIADR06	Nuclear Reactors (Environmental Impact Assessment for Decommissioning) (Amendment) Regulations 2006
Euratom Treaty	Treaty establishing the European Atomic Energy Community
HSE	Health and Safety Executive
HSWA74	Health and Safety at Work etc Act 1974
ILW	Intermediate level waste – waste with radioactivity levels exceeding the upper boundaries for low level waste (waste containing radioactive materials other than those acceptable for disposal with ordinary refuse, but not exceeding 4GBq/te of alpha or 12GBq/te of beta/gamma activity), but which does not require heating to be taken into account in the design of storage or disposal facilities
IRR99	Ionising Radiations Regulations 1999
LCLC	Local Community Liaison Committee
Licensee	Holder of a nuclear site license
NDA	Nuclear Decommissioning Authority – formerly known as the LMA (Liabilities Management Authority) – referred to in the Government White Paper, “Managing the Nuclear Legacy – A Strategy for Action” (Cm 5552, published July 2002)
NIA65	Nuclear Installations Act 1965, as amended
NII	Her Majesty’s Nuclear Installations Inspectorate – part of HSE
QQR	Quinquennial review – reviews of nuclear operators’ decommissioning strategies carried out every five years by HSE (NII) in consultation with EA and SEPA, as appropriate – referred to in the Government White Paper, “Review of Radioactive Waste Management Policy: Final Conclusions” (Cm 2919, published July 1995)

REPPIR	Radiation (Emergency Preparedness and Public Information) Regulations 2001
RSA93	Radioactive Substances Act 1993
Safestore	Preservation of reactor buildings, their contents, and other structures on the site to facilitate an extended delay period before dismantling
SEA	Strategic Environmental Assessment
SEPA	Scottish Environment Protection Agency
SSG	Site Stakeholder Group
TCPA(EIA)2000	Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 2000
TCPA90	Town and Country Planning Act 1990

## **Annex 1**

### **NUCLEAR REACTORS (ENVIRONMENTAL IMPACT ASSESSMENT FOR DECOMMISSIONING) REGULATIONS 1999**

#### **The Executive's pre-application opinion as to the content of the environmental statement for Dungeness A Nuclear Power Station**

##### **Issue**

- 1) To state the Executive's pre-application opinion as to the content of the environmental statement for Dungeness A Nuclear Power Station under the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999 (EIADR).

##### **Background**

- 2) EIADR implement the requirement for an environmental impact assessment for decommissioning nuclear power stations and nuclear reactors arising from Council Directive 85/337/EEC (as amended by Council Directive 97/11/EC) on the assessment of the effects of certain public and private projects on the environment.
- 3) Before decommissioning or dismantling of a nuclear reactor or power station can take place, a licensee must apply to the Health and Safety Executive (HSE, referred to as the Executive in EIADR) for consent, undertake an environmental impact assessment and provide an environmental statement. The information to be included in an environmental statement is referred to and specified in Schedule 1 to EIADR.
- 4) The nuclear site licensee, Magnox Electric plc, has asked HSE to provide a pre-application opinion under regulation 6 of EIADR as to the content of the environmental statement for Dungeness A Nuclear Power Station. This is an optional precursor to the licensee providing an environmental statement under regulation 5 of EIADR.
- 5) The licensee has provided a scoping report to inform the pre-application opinion entitled "Dungeness A Nuclear Power Station Pre-Application Opinion Report" (referred to as 'the scoping report' throughout this opinion). The scoping report identifies a range of issues to be considered in the context of the proposed scope of the environmental statement.

- 6) The procedure for a pre-application opinion is similar to that for the scoping opinion provided by the local authority under regulation 10 of the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999.
- 7) The environmental statement for Dungeness A Nuclear Power Station, when submitted to HSE, should address such of the information specified in Schedule 1 Part I to EIADR which is reasonably required to assess the environmental effects of the proposed project. In addition, the environmental statement must address all the information specified in Schedule 1 Part II to EIADR. If, on receiving the information, HSE's opinion is that such information is not sufficient, then EIADR give HSE the power to require the licensee to provide further information. HSE recognises that, within the scoping report, the licensee has indicated its intention to address the information required by Schedule 1 to EIADR.
- 8) The licensee has requested that HSE comments on the proposed assessment methodology. Where appropriate, such comments, relating to the assessment of specific topics, have been included in this opinion.

## **Consultation**

- 9) HSE has consulted the consultation bodies specified in regulation 2 of EIADR on the scoping report provided by the licensee. In addition, HSE has consulted other bodies it considered appropriate, other bodies nominated by consultees, and other persons who asked to be involved in the consultation process. HSE requested consultees with detailed local knowledge and experience located near to the station to include matters of local concern. The list of consultees is at Appendix 1. All statutory consultees and some non-statutory consultees responded to the consultation process. The list of respondents is given in Appendix 2.
- 10) Consultees were generally content with the breadth of the proposed scope. A number of consultees provided detailed points on the issues presented by the licensee. A number of other issues not explicit within the proposed scope were also highlighted by consultees for consideration.
- 11) The responses received by HSE have been considered and incorporated, as appropriate, into HSE's opinion. Responses have been copied in full to the licensee only with the agreement of consultees.

## **HSE's opinion as to the content of the environmental statement**

### ***Proposed scope and general content***

12) The licensee's scoping report provides an overview of the issues to be addressed in the environmental statement:

- a) Air quality and dust;
- b) Archaeology and cultural heritage;
- c) Ecology;
- d) Geology, hydrogeology and soils;
- e) Landscape and visual;
- f) Noise and vibration;
- g) Socio-economic;
- h) Surface waters;
- i) Traffic and transport; and
- j) Routine radioactive discharges.

13) The licensee should take into account the requirements of the regulations and HSE's expectations, in regard to the general content of the environmental statement, as described in Appendix 3. HSE recognises that the licensee has indicated its intention to address these issues within the scoping report. Appendix 3 also includes comments on HSE's expectations in regard to the general content of the environmental statement.

14) In addition, consideration should be given to the issues raised and comments made in Appendices 4 and 5. These are discussed further below.

***Detailed points on issues within the scoping report – to be addressed in the environmental statement***

15) Based upon its own analysis of the information provided in the scoping report and comments from consultees, it is HSE's opinion that the licensee should address certain detailed points on aspects discussed within the scoping report in the environmental statement itself. These points are listed at Appendix 4.

***Points on other matters – whose consideration could be of benefit to the environmental statement***

16) A number of other points are listed at Appendix 5. HSE suggests that, although not specifically required, their consideration could be of benefit to the environmental statement.

**Presentation**

17) This opinion will be copied for information to all consultees listed at Appendix 1. The opinion, together with copies of consultees' comments will be displayed at HSE libraries and information centres listed in Appendix 6 and the public libraries listed in Appendix 7. Alternatively, the opinion is available on the internet at <http://www.hse.gov.uk/nsd/index.htm#consultations>

**Implications**

18) The licensee may wish to provide flexibility within the environmental statement to deal with future operational or other changes, which may be reasonably anticipated at the time of application for consent.

19) HSE will consult on the environmental statement for Dungeness A Nuclear Power Station, when this is provided by the licensee.

**Contact**

Ms Eileen Myers, Health and Safety Executive, Nuclear Safety Directorate, Room 207 St Peter's House, Balliol Road, Bootle, Merseyside, L20 3LZ; tel 0151 951 4938; fax 0151 951 4163; e:mail [projectofficer.eia@hse.gsi.gov.uk](mailto:projectofficer.eia@hse.gsi.gov.uk)

## Consultees on the scoping report

### ***Consultation bodies***

HSE consulted 6 individuals in 5 organisations

Countryside Agency  
English Nature  
Environment Agency  
Kent County Council  
Shepway District Council

### **Other organisations**

HSE consulted 47 individuals in 45 organisations

Ashford Borough Council  
Ashford Ramblers Group  
British Ports Association  
British Trust for Ornithology  
Campaign to Protect Rural England  
Centre for Environment Fisheries and Aquaculture Science (CEFAS)  
Civil Aviation Authority  
Committee on Medical Aspects of Radiation in the Environment  
Country Landowners Association  
Crown Estate  
Department for the Environment Food and Rural Affairs  
Dungeness Estate  
Dungeness Residents Association  
East Sussex County Council  
English Heritage  
Food Standards Agency  
Friends of the Earth  
Greenpeace  
Hastings Borough Council

Highways Agency  
Kent Ambulance NHS Trust  
Kent and Essex Sea Fisheries  
Kent Police  
Kent Wildlife Trust  
Lydd Town Council  
Ministry of Defence Estate Organisation  
National Air Traffic Services plc  
National Farmers Union  
National Trust  
New Romney Town Council  
National Radiological Protection Board  
Nuclear Free Local Authorities  
Nuclear Safety Advisory Committee  
Office for Civil Nuclear Security  
Office of the Deputy Prime Minister  
Railtrack Properties  
Ramblers Association  
Rother District Council  
Royal Society for the Protection of Birds  
Royal Yachting Association  
Rye Town Council  
Shepway Primary Care Trust  
South of England Regional Assembly  
Sussex Sea Fisheries  
Tourism South East

### **Local Community Liaison Committee**

HSE consulted 44 individuals in 27 organisations

Ashford Borough Council  
British Energy  
Directorate of Fisheries Research (DFR) Fisheries Laboratory  
Dungeness A Nuclear Power Station  
Dungeness B Nuclear Power Station  
Dungeness Residents Association

East Kent Hospitals NHS Trust  
East Sussex County Council  
Folkestone and Dover Water Services  
Folkestone Fire Station  
Government Office South East  
Hastings Borough Council  
Health Protection Agency  
Kent County Council  
Kent Police  
Leader of the Conservative Party  
London Ashford Airport Group  
Lydd Police Office  
Lydd Town Council  
Maritime and Coastguard Agency  
National Farmers Union (South East Region)  
National Health Service  
New Romney Town Council  
Rother District Council  
Shepway District Council  
Sizewell B Nuclear Power Station  
Sussex Police

**Consultees who responded on the scoping report**

HSE received 20 responses on the scoping report from 19 organisations.

The Civil Aviation Authority

The Committee on Medical Aspects of Radiation in the Environment

The Countryside Agency

The Crown Estate

East Sussex County Council

English Nature

Environment Agency

Food Standards Agency

Hastings Borough Council

Kent County Council

Kent and Essex Sea Fisheries Committee

Kent Wildlife Trust

National Farmers Union

National Radiological Protection Board

The National Trust

Nuclear Safety Advisory Committee

Royal Society for the Protection of Birds

Royal Yachting Association

Shepway District Council

**General content of the environmental statement**

- 1) This Appendix describes the general content of the environmental statement as required by EIADR, together with comments from HSE on its expectations in this regard. HSE recognises that the licensee has indicated its intention to address these issues within the scoping report

**Description of the project**

- 2) EIADR require that the environmental statement includes a description of the project, including in particular:
  - A description of the physical characteristics of the whole project and the land-use requirements during the construction and operational phases;
  - A description of the main characteristics of the production processes, for instance the nature and quantity of the materials used; and
  - An estimate, by type and quantity, of expected residues and emissions.

(EIADR, Schedule 1, paragraphs 1 and 8)

HSE expects the statement to provide a clear picture of the whole project, including:

- a) The works phase;
- b) The care and maintenance phase;
- c) The site clearance phase;
- d) Transport;
- e) Treatment of wastes.

**Options and reasons for option chosen**

- 3) EIADR require that the environmental statement includes an outline of the main alternatives (or options) studied by the licensee, and an indication of the main reasons for the option chosen, taking into account the environmental effects (EIADR, Schedule 1, paragraphs 2, 10 and 11). HSE expects the statement to address options for the whole project, as listed in paragraph 2 above.

## **Description of likely effects on the environment**

- 4) EIADR require that the environmental statement describes the likely effects of the proposed project on the environment, which should cover indirect, secondary, cumulative, short-, medium- and long-term, permanent and temporary, and positive and negative effects of the project on the environment (EIADR, Schedule 1, paragraphs 3 and 4).
  
- 5) HSE expects the statement to cover the whole project through dismantling to site clearance, and address, amongst other things, accidental or untoward events. Furthermore, the nature and potential for adverse environmental effects arising from possible abnormal situations during the whole decommissioning period should be identified. While it may not be possible, at this stage, to be definitive about the later stages of decommissioning, the statement should cover the strategic intention for eventual completion of decommissioning and as much detail as possible on environmental effects. Where there is uncertainty in later stages, this must be indicated. Some more detailed aspects are described below.
  
- 6) HSE expects the consideration of the cumulative nature of effects to include assessment of the added impact of the decommissioning project to existing developments and works, even when unrelated to the project (for example, the operation of Dungeness B nuclear power station). In addition, the cumulative effects on the environment from different aspects of the project must be assessed and clearly described within the statement. Consideration should also be given to likely future projects, although HSE recognises that the amount of detail available for consideration within the assessment for such projects is likely to be limited.

## **Measures to control effects on the environment**

- 7) EIADR require that the environmental statement describes measures envisaged to avoid, reduce and, if possible, remedy significant adverse effects on the environment (EIADR, Schedule 1, paragraphs 5 and 9).

## **Radioactive emissions and wastes**

- 8) HSE expects the environmental statement to consider potential radioactive emissions and long-term storage of radioactive waste on the site (N.B. authorised discharges will continue to be made under the Radioactive Substances Act 1993). Other wastes should also be addressed, including asbestos, and other hazardous and non-hazardous wastes (EIADR, Schedule 1, paragraph 1).

### **Non-technical summary**

- 9) EIADR require that the environmental statement includes a non-technical summary of the information provided (EIADR, Schedule 1, paragraphs 6 and 12).

### **Indication of any difficulties**

- 10) EIADR require that the environmental statement includes an indication of any technical deficiencies or lack of know-how encountered in compiling the information (EIADR, Schedule 1, paragraph 7).

**Detailed points on issues within the scoping report – to be addressed in the environmental statement**

- 1) As a result of its own analysis, together with comments from consultees, it is HSE's opinion that the licensee should consider the detailed points, listed below, on the issues within the scoping report submitted by the licensee. Some of these detailed points are not explicitly described but may be mentioned within the scoping report. The level of detail provided in the environmental statement regarding issues covered by other legislation (Paragraph 31 of this Appendix), should be consistent with that described in Paragraph 32 of this Appendix.

**Air quality and dust**

- 2) The environmental impact assessment should include adequate consideration of the effects on air quality arising from discharges from waste plants and dust arising from demolition works.
- 3) Consideration should be given to extending the assessment zone for dust emissions from decommissioning works beyond the 1 km zone around the site boundary.
- 4) Consideration should be given to providing indicative levels for predicted atmospheric concentrations of Particulate Matter (PM<sub>10</sub>) at relevant receptor locations, arising from dust generating works, for example construction, demolition, excavation, use of explosives, movement of vehicles, loading and stockpiling of soil and rubble. Consideration should be given to formatting the predicted concentrations for each receptor to enable comparison with the objectives included in the Air Quality (England) Regulations 2000 (as amended).
- 5) Consideration should be given to assessing the effects of changes to on-site combustion processes.
- 6) Regarding monitoring of fugitive dusts, consideration should be given to:
  - a) Providing an indication as to whether dusts arising from decommissioning activities may contain radioactive material; and
  - b) Including assessment of how fugitive dust emissions will be monitored away from site and what mitigation measures will be employed to minimise dust impact.

## Archaeology and cultural heritage

7) No advice is given in relation to this topic

## Ecology

8) Consideration should be given to extension of the assessment area beyond 2km and to the inclusion of the following areas in the environmental impact assessment (HSE recognises that the licensee has indicated generically that such sites will be included in the assessment):

- a) The Dungeness to Pett Levels Special Protection Area (including the possible extension of this site);
- b) The Dungeness to Pett Levels potential Ramsar site;
- c) The Dungeness candidate Special Area of Conservation; and
- d) The Dungeness Site of Special Scientific Interest.

HSE would expect such an assessment to include consideration of loss of habitat and impact on species.

9) Consideration should be given to undertaking field surveys during appropriate periods of the year, to determine the extent of inhabitation of the study area by protected species, in particular:

- a) Undertaking a habitat survey to identify any important habitats;
- b) Determining whether protected animal species other than those listed in the submitted scoping report are present in the assessment area and if so, including in the assessment: for example the medicinal leech, other invertebrate communities, bats, badgers and great crested newt;
- c) Determining whether protected plant species other than those listed in the submitted scoping report are present in the assessment area and if so, including in the assessment: for example stinking hawk's beard and lichen communities;
- d) Assessing patterns of breeding, feeding and roosting of birds within the site itself and within 2km around the site boundary; and
- e) Assessing whether protected species of birds other than those listed in the submitted scoping report are present (for example breeding tern, and mediterranean gull).

HSE recognises that Magnox are in the process of undertaking a number of such surveys.

10) Consideration should be given to:

- a) Assessing the impact on sensitive receptors and habitats within close proximity to the inner security boundary;
- b) Assessing the impact on annual vegetation of drift lines in the Special Area of Conservation;

- c) Assessing the impact on perennial vegetation of stony banks within the Special Area of Conservation;
- d) Assessing the impact of air pollutants like nitrogen oxides (and nitrogen deposition), sulphur dioxide, volatile organic compounds, particulate emissions and dust on sensitive species such as lichens, shingle communities, and slime mould (as relevant, this list is not exhaustive);
- e) Assessing the impacts of HGVs on shingle vegetation, wherever this is likely to occur; and
- f) Discussing appropriate baseline conditions for designated sites with English Nature.

11) Consideration should be given to assessing the impact of changes in, or cessation of, abstractions and discharges via the cooling water system<sup>4</sup> and works to remove related structures, for example on coastal processes.

12) Regarding the environmental effects of the decommissioning project on protected species identified within the study area, consideration should be given to:

- a) Giving an indication of how effects will be monitored; and
- b) Including information as to how mitigation of the effects will be addressed.

13) Further related advice is given in the section on surface waters.

### **Geology, Hydrogeology and soils**

14) Consideration should be given to:

- a) Providing baseline information for contaminated material on- (and if relevant off-) site;
- b) Assessing the impact on geomorphological interest features of the designated sites;
- c) Referring to Department of Transport Guidance<sup>5</sup> when evaluating any highway related impacts on geology, hydrogeology and soils; and
- d) Explaining which Environment Agency Pollution Prevention Guidance Notes will be implemented and why.

### **Landscape and visual**

15) Consideration should be given to:

- a) Using interim landscaping to mitigate the environmental impact of the works over the decommissioning period;

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<sup>4</sup> Though HSE recognises that changes in, or cessation of, abstractions and discharges are an effect of end of generation rather than strictly part of the decommissioning project

<sup>5</sup> The Design Manual for Roads and Bridges, Volume 11 [DMRB 11] – Environmental Assessment, Department of Transport, 1993 (as amended, 2002)

- b) Noting that Dungeness is acknowledged as a landscape of county-wide importance, by virtue of its designation as a Special Landscape Area in the Kent Structure Plan 1996;
- c) Including assessment of impacts on the seaward element of the visual envelope; and
- d) Including a description of potential changes to reactor height and re-cladding (temporary and permanent), together with an assessment of the related visual impacts.

16) Consideration should be given to providing details of the location, height, design, sensors and luminance of all Floodlighting, which may be used, together with the proposed measures to:

- a) Limit obtrusive glare to nearby properties; and
- b) Minimise sky-glow.

### **Noise and vibration**

17) Consideration should be given to:

- a) Providing baseline data for on-site noise levels;
- b) Providing baseline for relevant off-site noise levels, for example nearby residential properties; and
- c) Providing estimated noise levels during the project for relevant off-site receptors.

### **Socio-economic**

18) Consideration should be given to:

- a) Obtaining information on the housing market in the area around the site, for example from local estate agents;
- b) Assessing the impact of hours of working and timing of anticipated transport movements on the local population; and
- c) Assessing the impact of decommissioning on amenity facilities and land use.

19) Consideration should be given to re-training and re-skilling the existing workforce to enable their employment in decommissioning work. The relevant council training organisations might be involved in any schemes.

## **Surface waters**

20) Consideration should be given to:

- a) Referring to Department of Transport Guidance<sup>6</sup> when evaluating any highway related impacts on surface waters (for example the effects of highway runoff on pollution); and
- b) Explaining which Environment Agency Pollution Prevention Guidance Notes will be implemented and why.

21) Consideration should be given to assessing the effect of the site's activities on the coast and coastal habitats (including coastal processes), in particular:

- a) The impact of stopping the cooling water outfall<sup>7</sup> and any resulting effects on communities, bathing waters or designated habitats alongshore;
- b) Potential impacts of any planned physical work on offshore inlet or discharge structures; and
- c) The potential impact of maintained secondary defences.

## **Traffic and transport**

22) Consideration should be given to:

- a) Including assessment of traffic related pedestrian and cyclist safety;
- b) Assessing the condition of the relevant parts of the road network and bridges;
- c) Assessing the need to resurvey traffic levels and trends at some appropriate stage in the future (to address the uncertainties associated with data beyond 2030);
- d) Assessing the effects of any proposed physical alterations to road junctions or general carriageway alignments on noise levels and air quality;
- e) Discussing road maintenance requirements with the relevant highway authority;
- f) Implementing a Green Travel Plan (for example to discourage single car occupancy by commuters); and
- g) Further assessing the options of road, water and / or rail transport.

23) Consideration should be given to discussing the potential for mitigation measures to reduce the impact of increased traffic flow with the relevant highway authority.

24) Consideration should be given to the effects on water navigation in the area, caused by removal of the pipelines, including:

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<sup>6</sup> The Design Manual for Roads and Bridges, Volume 11 [DMRB 11] – Environmental Assessment, Department of Transport, 1993 (as amended, 2002)

<sup>7</sup> Though HSE recognises that changes in, or cessation of, abstractions and discharges are an effect of end of generation rather than strictly part of the decommissioning project

- a) Whether the outfalls are below the high water mark; and
- b) Whether there may be a requirement for notices, markings, or lighting.

### **Civil engineering works and secondary developments**

25) The environmental statement should provide a clear picture of the number and purpose of buildings and facilities required to be constructed during the project, together with a summary of the resulting environmental impacts and the need for permissions under Town and Country Planning legislation. Consideration should be given to:

- a) Providing indications of likely size, location, planning status and mitigation measures associated with any proposed waste management facility or waste store;
- b) Noting that processing of low level waste may reveal intermediate level waste and including the latter when considering designs for the waste management facility; and
- c) Providing a clear indication of any ancillary buildings or facilities which are likely to be required during the decommissioning project.

26) Consideration should be given to providing information on the programme of other civil engineering works, which are to be undertaken on site during the 'Care and Maintenance Preparation Phase'. In particular this might include information on:

- a) Specific engineering tasks to be carried out, for example, dismantling of plant, demolition of existing buildings, excavation work, piling, use of explosives; and
- b) The likely timing of these tasks.

### **Radioactive waste disposal**

27) Consideration should be given to:

- a) Providing indicative radioactive discharge data for the works phase;
- b) Indicating outline radioactive discharge profiles for the care and maintenance and the site clearance phases;
- c) Providing an indication of removal of radioactive material from site during each decommissioning phase, in terms of the proportion of the total present at the start of the project;
- d) Providing an indication of the amount of radioactive waste to be stored on site;
- e) Providing a summary of measures to prevent spillages or leaks of radioactive material into the environment, together with reference to the legislation which covers such matters; and
- f) Taking into account the fact that some intermediate level waste will decay to become low level waste during the full period of the decommissioning project.

## **Treatment of non-radioactive wastes**

28) Consideration should be given to:

- a) Including in the assessment, the potential for hazardous wastes to also be radioactive;
- b) Providing estimates of the quantities of hazardous wastes, and likely disposal routes, including an indication of the amounts of such waste to be stored on site;
- c) Providing information regarding the potential for recycling of waste materials;
- d) Summarising the processing of waste materials within the waste management facility; and
- e) Identifying potential discharges arising from waste treatment processes.

## **Impact assessment criteria**

29) The environmental statement should include explanations as to how impact assessment magnitude and significance have been determined for assessed impacts.

## **Baseline data**

30) Consideration should be given to whether, in fact, a generic baseline year is required across all topic areas. Valid data on the specific environmental impacts associated with the site prior to changes taking place are required, however, these may be from various points in time providing they are representative.

## **Issues covered by other legislation**

31) A number of issues are covered by existing legislation, and these will continue to be enforced under this legislation. These issues include:

- a) Continuity of site management;
- b) Site security and integrity, including human and animal intrusion;
- c) Fire safety, including safety of additional contractors housed in temporary accommodation, procedures for dealing with incidents involving hazardous materials, and liaison with the local fire service;
- d) Emergency arrangements;
- e) Safety of plant, including reactor dismantlement;
- f) Final delicensing of the site;
- g) Transport safety, including identifying standard road routes (with implications for congestion of narrow lanes), and dealing with incidents involving vehicle fires and leakage of hazardous material;

- h) Health and safety aspects of dust control from, for example, masonry crushing on the site;
- i) Integrity of flood defences;
- j) Release of radioactive material and non-radioactive wastes; and
- k) Secondary developments and re-cladding of reactor buildings will be subject to planning legislation.

32) The environmental statement should include reference to the above and sufficient detail to give a clear picture of the scope of issues involved and their relation to the environmental impact assessment. However, where appropriate, reference should be made to the relevant legislation and related submissions to the regulatory authorities, where the licensee has provided or will provide greater detail.

**Points on other matters – whose consideration could be of benefit to the environmental statement**

- 1) The licensee may wish to take into account the points listed below in the environmental statement, although these are not explicitly required by EIADR.
  
- 2) Consideration may be given to:
  - a) Including strategies for monitoring the actual impacts of measures to be taken to avoid, reduce and, if possible, remedy significant adverse effects on the environment. This could cover gathering base-line data, and monitoring during the works and care and maintenance phases to demonstrate the effectiveness of the measures taken or to identify the need for measures to be reviewed and amended;
  - b) Using the proposed 100 year delay before site clearance begins to consider the options for ecological enhancement of the area;
  - c) Demonstrating, where appropriate, how environmental management of the decommissioning project will contribute to local sustainable development priorities;
  - d) Involving the local population in the decommissioning programme, in particular, discussing concerns and expectations, and involving local government in discussions on changes in land use and asset disposal arrangements with a view to benefiting the community.
  - e) Providing a summary matrix of the different activities associated with the proposed work and the range of environmental parameters potentially affected, with some form of ranking of the potential significance of any impact;
  - f) Providing a clear indication as to whether the project is likely to have significant effects on the environment of another European Economic Area State;
  - g) Ensuring that the policy framework described includes up to date information regarding any relevant central government policy;
  - h) Using photographs, figures and diagrams where appropriate to clarify text. Examples of such include:
    - i) Use of photomontage to demonstrate the phased demolition of structures;
    - ii) A map showing the locations of off-site noise monitoring locations; and
    - iii) Indication of facilities, such as footpaths, on diagrams showing the identified Zones of Visual Influence.
  - i) Ensuring that potential benefits to the environment arising from the decommissioning project are adequately addressed.

**HSE Knowledge Centre and Area Office displaying the Pre Application Opinion**

Health and Safety Executive  
Knowledge Centre  
Building 1  
Redgrave Court  
Merton Road  
Bootle  
Merseyside  
L20 7HS  
Tel: 0151 951 4000  
email: [knowledge.centre@hse.gsi.co.uk](mailto:knowledge.centre@hse.gsi.co.uk)

Mrs J Barker  
Health and Safety Executive  
Phoenix House  
23-25 Cantelupe Road  
East Grinstead  
West Sussex  
RH19 3BE  
Tel: 01342 334286

**Public libraries displaying the Pre-Application Opinion**

Mrs M Kirkham  
Dymchurch Library  
Plater Memorial Hall  
Dymchurch  
Kent, TN29 0TA  
Telephone: 01303 873894

Ms P Waters  
Folkestone Library  
2 Grace Hill  
Folkestone  
Kent, CT20 1HD  
Telephone: 01303 850123

Librarian  
Hythe Library  
1 Stade Street  
Hythe  
Kent CT21 6BQ  
Telephone: 01303 267111

Ms T Patterson  
Lydd Library  
Old School  
Skinner Road  
Lydd, Romney Marsh  
Kent, TN29 9HN  
Telephone: 01797 320131

Mrs Dodd  
New Romney Library  
82 High Street  
New Romney  
Kent, TN28 8AU  
Telephone: 01797 363245

Miss B Marshall  
Rye Library  
Lion Street  
Rye  
East Sussex, TN31 7LB  
Telephone: 01797 223355

## **ANNEX 2 Consultees on the environmental statement**

### ***Consultation bodies***

HSE consulted 11 individuals in 5 organisations

Countryside Agency

English Nature

Environment Agency

Kent County Council

Shepway District Council

### **Other organisations**

HSE consulted 57 individuals in 51 organisations

Ashford Borough Council

Ashford Ramblers Group

British Energy Generations Ltd

British Ports Association

British Trust for Ornithology

Campaign to Protect Rural England

Centre for Environment Fisheries and Aquaculture Science (CEFAS)

Civil Aviation Authority

Committee on Medical Aspects of Radiation in the Environment

Country Landowners Association

Crown Estate

Defence Estates Safeguarding

Department for the Environment, Food and Rural Affairs

Department of the Environment, Heritage and Local Government Ireland  
Dungeness Estate  
Dungeness Residents Association  
East Sussex County Council  
English Heritage  
Food Standards Agency  
Friends of the Earth  
Greenpeace  
Hastings Borough Council  
Health Protection Agency, Radiation Protection Division (formerly NRPB)  
Highways Agency  
Isle of Man Government Department of Local Government and the Environment  
Kent Ambulance NHS Trust  
Kent and Essex Sea Fisheries  
Kent Police  
Kent Wildlife Trust  
Lydd Airport Action Group  
Lydd Town Council  
National Air Traffic Services plc  
National Farmers Union (South East Region)  
National Trust  
New Romney Town Council  
Nuclear Free Local Authorities  
Nuclear Decommissioning Authority  
Nuclear Safety Advisory Committee  
Office for Civil Nuclear Security  
Office of the Deputy Prime Minister

Ramblers Association  
Romney Marsh Countryside Project  
Rother District Council  
Royal Society for the Protection of Birds  
Royal Yachting Association  
Royal Yachting Association, Eastern Region  
Rye Town Council  
Shepway Primary Care Trust  
South of England Regional Assembly  
Sussex Sea Fisheries  
Tourism South East

## **Site Stakeholder Group**

HSE consulted 54 individuals in 36 organisations

Ashford Borough Council

Ashford Police Station

Bird Observatory

British Energy

Channel Chamber of Commerce

Dungeness A Nuclear Power Station

Dungeness B Nuclear Power Station

Dungeness Residents Association

East Sussex County Council

English Nature

Environment Agency

Folkestone and Dover Water Services

Folkestone Fire Station

Food Standards Agency

Government Office South East

Hastings Borough Council

Health Protection Agency

Kent and Canterbury Hospital

Kent County Council

Kent and Essex Sea Fisheries

Kent Police

Leader of the Conservative Party

London Ashford Airport Group

Lydd Police Office

Lydd Town Council  
Maritime and Coastguard Agency  
Marsh Forward  
National Farmers Union (South East Region)  
National Health Service  
New Romney Town Council  
Romney Marsh Countryside Project (other)  
Rother District Council  
Shepway District Council  
Sizewell B Nuclear Power Station  
Sussex Police  
Sussex Sea Fisheries

### **ANNEX 3 Consultees who responded on the environmental statement**

HSE received 21 responses on the environmental statement from 19 organisations and 2 members of the public

Ashford Borough Council

Civil Aviation Authority

Committee on Medical Aspects of Radiation in the Environment

Countryside Agency

Defence Estates

Department of the Environment, Heritage and Local Government Ireland

English Heritage

English Nature

Environment Agency

Folkestone & Dover Water Services Ltd

Food Standards Agency

Health Protection Agency

Highways Agency

Isle of Man Government Department of Local Government and the Environment

Kent County Council

Lydd Airport Action Group

Royal Yachting Association

Shepway District Council

Tourism South East

2 Members of the Public

**ANNEX 4 Letter requesting evidence to verify information in the environmental statement**

**Mr A J Shuttleworth  
The Company Secretary  
Magnox Electric Ltd  
1100 Daresbury Park  
Daresbury  
Warrington  
WA4 4GB**

**Your Ref: DNA 51210  
File Ref NUC 157/20/1 P1 E110  
Unique N° DNA70650  
Date 22<sup>nd</sup> May 2006**

Dear Mr Shuttleworth

**Magnox Electric Ltd, DUNGENESS A POWER STATION**

**Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999 as amended by the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) (Amendment) Regulations 2006**

**Request for evidence to verify information in the environmental statement; regulation 10(9)**

I refer to the letter from Mr Gore dated 31<sup>st</sup> October 2005 applying for consent to carry out a decommissioning project at Dungeness A Power Station under regulation 4(a) and submitting an environmental statement under regulation 5 of the above Regulations, and Dr J S Nettleton's acknowledgement dated 1<sup>st</sup> November 2005. Subsequently, a public consultation was undertaken in accordance with the Regulations.

From its consideration of the comments received and other work, the Health and Safety Executive is of the opinion that evidence is required to verify information in the environmental statement provided by Magnox Electric Ltd for Dungeness A Power Station under regulation 5, and for the purposes of the powers under regulation 10(9) of the above Regulations hereby requests that Magnox Electric Ltd provide evidence as specified in the Appendix to this letter.

Yours sincerely

**Dr J. S. Nettleton**  
Head of Defuelled Reactor Inspection  
Nuclear Safety Directorate

Copies: Mr Gore, Site Manager, Dungeness A Power Station  
Dr S Hall, British Nuclear Group, Berkeley Centre

## **APPENDIX – EVIDENCE TO BE PROVIDED**

In the environmental statement Magnox Electric Ltd have described mitigation measures to prevent, reduce and where possible offset significant adverse effects of the project on the environment. Evidence is requested from Magnox Electric Ltd to verify that it will implement a monitoring and review process to direct the implementation of mitigation measures and that this will continue throughout the project. Specifically, evidence is requested to verify that Magnox Electric Ltd will, in consultation with all relevant regulators and organisations, determine and implement processes to monitor and review, within an appropriate timescale, the following:

- a) Management of shingle habitat affected by the decommissioning project
- b) Population of the Sussex Emerald Moth on site
- c) Groundwater on the site at appropriate points
- d) The infilled outfall and intake culverts with regard to any possible future exposure and subsequent change or extension to the decommissioning project

And that Magnox Electric Ltd will report upon the monitoring and review processes described above and on the implementation of mitigation measures in the environmental management plan. The mitigation measures, monitoring and review processes will be agreed with the HSE prior to their implementation.

## **ANNEX 5 Evidence to verify information in the environmental statement**

### **Reasons for requesting evidence to verify information in the environmental statement**

1. A brief explanation is given of the reasons why HSE considered it necessary to request evidence to verify information in the environmental statement.
2. The environmental statement describes mitigation measures to prevent, reduce and where possible offset significant adverse environmental effects. In assessing the environmental statement and considering comments from a number of consultees HSE concluded that evidence was required to verify that the implementation of mitigation measures would be directed by an appropriate monitoring and review process.
3. Comments from a number of consultees indicated a desire to input into the process of determining the review and monitoring.
4. Comments relating to monitoring and review processes which would be required to direct the implementation of the proposed mitigation measures were made by consultees in relation to four areas:
  - a. Management of shingle habitat affected by the decommissioning project
  - b. Population of the sussex emerald moth on site
  - c. The monitoring of groundwater on the site at appropriate points
  - d. The infilled intake and outfall structures, with regard to any future possible exposure.
5. HSE considered that evidence was required to verify the determination and implementation of monitoring and review processes to direct mitigation measures. These would be developed in discussion with relevant regulators and organisations and agreed with HSE.
6. HSE was also of the opinion that detail of the monitoring and review processes and the mitigation measures should be reported in the environmental management plan.

### **Reasons for not seeking further clarification**

1. It was HSE's opinion that the evidence together with the environmental statement provided sufficient assurance that the licensee will continue to consult with HSE, relevant regulators and other organisations in determining the monitoring and review processes to direct mitigation measures.
2. The licensee has undertaken to engage with relevant regulators and other bodies in determining appropriate review and monitoring processes as described in the request for evidence. In the environmental statement mitigation measures relating to the four areas were described. General descriptions of ongoing discussions with stakeholders and some monitoring was also described. The evidence provided assurance that the environmental management plan would be used as a tool for reviewing the mitigation measures.

## **ANNEX 6 Reasons for topics not pursued for evidence or further information**

The main topics raised by consultees on the environmental statement that were not pursued for evidence or further information on the environmental statement are listed here with a brief explanation of why HSE considered that evidence or further information was not necessary. In several cases, the topics are regulated under other legislation where compliance with that legislation would ensure that adverse environmental impacts would be minimal.

### **1. Timetable for decommissioning:**

The environmental statement presented options for decommissioning timetables, and the environmental impacts considered did not change the overall outcome of the decommissioning strategy selection process. Current Government policy considers the safestore strategy to be potentially feasible and acceptable, however the recently published NDA strategy states that there is 'an aspiration to deliver accelerated decommissioning wherever feasible'. Should there be changes to the decommissioning strategy then regulation 13 of the EIADR will apply if there may be a significant adverse effect to the environment. Magnox Electric Ltd would have to apply to HSE for consent to carry out that change or extension to the decommissioning project, and prepare an environmental statement which would be subject to public consultation.

### **2. Integrity of the safestore:**

Statutory controls for the safestore are outlined in the environmental statement. Nuclear safety aspects of the safestore, including its integrity over a period of up to 100 years, will be regulated under NIA65 and enforced by HSE.

### **3. Security:**

Security arrangements are the responsibility of the Office of Civil Nuclear Security. NIA65 covers emergency arrangements. The 2-mile air exclusion zone around the site is the responsibility of the Civil Aviation Authority (CAA).

### **4. Packaging and long-term storage of ILW:**

NIA65, RSA93 and IRR99 cover safety aspects of packaging and long-term storage of ILW.

### **5. End State:**

The environmental statement outlines the purpose of final site clearance as being the removal of all radioactive or other hazardous materials and wastes from the site, enabling it to be de-licensed and made available for alternative use consistent with its location. In order for the site to be de-licensed it will have to

demonstrate that there is no danger from residual radiation<sup>8</sup>. There is a current NDA consultation on the issue of end-states.

## **6. Disposal of LLW:**

Disposal of LLW is covered by NIA65, RSA93 and IRR99. LLW is currently disposed of to Drigg facility. Should future circumstances result in the need for changes to the LLW disposal route and thus to the decommissioning project, then regulation 13 of EIADR will apply as above.

## **7. Air quality impact from dust emissions, vehicles and incinerator use:**

Emphasis in the environmental statement is on air quality and dust from vehicle movements and demolition activities. Mitigation measures identified include sheeting of lorries, the provision of re-circulating wheel washing for heavy goods vehicles on leaving the site, use of water sprays for demolition activities and the minimisation of unnecessary material and waste handling as far as practicable.

With regard to the possible impacts of dust deposition on vegetated shingle and sussex emerald moth, in addition to the mitigation measures described above the environmental statement identifies dust monitoring. Magnox Electric Ltd will use the dust monitoring as a first tier in the process of determining if any dust is deposition is occurring. The mitigation measures are designed to prevent dust arising at source.

The environmental statement identifies that emissions from the increased use of the incinerator during care and maintenance will have a negligible impact on emissions. Further assurances were provided from Magnox Electric Ltd in discussions with consultees, relating to the intermittent use of the incinerator and the regulation of the emissions under the IPPC (Integrated Pollution Prevention and Control) regime.

With regard to the possible use of explosives, the environmental management plan will report (Condition 3 of the consent, see Annex 7) on mitigation measures for work activities, which cannot be decided until a later time in the project when more information is available. Any use of explosives would require safety documentation under NIA65 and would be regulated by HSE. In addition Magnox Electric Ltd has provided further assurances in discussion with consultees that it will discuss controls around the use of explosives with HSE and local authorities when more detail of the activities is available.

## **8. Archaeology and Cultural Heritage:**

This section of the environmental statement concluded that there is no evidence of surviving features of archeological interest within the power station. However, in discussion with statutory consultees, Magnox Electric Ltd have given

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<sup>8</sup> HSE's policy on delicensing can be viewed at <http://www.hse.gov.uk/nuclear/delicensing.pdf>

assurance that the 'Code of practice for Seabed Development'<sup>9</sup> will be used when undertaking works on the intake and outfall culverts.

The NDA have indicated that a National Nuclear Archive may be established, and the licensee has given assurance that they will facilitate this process when required.

## **9. Cumulative effects; Lydd airport development**

As no planning application has been submitted for the expansion of Lydd airport, there was no available information for Magnox Electric Ltd to consider the potential cumulative effects of this possible project alongside the decommissioning project.

## **10. Coastal issues:**

Magnox Electric Ltd has committed to continued involvement in its work with the Dungeness Shoreline Management Group, which includes English Nature, the Environment Agency and British Energy. If a decision is made to remove the intake and outfall culverts then regulation 13 of EIADR would apply.

Assessing the ecological impacts at the source of shingle supplied to the site would be the responsibility of the operator of that facility and would not form part of the environmental impact assessment for this project.

The cessation of cooling water will occur at the end of power generation and does not form part of the application for consent to decommission. However Magnox Electric Ltd have included it in their assessment for completeness, and concluded that there will be a negligible effect on ecology and geomorphology.

## **11. Ecology:**

Black redstart nest within the power station and the impact of decommissioning would be a permanent negative effect of key significance. As identified in the environmental statement, this impact would be reduced to not significant by the provision of suitable mitigation. This includes appropriately designed nesting boxes prior to the commencement of site works, minimisation of habitat loss where reasonably practicable and employee awareness programmes for identification of active nest sites.

The impact on badgers of the decommissioning project has been assessed as negligible and not significant. In discussions with consultees Magnox Electric Ltd have given assurances that a watching brief will be maintained on badgers to capture changes in distribution over time.

The impact on the single early spider orchid has been assessed as not significant when mitigation measures including fencing and general dust mitigation measures are implemented. The impact on red hemp-nettle and lichens has also been assessed as not significant with mitigation measures in place. In addition,

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<sup>9</sup> JNAPC Code of Practice for Seabed Development, (Joint Nautical Archaeology Policy Committee) available at [http://www.thecrownstate.co.uk/1391\\_jnadc\\_code\\_of\\_practice.pdf](http://www.thecrownstate.co.uk/1391_jnadc_code_of_practice.pdf)

Magnox Electric Ltd have provided further assurances in discussions with consultees that dust monitoring will be implemented in appropriate locations and if deposition is revealed that could affect vegetation then appropriate mitigation would be put in place and reported in the environmental management plan.

## **12. Ground Water:**

Magnox Electric Ltd has no abstraction points or licence. With regard to the potential impacts of any de-watering activities on groundwater levels, mitigation measures including sheet piling and recharge barriers will be employed if necessary to minimise the extent of groundwater level change. Magnox Electric Ltd have provided further assurances in discussions with licensees that it will consult fully with all interested parties regarding this issue. In addition any significant de-watering operations would require prior authorisation from the Environment Agency.

## **13. Landscape and visual:**

Re-cladding of reactors requires planning permission and therefore requires discussion and agreement with the local planning authority. Mitigation proposals for this and other identified effects on landscape and visual will be included in the environmental management plan.

Magnox Electric Ltd has described that buildings will be dismantled in their entirety once dismantling has started and skeleton buildings will not be left.

## **14. Noise and Vibration:**

The assessment of vibration from traffic and demolition identified impacts as negligible and not significant. Noise impacts on properties within 2km of the site have been identified as a medium term key significant adverse effect. Mitigation measures will be employed to reduce these impacts, including; noise barriers, use of equipment with silencers, use of a site contact, informing local residents of exceptional activities, restrictions on hours for certain work. Assessment of the reduction in noise from the implementation of mitigation measures will not be possible until detailed working plans are defined, and therefore will be reported in the environmental management plan.

## **15. Socio-economic impact of reduction in workforce numbers:**

The environmental statement outlines the assessed impacts (direct and indirect) relating to the reduction in workforce and outlines the mitigation measures to be implemented. Mitigation includes measures to re-deploy affected staff where possible, provision of opportunities for early retirement, support to staff re-training/re-skilling and encouragement for contractors to use local labour, equipment and services as far as practicable. In addition Magnox Electric Ltd have committed to working in partnership with stakeholders regarding employment levels during the decommissioning project, a Site Stakeholder Group Steering Committee has been set up and contact has been made with SEEDA (South East England Development Agency), Shepway District Council, Romney

Enterprise Gateway and Marsh Forward. The NDA is required, under the Energy Act 2004, to consider giving encouragement and other support to activities that benefit the socio or economic life of communities living near designated reactor sites.

#### **16. Surface Water:**

The implementation of the mitigation measures relating to surface water and drainage, as summarised in Annex 8, reduced the impact from moderate adverse significant to not significant.

#### **17. Traffic and Transport:**

Magnox Electric Ltd will implement a Travel Plan that will be discussed in advance with relevant authorities. With regard to road safety speed restrictions, these will be enforced by the relevant authorities. In addition Magnox Electric Ltd have provided the assurance, in correspondence with consultees, that the contractors employed at the site will have a social responsibility clause in their contract which can be used in situations of unacceptable behaviour, such as unsafe driving.

## ANNEX 7

Decommissioning Project Consent No.1

13 July 2006

### **NUCLEAR REACTORS (ENVIRONMENTAL IMPACT ASSESSMENT FOR DECOMMISSIONING) REGULATIONS 1999**

#### **CONSENT**

granted under regulation 4(b)  
in accordance with regulation 8(3)  
with conditions attached under regulation 8(4)

#### **DUNGENESS A POWER STATION**

The Health and Safety Executive, for the purposes of regulation 4(b) in accordance with regulation 8(3), hereby grants consent for carrying out the project<sup>1</sup> applied for under regulation 4(a), in particular, to remove all buildings except the reactor buildings, alter the reactor buildings for a period of deferment, retrieve and package operational intermediate level waste, and store the intermediate level waste until it can be removed from site, and clear the site, subject to the conditions under regulation 8(4) attached.

**Dated:**

**Signed**

**For and on behalf of the  
Health and Safety  
Executive  
Dr S. L. Creswell  
A person authorised to act  
in that behalf**

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<sup>1</sup> Project as defined in regulation 2

**NUCLEAR REACTORS (ENVIRONMENTAL IMPACT ASSESSMENT FOR  
DECOMMISSIONING) REGULATIONS 1999**

**CONDITIONS**

attached under regulation 8(4)  
to Decommissioning Project Consent No. 1 granted under regulation 4(b)

**DUNGENESS A POWER STATION**

**Condition 1**

The project<sup>1</sup> shall commence before the expiration of five years from the date of this Consent.

**Condition 2**

(1) The licensee is required to prepare and implement an environmental management plan to cover mitigation measures to prevent, reduce and where possible offset any significant adverse effects on the environment.

(2) The project shall not be carried out except in accordance with the environmental management plan.

**Condition 3**

Within 90 days of the date of this Consent, with reference to the environmental statement provided under regulation 5(1) and evidence to verify information in the environmental statement, provided under regulation 10(9), the environmental management plan shall:

- a. list the mitigation measures that are already identified in the environmental statement and evidence submitted to verify information in the environmental statement;
- b. list the options to implement work activities where mitigation measures may be required but where selection of an option will only be possible in the future;
- c. list the work activities where mitigation measures may be required but where assessments to identify mitigation measures will only be possible in the future.

**Condition 4**

Subsequent to condition 3, the environmental management plan shall:

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<sup>1</sup> Project as defined in regulation 2

- a. with reference to condition 3b, identify the mitigation measures for options that have been selected, giving reasons for their selection;
- b. with reference to condition 3c, identify the mitigation measures from assessments carried out, giving reasons for their selection;
- c. describe the effectiveness of the mitigation measures over time;
- d. describe significant changes to the mitigation measures in light of experience, giving reasons for such changes.

**Condition 5**

The licensee is required to:

- a. provide the environmental management plan to the Health and Safety Executive within 90 days of the date of this Consent and every year thereafter, or within such longer time as the Executive may agree;
- b. make the environmental management plan available to the public within 30 days of the plan being sent to the Health and Safety Executive, or within such longer time as the Executive may agree; the plan may replace earlier versions.

**Condition 6**

The licensee is required to provide notice to the Health and Safety Executive of any significant change to a mitigation measure to prevent, reduce and where possible offset any major adverse effects on the environment no less than 30 days before the change is made, or within such shorter time as the Executive may agree.

**Dated:**

**Signed**

**For and on behalf of the  
Health and Safety  
Executive  
Dr S. L. Creswell  
A person authorised to act  
in that behalf**

## **ANNEX 8 Summary of environmental benefits and detriments and mitigation measures**

A summary of the benefits and detriments of the environmental impacts identified by Magnox Electric Ltd is given here. The licensee has undertaken to implement any mitigation measures identified in the environmental statement and supporting evidence (and will be required to do so in accordance with the environmental management plan referred to in the conditions attached to the consent).

### **1. Air quality and climatic factors:**

Two major topic areas were assessed (relating to traffic flow and fugitive dust) for each of the three phases of decommissioning.

Within these topic areas there were three temporary impacts identified as key significant or significant adverse short and medium term for the care and maintenance phase and final site clearance.

These impacts relate to an increase in dust to residential properties and industrial receptors within 1km of the site due to construction and demolition activities and the possible use of explosive demolition, and also an increase in dust at receptors along traffic routes. The environmental statement identified mitigation activities for control of dust from general on-site dust generating activities, such as construction and demolition, and traffic which if implemented would render two of the three impacts as not significant. These mitigation measures include:

- Use of water sprays for external activities as appropriate;
- Sheeting or seeding of surfaces and/or use of wind fences as appropriate;
- Covering of containers;
- Sheeting of vehicles carrying potential dusty loads;
- Use of re-circulating water wheel washers;
- Avoidance of use of un-surfaced ground; and
- Cleaning of on site roads.

The mitigation measure identified to reduce the impact of dust from the use of explosives can not rule out the possibility of a key significant impact, however the effects would be occasional and short-term. Mitigation measures include not carrying out the demolition under particularly windy or dry conditions and notifying residents in advance. Any use of explosives would require safety documentation under NIA65 and would be regulated by HSE. In addition Magnox Electric Ltd has provided further assurances in discussion with consultees that it will discuss controls around the use of explosives with HSE and local authorities when more detail of the activities is available.

### **2. Archaeology and cultural heritage:**

There are no surviving features of archaeological interest within the power station site, other than the station itself, therefore Magnox Electric Ltd felt that no further assessment was appropriate. However consultations are ongoing with English

Heritage regarding the Royal Commission on the Historical Monuments of England Survey at Dungeness A power station. Also the NDA are considering establishing a National Nuclear Archive.

### **3. Ecology:**

Twelve topic areas were assessed for care and maintenance preparations and final site clearance, with four topic areas for the care and maintenance phase. There were six topic areas where there was found to be key significant or significant adverse effects. The six topic areas and associated impacts were as follows:

- Dungeness SSSI (Site of Special Scientific Interest) and NNR (National Nature Reserve): HGVs straying onto verges;
- Sussex emerald moth and its larval food plants: loss of habitat, incidental mortality and dust deposition;
- Early spider orchid; loss of habitat/incidental mortality and dust deposition;
- Red hemp nettle: Loss of habitat/disturbance to habitat, incidental mortality, and dust deposition;
- Black redstart: loss of nesting/breeding habitat; and
- Lichens: result of HGVs straying onto verges of the access road.

However, the environmental statement identified mitigation measures relating to all of the above which if implemented will render all of the effects not significant. These mitigation measures include:

- Appropriate signs to advise drivers not to access verges;
- Minimisation of habitat loss;
- Implementation of an agreed methodology for working on sensitive shingle habitats;
- Agreement with English Nature regarding the management of the receptor area for moth larvae;
- Appropriate barriers used to prevent vehicles straying onto area with early spider orchid;
- Minimisation of areas of ground disturbance, winter working and the use of temporary track ways; and
- Provision of appropriately designed nest boxes prior to the commencement of site works.

Evidence provided by Magnox Electric Ltd demonstrates that the licensee will continue to consult with relevant regulators and organisations regarding this matter, and prior to carrying out work will agree the monitoring and review process with HSE.

During the care and maintenance phase significant long term positive impacts were identified regarding the gain of habitat for black redstarts, sussex emerald moths and vegetated shingle.

#### **4. Geology, hydrogeology and soils:**

One topic area (contaminated soils and groundwater, including effects on existing water supplies, groundwater resources, land areas affected) was considered for the three phases. Within this, eleven impacts were assessed for care and maintenance preparation and for final site clearance of which one was identified as a significant benefit, six were identified as potentially key significant adverse and one was identified as potentially significant adverse. The effects related to disturbance and possible mobilisation of existing ground contamination, temporary storage of materials, in-fill materials effecting groundwater flow and spills or leaks, and also if required, dewatering operations.

For the care and maintenance phase five impacts were assessed of which one was a significant benefit, two were identified as potentially key significant adverse and one was identified as potentially significant adverse.

Remediation of contaminated ground and/or groundwater if required would result in a beneficial impact.

Mitigation measures include:

- Controlled access to or from known or potentially contaminated working areas;
- Desk study and site investigations;
- Investigation of contaminated soils prior to removal of hard-standings or buildings/foundations with prior remediation if needed;
- Excavation dewatering, if necessary with monitoring and appropriate management/disposal of any waters arising;
- Tenting of exposed excavations;
- Production of risk assessments, method statements and contingency plans;
- Sampling and testing of soils, wastes and materials prior to storage;
- Segregation as appropriate;
- Use of containment to eliminate cross-contamination;
- Management of rainwater run-off from storage areas for contaminated or potentially contaminated, soils, wastes and materials;
- Bunding, appropriate handling protocols, contingency plans for spills;
- Emergency spill response planning according to appropriate standards, including spill kits to be kept on site and trained staff available; and
- Use of re-circulating wheel washers on HGVs leaving the site where appropriate.

In conjunction with the supporting evidence, in which Magnox Electric Ltd commit to engaging with relevant regulators and organisations in determining and implementing a process to monitor and review groundwater on the site, the mitigation measures will reduce all the impacts to non-significant.

## **5. Landscape and visual:**

The assessment concluded that in the long term the decommissioning project will provide considerable benefit to the landscape and visual amenity of the area. Nine landscape attributes have been assessed. For each landscape attribute the impact and mitigation are described for the following phases; care and maintenance preparations, start of care and maintenance, 20 years into care and maintenance, final site clearance and following final site clearance (winter). Five beneficial long-term significant impacts and two beneficial long-term key significant impacts were identified.

At the start of care and maintenance the initially shiny appearance of the newly re-clad reactor buildings and new radioactive waste storage building have been identified as a significant long-term adverse impact. Due the unique landscape at Dungeness traditional visual landscaping mitigation, such as tree-planting has not been considered appropriate.

## **6. Noise and vibration:**

Four major topic areas were assessed for the care and maintenance preparations and final site clearance phases, three for the care and maintenance phase and also following final site clearance (relating to the effects of work on site and transport vehicles).

For the care and maintenance phase no adverse impacts have been identified, as the cessation of the care and maintenance preparations activities will have long-term beneficial impacts.

Following final site clearance, the cessation of activities on site and associated traffic will result in long-term permanent beneficial effects.

For the care and maintenance preparations and final site clearance phases two of the four areas have been identified as having key significant or significant impacts, these are direct noise from site and the use of explosives. Noise directly from the site and associated changes in traffic is assessed as having a medium term adverse key significant impact to properties within 2km of the site, a temporary significant impact on recreational areas within 2km. Mitigation measures include:

- Use of noise barriers;
- Using equipment with silencers;
- Use of a site contact;
- Informing residents of exceptional activities;
- Restricting hours of work for certain work; and
- Compliance with British Standard for control of noise and vibration on construction sites (BS 5228)<sup>10</sup>.

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<sup>10</sup> BS 5228 – British Standard 1997, Noise and Vibration Control on construction and open sites

Until working methods are defined it is not possible to assess the noise reduction and therefore impact significance reduction that will be achieved by mitigation measures. The worst-case assessment presumes that noise impacts for properties within 2 km will be reduced to significant from key significant with the use of noise barriers. Noise and vibration from explosive demolition, if used, will have a significant short-term temporary adverse effect. The identified mitigation measures; publicity and good blasting practice, will reduce the impact to not significant.

## **7. Socio-economic:**

Impacts were assessed for care and maintenance preparations; care and maintenance; and final site clearance. Six topic areas were assessed, of these there were two topics identified as having permanent adverse significant effects. These relate to direct employment levels, and unemployment and inactivity in the Shepway District. The significant effects are due to the long term loss of jobs, which will have a moderate significant impact on employment levels, (particularly male employment opportunities) and the impact on unemployment levels in the Shepway District, which will be major significant in the absence of alternative job creation. Mitigation measures to reduce the magnitude of the impacts include:

- Opportunities for re-deployment within Magnox Electric Ltd;
- Potential for providing opportunities for early retirement; and
- Support in retraining and re-skilling.

For further detail of mitigation measures see Annex 6. Temporary employment will generate job opportunities and there will be a temporary peak in demand for temporary accommodation, which has been assessed to be a beneficial temporary impact to direct and indirect employment and the housing market during care and maintenance preparation and final site clearance. Magnox Electric Ltd will make use of local labour, equipment and services as far as practicable.

## **8. Surface water quality and drainage:**

Four topic areas were assessed for the care and maintenance preparation, and final site clearance phases, and one for the care and maintenance phase. The potential release of turbid and/or contaminated water from decommissioning activities on site for care and maintenance preparation and final site clearance is assessed as having a moderate adverse significant effect. However mitigation, which if implemented will render the above not significant. Mitigation measures include:

- Wetting down to prevent windblown spread of dust into locations where subsequent washing into surface water drains would be likely, and appropriate management of waste water arising;
- On-site roads to be regularly kept free from mud/dust deposits, including the use of recirculation water wheel washers and road cleaners as appropriate;
- Sheeting or seeding of stockpiles of soil; and

- Careful design and siting of spoil mounds.

Minor spills and leaks of non-radioactive substances, if they occur, may have significant adverse effects during the care and maintenance preparations phase. Mitigation measures if implemented will render this effect not significant.

Mitigation measures include:

- Careful siting of concrete plant and fuel/chemical handling facilities;
- Oil separation facilities on the surface water drainage system at appropriate locations;
- Bunding of chemical and fuel storage;
- Appropriate handling protocols for fuel and chemicals; and
- Emergency/spill response planning, including spill kits kept on site and trained staff available.

## **9. Traffic and transport:**

The magnitude and impact of changes in traffic were considered. Two topic areas were considered for each of the phases of decommissioning including; care and maintenance preparations; care and maintenance; final site clearance; and following final site clearance. Within each topic area, thirteen roads/sites were assessed.

During care and maintenance preparations and final site clearance phase, four of the thirteen sites were identified as having temporary significant medium term adverse impacts; two sites on the A2070, Dungeness Road and The Parade, due to the changes in traffic flow. One temporary key significant medium term adverse impact was identified on Harden road Lydd due to a moderate increase in traffic flow with a high number of vulnerable users.

Magnox Electric Ltd have undertaken to implement a travel plan as a mitigation measure, this is intended to assist in reducing the number of trips generated by the station throughout the entire decommissioning project. The travel plan will be discussed in advance with the relevant highway authority. Until the travel plan is drafted, when the work plans are further defined, the amount of reduction in significance for the adverse impacts is undefined.

During care and maintenance and after final site clearance significant, long-term positive effects are identified for the A2070, Dungeness Road and The Parade due to the reduction in traffic during these phases.

All other roads and junctions are assessed as having no significant effects.

