Department for
Business, Energy
& Industrial Strategy

SUMMARY OF RESPONSES TO THE CONSULTATION: DRAFT NATIONAL POLICY STATEMENT FOR GEOLOGICAL DISPOSAL INFRASTRUCTURE

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Introduction

The Consultation

1. This document provides a summary of the responses to the Government consultation, draft National Policy Statement - Geological Disposal Infrastructure[1], which ran from 25 January 2018 to 19 April 2018. The consultation included the accompanying Appraisal of Sustainability[2] and the Habitats Regulations Assessment[3] for the draft National Policy Statement. The consultation built on commitments made in the 2014 White Paper, Implementing Geological Disposal – A Framework for the long-term management of higher activity radioactive waste[4].

2. Radioactive waste management is devolved, and therefore this National Policy Statement (NPS) provides the framework for decision making on development consent applications for the construction of geological disposal infrastructure in England, and beneath the seabed in waters adjacent to England up to the seaward limits of the territorial sea. However, the associated Appraisal of Sustainability (AoS) and Habitats Regulations Assessment (HRA), which inform this NPS, considers the potential socio-economic and environmental impacts of geological disposal infrastructure (located in England) on Wales and Scotland, given their common borders with England. Although the NPS only covers England, responses to this consultation were invited from throughout the UK.

3. The draft NPS has been revised, where appropriate, to take account of consultation responses and recommendations from Parliamentary scrutiny, prior to being laid in Parliament on 24 June 2019, and, subject to the will of Parliament, being designated in due course after that date. The final AoS and HRA will be published at the time that the final NPS is designated, alongside a Post Adoption Statement.

National Policy Statement

4. NPSs were established under the Planning Act 2008[5], which set out a methodology for granting development consent for Nationally Significant Infrastructure Projects (NSIPs). NPSs are intended to provide greater clarity and certainty by setting out, in

[1] The public consultation and the draft NPS for Geological Disposal Infrastructure can be accessed online at https://www.gov.uk/government/consultations/national-policy-statement-for-geological-disposal-infrastructure
[2] The Appraisal of Sustainability report can be accessed online at: https://infrastructure.planninginspectorate.gov.uk/application-process/the-process/
[3] The Habitats Regulations Assessment can be accessed online at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/676408/New_Draft_Final_HRA_Report-compressed.pdf
[4] The 2014 White Paper Implementing Geological Disposal can be accessed online at: https://www.gov.uk/government/publications/implementing-geological-disposal
[5] The Planning Act 2008 can be accessed online at: http://www.legislation.gov.uk/ukpga/2008/29/contents

a single document, the Government's national policy in relation to the specified description of development and providing reasons for that policy.

5. An extensive period of consultation and parliamentary scrutiny is required before an NPS can be designated. In relation to this NPS, parliamentary scrutiny was undertaken at the same time as public consultation. The Business, Energy and Industrial Strategy Committee (BEIS Committee) scrutinised the draft NPS and accompanying documents in July 2018 and subsequently published its recommendations[6]. The House of Lords debated the draft NPS on 6 September 2018.

6. The NPS sets out the need for NSIPs relating to geological disposal infrastructure (as defined in section 30A of the Planning Act 2008), which includes both:

- any deep geological facility for the disposal of radioactive waste – geological disposal facilities; and
- the deep borehole investigations necessary to characterise the geology at a particular site to enable its suitability as a site for a geological disposal facility to be considered.

7. The NPS will be used as a primary basis for examination by the Examining Authority and for decisions by the Secretary of State in considering development consent applications for geological disposal infrastructure.

8. The NPS comprises five chapters, as follows:

- Chapter 1: provides an overview of the purpose and scope of the NPS including the draft NPS objectives;
- Chapter 2: sets out the Government policy on the management of higher activity radioactive waste, including an outline of what geological disposal is, the waste to be managed and the strategy for implementation;
- Chapter 3: outlines the need for geological disposal infrastructure;
- Chapter 4: sets out the assessment principles against which applications relating to geological disposal infrastructure are to be decided;
- Chapter 5: sets out the generic impacts to be considered by the developer, the Examining Authority and the Secretary of State.

Appraisal of Sustainability (AoS)

9. The Planning Act 2008 requires that an AoS be carried out before an NPS can be designated. The main purpose of this appraisal is to ensure that the likely environmental and socio-economic effects of the NPS, at a national level, are

[6] The BEIS Committee recommendations report can be accessed online at: https://publications.parliament.uk/pa/cm201719/cmselect/cmbeis/1092/1092.pdf

identified, described and evaluated. If potential significant adverse effects are identified, the AoS recommends options for avoiding or mitigating such effects. In this way, it helps to inform the preparation of the NPS and to support the NPS's contribution to the achievement of sustainable development.

10. The AoS incorporates an assessment which satisfies the requirements of the Directive 2001/42/EC[7] (the Strategic Environmental Assessment or 'SEA' Directive) and the domestic implementing regulations (the Environmental Assessment of Plans and Programmes Regulations 2004[8]). The SEA Directive aims for a high level of environmental protection and to promote sustainable development. It applies to certain plans that are likely to have significant effects on the environment. The AoS also considers socio-economic effects in the same way as environmental effects are required to be assessed by the SEA Directive. A post-adoption statement, which fulfils certain requirements set out in the SEA Directive, will be published with the final AoS report.

Habitat Regulations Assessment (HRA)

11. The NPS is also subject to the Council Directive 92/43/EEC[9] (the 'Habitats Directive') and Directive 2009/147/EC[10] (the 'Wild Birds Directive') and the relevant domestic implementing regulations (the Conservation of Habitats and Species Regulations 2017). These require an assessment of whether there are likely to be any 'significant effects' on any European site (sites protected because of their importance to European nature conservation) as a result of the implementation of the NPS (either on its own or in combination with other plans or projects) and, if so, whether these effects will result in any adverse impacts on that site's integrity.

Implementing Geological Disposal

12. The NPS sits alongside the other elements of the Government's programme for the implementation of geological disposal. A parallel consultation was undertaken on the Working with Communities process which sought views on how communities should be engaged and represented in a process for identifying a location for a geological disposal facility for higher activity radioactive waste. Those proposals also built on the commitments set out in the 2014 White Paper, and following

[7] Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment can be accessed online at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32001L0042

[8] The Environmental Assessment of Plans and Programmes Regulations 2004 can be accessed online at: http://www.legislation.gov.uk/uksi/2004/1633/contents/made

[9] Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora can be accessed online at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A31992L0043

[10] Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds can be accessed online at: https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1547138086279&uri=CELEX:32009L0147

consultation the final policy 'Implementing Geological Disposal – Working with Communities' has now been published[11].

13. The Implementing Geological Disposal – Working with Communities' policy paper replaces the 2014 White Paper in England. It reconfirms the UK Government's commitment to geological disposal as the safest option for the long-term management of higher activity radioactive waste and provides updates on actions set out in the 2014 White Paper, including the final policy on working with communities. The policy on working with communities applies to the Government's designated delivery body for its programme of geological disposal, Radioactive Waste Management Ltd. (RWM). In contrast, the NPS applies to any developer wishing to apply for development consent for geological disposal infrastructure.

[11] The Implementing Geological Disposal – Working with Communities policy 2018 can be accessed online at: https://www.gov.uk/government/publications/implementing-geological-disposal-working-with-communities-long-term-management-of-higher-activity-radioactive-waste

Summary of consultation responses

Consultation Questions

Consultation Questions

1. **NPS Chapter 3 – The need for geological disposal infrastructure**

   Does the draft NPS provide suitable direction to the Planning Inspectorate and Secretary of State on the need for geological disposal infrastructure?

2. **NPS Chapter 4 – Assessment Principles**

   Do the assessment criteria adequately address the principles that the developer, the Planning Inspectorate and the Secretary of State should take into account in an application for development consent? If not, what further information on the assessment criteria is required?

3. **NPS Chapter 5 – Impacts**

   Does the draft NPS appropriately cover the impacts of geological disposal infrastructure and potential options to mitigate those impacts? Please provide reasons to support your answer.

4. **AoS Chapter 5**

   Do you agree with the findings (of 'likely significant effects') from the Appraisal of Sustainability Report and the recommendations for enhancing the positive effects of the draft NPS? Please provide reasons to support your answer.

5. **AoS Chapter 6**

   Do you agree with the conclusions of the Appraisal of Sustainability Report? If not, please explain why.

6. **HRA**

   Do you agree with the findings from the Habitats Regulations Assessment Report for the draft NPS? Please provide reasons to support your answer.

7. **Other**

   Do you have any other comments on the draft NPS and the accompanying documents (Appraisal of Sustainability, Habitats Regulations Assessment)?

14. In total, there were 86 individual UK responses to the consultation from a range of organisations and members of the public. In addition, there were 360 campaign responses from members of the German public. The response from members of the German public is addressed in paragraphs 173-175 of this document.

15. The responses raised a number of points regarding the draft NPS. The main themes raised included:

- alternatives to disposal;
- alternative disposal methods;
- the need case for geological disposal infrastructure;
- general impacts; and
- exclusionary criteria for siting of geological disposal infrastructure.

16. A summary of key issues raised in response to the questions, and how the Government has addressed these issues in the final NPS, is set out in the remainder of this document.

17. For clarity and ease of reference, we have set out for each consultation question the matters raised in those responses which relate directly to the question and the Government response.

18. A number of responses were also received that did not relate either to a specific question, or to the NPS itself (or accompanying documents). Those responses have been grouped and added under question 7, which requested any other comments on the consultation.

19. A number of responses were received that fell outside the scope of this consultation on the NPS. These are summarised at the end of this document in the section Government response to topics outside the scope of the consultation.

20. The consultation offered respondents the ability to state a view on the adequacy/ degree of agreement that they had with:

- the draft NPS providing suitable direction to the Planning Inspectorate and the secretary of State;
- the assessment criteria within the draft NPS;
- the impacts of geological disposal within the draft NPS;
- the findings of the Appraisal of Sustainability Report and the recommendations for enhancing the positive effects;
- the conclusions of the Appraisal of Sustainability Report; and
- the findings from the Habitats Regulations Assessment Report.

The responses from the 86 respondees were relatively consistent across the 6 questions that asked for a view. The balance of views tended to be with those that disagreed with the documents, with approximately 30% disagreeing on each question. Those that expressly agreed accounted for approximately 15%, however when this was combined with those who partially agreed this tended to equal the proportion of those who disagreed. There was a large proportion of respondees for each question for whom we were unable to determine whether they agreed or disagreed or gave no response on their agreement, this varied from 30-60%.

Question 1: NPS Chapter 3 – The need for geological disposal infrastructure

Q1: Does the draft NPS provide suitable direction to the Planning Inspectorate and Secretary of State on the need for geological disposal infrastructure?

What we said:

21. Chapter 3 of the draft NPS sets out the need to manage higher activity radioactive waste in the long term through the development of a geological disposal facility. The Secretary of State will assess applications for infrastructure covered by the NPS on the basis that that need has been demonstrated.

22. This chapter also explains the UK Government's policy framework for managing higher activity radioactive waste in the long term, specifically how geological disposal policy has been developed, consulted on and put into effect, prior to the development of the draft NPS.

23. The drivers for a long-term solution to the management of radioactive waste identified in chapter 3 include the legacy waste from over 60 years of nuclear electricity generation. This and other legacy wastes are currently stored temporarily at over 30 sites in the UK.

24. Chapter 3 also sets out the international consensus that geological disposal is the safest and most secure means of disposing of higher activity radioactive waste.

What you said:

25. The main themes raised under question 1 included: alternative disposal methods; the need case for geological disposal infrastructure; and CoRWM recommendations.

Alternatives to geological disposal

26. Alternatives to geological disposal includes alternative disposal methods (such as near-surface disposal and borehole disposal) and alternatives to disposal (such as continued storage of waste).

What you said:

27. Concerns were raised about whether geological disposal is best practice due to incidents internationally at nuclear waste facilities. A number of respondents favoured alternative disposal technologies for higher activity waste, such as near surface disposal or deep borehole disposal, over geological disposal. Respondents also felt that intermediate level waste should be stored in existing holes or facilities, and that high-level waste should be stored on site.

28. Respondents commented that the NPS should clarify that the Secretary of State and the examining authority are not required to consider alternative methods of disposal during the assessment of a development application.

29. The matter of retrievability of the waste was raised, and that long-term storage may be preferable to disposal. Comments were also received on the development of nuclear electricity generation and the potential for utilisation of the waste.

Government Response:

30. Geological disposal of higher activity radioactive waste is considered best practice internationally and is the Government's preferred approach. This is set out in chapter 3 of the NPS, noting that the need for geological disposal would remain even if some alternative options could be used to take part of the inventory for disposal. We have added in further information in paragraph 3.2.8 about potential alternative disposal methods and our commitment to keep them under review.

31. The Government's position on retrievability is set out in, paragraphs 2.2.7 to 2.2.9 of the NPS and remains unchanged.

Case for a geological disposal facility

What you said:

32. Respondents said that the NPS should clearly set out: that the interim storage measures are not sustainable in the long term; that the interim storage measures are vulnerable over the long term, and; that geological disposal is a long-term solution.

33. Respondents felt that the NPS stated the need case for geological disposal and was aligned with other policies. However, some respondents felt that the technical need case could be more detailed and there should be greater focus on managing legacy wastes appropriately.

34. Some respondents commented that CoRWM's 2006 recommendation for geological disposal was based on knowledge at that time and raised concerns that at present,

no operational facility exists. Respondents wanted the NPS to set out the important need to clean up high hazard facilities at Sellafield.

Government Response:

35. Interim storage is inherently only temporary, and so is not capable of providing the long-term solution for the management of higher activity radioactive waste, which is needed, and which geological disposal can provide. We believe that the information on storage already contained in the NPS in paragraphs 3.2.5, 3.2.12 and section 3.4 is adequate in explaining this.

36. The NPS sets out the need case, including the ethical, technical and legal need, and the need to meet energy and climate change objectives for geological disposal in chapter 3. The NPS notes the need for secure and safe interim storage. There is international consensus that geological disposal is the best practice solution. Reference is made to the intensified research programme in paragraph 2.1.5 of the NPS. Decommissioning of the Sellafield site is carried out by the Nuclear Decommissioning Authority (NDA); no change to the NPS was considered necessary on these points.

CoRWM recommendations

What you said:

37. Respondents commented on the Committee on Radioactive Waste Management, (CoRWM) recommendations[12] for geological disposal made in 2006. Comments included that the recommendations were not up to date; that the Government had not considered the recommendations in their entirety; that CoRWM had recommended further research should be carried out on reducing uncertainties and alternatives, including an intensified programme of research into improving safety of geological disposal; and that the CoRWM recommendations only applied to the legacy waste, not to any waste from a future nuclear new build programme.

Government Response:

38. The NPS includes information in section 2.1 on the work and recommendations made by CoRWM.

39. CoRWM recommended that the UK progress disposal as soon as practicable. In line with CoRWM's recommendations, an intensified programme of research into safety aspects of geological disposal continues through the work of RWM and the NDA. Reference to this is made in paragraph 2.1.5 of the NPS.

[12] Between 2003 and 2006, a wide range of options for how to deal with the UK's higher activity radioactive waste was considered, from indefinite storage on or below the surface through to propelling the waste into space. This work was carried out by the independent CoRWM and involved extensive consultation with the public and expert groups. In July 2006, CoRWM recommended that geological disposal, coupled with safe and secure interim storage, was the best available approach for the long-term management of the UK's legacy of higher activity radioactive waste.

40. CoRWM's 2006 recommendations specified that they only applied to the legacy waste. In their 2011 annual report CoRWM stated that "wastes from new reactors should simply be managed in due course. CoRWM's scrutiny and advice role relates to the whole of the inventory and it does not need a separate position on new build working". The need case set out in chapter 3 of the NPS sets out the technical, ethical and legal need for a geological disposal facility, as well as the need to meet energy and climate change objectives. The Government considers that the need case encompasses both legacy and new build waste, and that the CoRWM recommendations are one of the elements that supports that need case.

Question 2: NPS Chapter 4 – Assessment Principles

Q2: Do the assessment criteria adequately address the principles that the developer, the Planning Inspectorate and the Secretary of State should take into account in an application for development consent? If not, what further information on the assessment criteria is required?

What we said:

41. Chapter 4 of the draft NPS sets out certain general principles in accordance with which development consent applications relating to geological disposal infrastructure are to be decided.

42. The scale of nationally significant infrastructure projects gives rise to the possibility of significant impacts on the environment, the economy and communities. It is therefore important for the applicant when assessing these impacts, and the Secretary of State when considering the application, to have a clear set of principles against which the application should be judged. Chapter 4 sets out assessment criteria for these principles, which relate to design, the environment, health, safety and security.

43. Chapter 4 also states that in considering any proposed development, the Examining Authority and the Secretary of State (as decision maker) should take into account:

- its potential benefits, including its contribution to meeting the need for geological disposal infrastructure, job creation and any long-term or wider benefits; and
- its potential adverse impacts, including any longer-term and cumulative adverse impacts[13], as well as any measures to avoid, reduce or compensate for any adverse impacts.

[13] This covers the operational period of the facility (or boreholes) up to and including closure.

44. Chapter 4 also refers to regulatory requirements associated with planning such as the Infrastructure Planning Environmental Impact Assessment (EIA) Regulations 2017[14] and the Habitats and Species Regulations 2017[15] It also outlines the permitting, licensing and consenting requirements of (amongst others), the Environmental Permitting Regulations 2016[16], the Nuclear Installations Act 1965[17] and the Planning Act 2008. Nuclear safety, security and post-closure environmental protection are all regulated by the Office for Nuclear Regulation and the Environment Agency; these specific issues are outside conventional land-use planning considerations.

What you said:

45. The main themes raised under question 2 included: the AoS and HRA; issues regarding the environment; and the assessment criteria.

AoS and HRA

You said:

46. Respondents commented on the AoS, HRA and associated Environmental Impact Assessment (EIA). Comments included assessment of alternative locations; willing community aspect not being part of the HRA; weight given to HRA, AoS and EIA in planning decisions and minimising environmental impact.

Government response:

47. Information on the AoS, HRA and EIA, how they are considered by the Secretary of State and the Examining Authority in the decision-making process and their part in minimising environmental impact can be found in sections 1.6, 1.7, 4.2, 4.3 and chapter 5 of the NPS. These sections have been revised according to comments made, where appropriate, noting that the NPS is non-site-specific and does not consider a willing community as a requirement to the grant of development consent (nor do the HRA or AoS take this into consideration). Applications for development consent for geological disposal infrastructure will be accompanied by site specific HRA and Environmental Statements assessing the impacts of the proposed development.

Environment

You said:

48. Respondents raised a number of issues regarding the environment. Comments included whether the effect of climate change has been adequately assessed;

[14] The Infrastructure Planning Environmental Impact Assessment (EIA) Regulations can be accessed online at: http://www.legislation.gov.uk/uksi/2017/572/contents/made
[15] The Conservation of Habitats and Species Regulations 2017 and the Offshore Marine Conservation (Natural Habitats, & c.) Regulations 2007 (as amended), available on line at: https://www.legislation.gov.uk/uksi/2017/1012/pdfs/uksi_20171012_en.pdf
[16] The Environmental Permitting Regulations 2016 can be accessed online at: http://www.legislation.gov.uk/uksi/2016/1154/contents/made
[17] The Nuclear Installations Act 1965 can be accessed online at: http://www.legislation.gov.uk/ukpga/1965/57/contents

requests for more information on long term environmental impacts; and for consideration of nuclear accidents.

Government response:

49. Clarification has been added into chapters 4 and 5 on the assessment of climate change and the need to consider the credible maximum climate change scenario. Clarification has been added to paragraph 1.5.3 on the environmental impacts which are considered as part of the development consent process and those which are considered through the staged regulation. Paragraphs 4.2.5 and 4.9.3 of the NPS describes the assessment of impacts of nuclear accidents.

Assessment criteria

You said:

50. A number of responses were received regarding the assessment criteria. Some respondents believed that the criteria are adequate and welcomed the assessment principles. Others required clarification on: how the criteria would be assessed, in particular with regards to the weighting of the impacts set out in chapter 5 of the NPS, the extent of 'good design' and the need to include environment as an assessment principle.

51. Concerns were raised over the level of importance being placed on security and safety of the facility, especially if the applicant is allowed to submit an application without precise information on the final design.

52. Comments were also received on the need for innovation to be demonstrated as part of the delivery of the geological disposal facility.

Government response:

53. As is set out in section 4.1 of the NPS, the assessment criteria set out the general principles against which any application for development consent for geological disposal infrastructure will be judged. The impacts set out in chapter 5 require further specific topics to be addressed by the applicant.

54. Clarification has been added into section 4.5 on the criteria for 'good design'. Section 4.2 discusses the Environmental Impact Assessment (EIA) and Environmental Statement that will accompany any application for development consent for geological disposal infrastructure – in particular it notes that the impacts identified in any environmental statement and their mitigation should be considered by the Secretary of State in their decision. It is therefore not considered necessary to add environmental impacts as an assessment principle in Table 1.

55. The safety and security of the geological disposal facility will be addressed continually by independent regulation. This starts before the planning process and continues far beyond the extent of the planning process, until the facility is operational and eventually closed. Information on staged regulation can be found in Annex A of the NPS.

56. The development consent process requires consideration of the application for geological disposal infrastructure that is made by the applicant. Geological disposal is inherently innovative, because there are currently minimal numbers of similar facilities elsewhere in the world. Even if, by the time a GDF is consented in the UK, a significant number of similar facilities are operational elsewhere, there will still be a significant degree of innovation inherent in the UK GDF, because its design will be bespoke to the specific geological environment in which it is to be constructed.

57. Innovation is not essential for meeting the objectives of the NPS or the Government's wider policy on nuclear waste disposal. If a GDF could be constructed in a way that was safe and effective, but for some reason could not be characterised as 'innovative', that is not a good reason for development consent to be refused. Our primary objective is safe and secure permanent disposal of the waste.

Regulation/Regulators

You said:

58. Comments were received on the regulators of any geological disposal infrastructure; their role in the planning process; their independence from the developer and government; and the ability to regulate into the future – given the long timescales involved.

59. Comments were received on the post-closure safety case, and whether it should be agreed at the start of the process, or more specifically at the point at which a development consent application is made for a geological disposal facility.

Government response:

60. Annex A has been added to the NPS to set out the difference in the involvement of the regulators during the planning process and through their own permitting and licensing regimes. This staged regulation process is separate to the planning process and fully independent of the work done by the Department for Business, Energy and Industrial Strategy with regards to the policy proposals for geological disposal infrastructure.

61. The regulators operate separately and independently from Government. The Office for Nuclear Regulation was established as a statutory Public Corporation in 2014. The Environment Agency is an executive non-departmental body, sponsored by the Department for Environment, Food & Rural Affairs (Defra). The Health and Safety Executive is a non-departmental public body, sponsored by the Department for Work & Pensions (DWP). The staged regulation considers the timescales associated with the lifetime of construction and operation of the geological disposal infrastructure and accounts for that in its operation.

62. The table in Annex A sets out the process of staged regulation and the interaction between regulation undertaken by the independent regulators, and the planning process. The processes set out in the table help the Examining Authority and Secretary of State to ensure that they can be satisfied with the level of information that is available at the time of application for development consent for geological

disposal infrastructure. No geological disposal facility will be able to be operated or closed without complying with the planning process, any requirements placed on the development consent, and the permitting and licensing that are required through the staged regulation.

Question 3: NPS Chapter 5 – Impacts

Q3: Does the draft NPS appropriately cover the impacts of geological disposal infrastructure and potential options to mitigate those impacts? Please provide reasons to support your answer.

What we said:

63. Chapter 5 of the draft NPS sets out the generic impacts to be considered by an applicant and the Examining Authority. Guidance is provided across the following topics:

- Air quality
- Noise
- Biodiversity and nature conservation
- Climatic factors including climate change and adaptation
- Cultural heritage including architectural and archaeological heritage
- Socio-economics, population and demographics
- Flood risk and coastal change
- Human health
- Landscape and visual impacts
- Land use
- Traffic and transport
- Waste management
- Water quality

64. For each impact, guidance is provided for the following three areas:

- the matters to be considered and presented by the applicant in an Environmental Statement;
- decision making by the Secretary of State;
- the proposed mitigation measures to be considered by the applicant.

65. In his decision-making the Secretary of State should balance the national need for geological disposal infrastructure (described in chapter 3) against the impacts of the development (described in chapter 5) of the NPS.

What you said:

66. The main themes raised under question 3 included: general impacts; air quality; noise; biodiversity and nature conservation; socio-economic; amenity; compulsory purchase of land and compensation; demographics; flood risk and coastal change; traffic and transport; and waste management.

Impacts

You said:

67. Some respondents felt that the impacts covered in the NPS were simply a list and were not covered in sufficient detail. Respondents also felt that negative impacts weren't addressed in the NPS. Respondents also wanted more information on the scale of weightings given to each impact, stating that some of the "tests" in the NPS were too 'black and white' and the temporary nature of some impacts needed to be taken into account.

Government response:

68. Chapter 5 of the NPS covers the potential impacts and provides guidance on each of these in the following three areas:

- the matters to be considered and presented by the applicant in an Environmental Statement to meet the requirements of the Infrastructure Planning Environmental Impact Assessment Regulations;
- decision making by the Secretary of State;
- the proposed mitigation measures to be considered by the applicant – the negative impacts are addressed by requiring applicants to propose mitigation measures.

69. The weighting of the impacts in chapter 5 has been amended to address the language for the various weightings to be applied to the impacts. The weighting notation of impacts is drawn from other planning documents, such as the National

Planning Policy Framework 2018[18] (NPPF). The tests of impacts are designed to be proportionate but to also bring greater certainty into decision making. Therefore, the tests are considered appropriate and similar tests are set out in other NPSs and are currently being used to consider DCO (development consent order) applications across a number of infrastructure projects.

70. Applicants are required to consider the nature of impacts, including how temporary or permanent they are, and address them accordingly.

Air quality

You said:

71. Respondents raised the comment that no site in the UK would avoid air pollution and health effects at the site of the development.

Government response:

72. Paragraph 5.2.4 of the NPS requires an assessment of air quality and health impacts, as part of the Environmental Statement that comprises part of any application for development consent for geological disposal infrastructure. This requires the applicant to identify measures to avoid, reduce or compensate for any impacts as appropriate. The assessment would be considered by the Examining Authority and Secretary of State when making a decision on any application.

Noise

You said:

73. Concerns were raised over the potential levels of noise associated with the development, such as increased transport movements, and construction noise over long timescales.

Government response:

74. Paragraph 5.3.4 of the NPS requires a noise assessment – looking at noise from different sources and over time periods as part of the Environmental Statement that accompanies any application for development consent for geological disposal infrastructure. The assessment would be considered by the Examining Authority and Secretary of State when making a decision on any application.

Biodiversity and nature conservation

You said:

75. Many responses were received regarding the impacts of development on the environment and conservation. Comments included wider sustainability benefits, adverse effects on the environment; the need for an adaptive management

[18] The National Planning Policy Framework 2018 can be accessed online at: https://www.gov.uk/government/publications/national-planning-policy-framework--2

approach; environmental net gain; conserving archaeological sites; selecting a development site which minimises harm; and that applications should demonstrate how environmental impacts have been considered.

Government response:

76. Chapter 5 of the NPS discusses impacts in detail including biodiversity, nature conservation, historical environment and climatic factors, including reference to environmental net gain. The NPS is non-site specific and the existing requirements in paragraph 5.4.7 are considered to balance the development need and mitigation of impacts. The impacts of geological disposal infrastructure are to be considered before development consent is granted; an assessment of these impacts will be provided in the Environmental Statement accompanying any development consent application. An increased level of detail on the impacts of the development is not considered necessary in the NPS.

Socio-economic

You said:

77. A number of comments were received relating to the socio-economic impacts of geological disposal infrastructure on the local area and on a national basis. This included impacts on the local workforce and the need to provide skills, jobs and adequate training; and also, the impacts on tourism in the area local to a site for a potential geological disposal facility.

Government response:

78. Section 5.7 of the NPS relates to socio-economic impacts. Whilst there is a requirement to consider these impacts, it is not appropriate to require specifics with regards to the provision of jobs, as these would be dependent on the site of the potential geological disposal facility or infrastructure. Clarification has been made within the NPS to the extent considered appropriate. The impacts on tourism are already considered within this section of the NPS.

Amenity

You said:

79. Comments were received on the need to include a separate section on residential amenity.

Government response:

80. Residential amenity is already covered in paragraph 5.7.6 of the NPS.

Compulsory purchase of land and compensation

You said:

81. Comments were received that the NPS should include information on a property compensation scheme at an early stage in the process, and also on the provision for compulsory purchase of land for development – in particular ensuring that a fair price was agreed.

Government response:

82. Whilst there is provision for compensation and compulsory purchase within the Planning Act 2008, Government does not consider it necessary to specify further details on this within the NPS. This does not preclude their use in any development consent order.

Demographic

You said:

83. Respondents felt that the NPS should show the impacts on specific demographic groups.

Government response:

84. Paragraph 5.7.3 of the NPS already requires that applicants should ensure that impacts on demographic groups should be considered. In addition to this, given the non-site-specific nature of the NPS, it is not possible to set out at this stage what the different impacts on different demographics would be.

Flood risk and coastal change

You said:

85. Respondents raised issues around flood risk expressing that: development should not be permitted if there is any concern of flooding; that the NPS should require applicants to carry out an assessment of a credible maximum climate change scenario; and there should be more focus flood risk management.

Government response:

86. Section 5.8 of the NPS covers the impact of flood risk and coastal change. Any application for development consent for geological disposal infrastructure would have to consider flood risk and coastal change, as set out in Section 5.8 of the NPS. A flood risk assessment would be included as part of the Environmental Statement within the application for development consent and would consider all forms of flood risk. In addition to this, the applicant will need to demonstrate to the independent regulators that flood risk has been considered in order to gain their respective licences and permits. Information has been added to paragraph 5.8.24 regarding the credible maximum climate change scenario assessment that will be carried out as part of the applicant's flood risk assessment.

Traffic and transport

You said:

87. Many respondents commented on transport including: transport of waste from storage to disposal; transport infrastructure and capacity; sourcing and transport of construction materials; the safety and security of transport; the provision of suitable transport routes to the proposed site for a geological disposal facility; and impacted local authority involvement in transport of waste.

Government response:

88. Section 5.12 outlines the assessment of traffic and transport that will need to be considered in any application for development consent for geological disposal infrastructure; this would include any provision of additional transport infrastructure. Clarification has been added as to the regulation by the Office for Nuclear Regulation of any transport of nuclear waste.

89. Regarding impacted local authorities, they will be consulted as part of the development consent process and invited to submit local impact reports, as stated in paragraph 1.2.3 of the NPS.

Question 4: AoS Chapter 5

Q4: Do you agree with the findings (of 'likely significant effects') from the Appraisal of Sustainability Report and the recommendations for enhancing the positive effects of the draft NPS? Please provide reasons to support your answer.

What we said:

90. The Planning Act 2008 requires that an AoS must be carried out before an NPS can be designated. The main purpose of this appraisal is to ensure that the likely environmental and socio-economic effects of the NPS, at a national level, are identified, described and evaluated. If potential significant adverse effects are identified, the AoS recommends options for avoiding or mitigating such effects. In this way, it helps to inform the preparation of the NPS and to support the NPS's contribution to the achievement of sustainable development.

91. The AoS incorporates an assessment which satisfies the requirements of the SEA Directive and the domestic implementing regulations (the Environmental Assessment of Plans and Programmes Regulations 2004). The SEA Directive aims for a high level of environmental protection and to promote sustainable development. It applies to certain plans that are likely to have significant effects on

the environment. The AoS also considers socio-economic effects in the same way as environmental effects are required to be assessed by the SEA Directive.

92. Wood (formerly Amec Foster Wheeler) has undertaken the AoS on behalf of BEIS by appraising the likely sustainability effects of implementing the draft NPS in delivering the Government's policy of geological disposal for higher activity radioactive waste, with a particular focus on:

- the proposed NPS objectives set out in section 1.12 of the draft NPS;
- the proposed assessment principles and guidance on impacts and general siting considerations contained within chapters 4 and 5 of the draft NPS;
- two reasonable alternatives to the draft NPS:
- - a non-site specific NPS that includes exclusionary criteria: such criteria may be included on the grounds of landscape, cultural and natural heritage and nature conservation (e.g. exclude geological disposal infrastructure development in areas such as National Parks);
- - no NPS: an option which is based on existing national planning policy to guide the development of any future geological disposal infrastructure for higher activity radioactive waste in England.

93. Overall, the draft NPS has been assessed as having long-term, permanent positive effects across all of the AoS objectives. No negative effects (significant or minor) have been identified, although there is the potential for positive effects associated with the implementation of the draft NPS to be enhanced.

94. At a later stage in the process the developer will be required to undertake assessment of the environmental effects of specific sites of proposed development.

What you said:

95. The main themes raised under question 4 included: the findings of the AoS; cultural heritage, land and townscape; and socio-economic.

AoS Findings

You said:

96. Respondents felt that the AoS should appraise both the positive and negative effects of the geological disposal facility, proposing mitigation measures as appropriate. They also considered that there were too many risks that had not been addressed

97. Comments were received on the potential for accidents during the transport of radioactive waste, and potential contamination, specifically noting the lack of scenario testing and assessment of potential accidents within the AoS.

98. Respondents agreed with the AoS findings with regards to working at depth but suggested that reference should be made to the long-term health effects that it may have.

99. Respondents also queried how the AoS could conclude positive cumulative effects against biodiversity without reference to the principle of environmental net gain.

100. Respondents disagreed with the findings of the AoS, with regards to the effects on national heritage assets and protected landscapes. In addition to this it was commented that the AoS did not take proper account of the impact on key sections of the economy, such as tourism, agriculture and food production in relation to designated areas such as National Parks, Areas of Outstanding Natural Beauty and World Heritage Sites. Comments were received noting that the AoS did not take into account future climate change scenarios.

Government response:

101. The purpose of the NPS is to provide the framework for planning decisions on geological disposal infrastructure and it is the proposed contents of this framework, including requirements for the applicant's assessment of impacts, requirements relating to decision-making by the Secretary of State and mitigation considerations, that have been the subject of the AoS. The AoS identifies, describes and assesses the likely significant socio-economic and environmental effects of using the NPS to deliver the Government's policy of implementing geological disposal for higher activity radioactive waste, as well as reasonable alternatives to the NPS.

102. As noted at paragraphs 1.5 and 4.7 of the AoS Report, the AoS is an appraisal of the draft NPS only and does not, therefore, consider site-specific proposals for geological disposal infrastructure. Notwithstanding this, in undertaking the AoS, consideration has been given to the likely activities and potential sources of effects associated with developing geological disposal infrastructure.

103. This review of impacts has helped determine the extent to which the policy contained in the NPS addresses potential adverse impacts and enhances benefits associated with the development of geological disposal infrastructure, in turn informing the identification of mitigation and enhancement measures (see the detailed assessment matrices contained in Appendix B[19] of the AoS Report). As detailed in section 4 of the AoS Report, the review contained in Appendix B has

[19] The AoS Appendix B can be accessed online at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/676407/New_Draft_Final_AoS_Report_Appendix_B-compressed.pdf

included full consideration of (inter alia) the RWM Geological Disposal Generic Environmental Assessment 2016[20].

104. In this context, the appraisal contained in the AoS Report has found that the implementation of the draft NPS is likely to have positive effects across all of the AoS objectives that have been used to help characterise the socio-economic and environmental effects of the draft NPS. This reflects the policy and guidance for the nationally significant infrastructure project developer, the Examining Authority and the Secretary of State contained in the draft NPS which will, alongside prevailing national planning policy, legislation and regulatory regimes, provide a positive framework that helps to ensure the potential adverse impacts of geological disposal infrastructure development are identified, appropriately assessed and, where necessary, avoided, minimised or mitigated. No change to the AoS is therefore considered necessary.

105. The impacts of specific geological disposal infrastructure will be assessed when an application for development consent is made. The application(s) will fully consider the impacts of construction, operation, decommissioning and closure of the facility at the location identified. The application will need to comply with the requirements of the NPS.

106. It is noted that paragraph 4.2.5 of the NPS states "Pursuant to the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, applicants should ensure that the expected effects deriving from the vulnerability of the geological disposal facility development to risks of major accidents and/or disasters are considered. Where these effects fall outside the remit of the Examining Authority, they will be considered by the independent regulators. The applicant should make reference to the safety case, in which consideration is given to major accidents and/or disasters, in the Environmental Statement".

107. With regards to working at depth, we consider that the suggested change would not materially affect the determination of significant effects identified in section 5 of the AoS Report and no change is therefore proposed.

108. The 25 Year Environment Plan to embed an 'environmental net gain' principle for development was published in January by the Department for Environment, Food and Rural Affairs, after the draft NPS and accompanying assessments were published by BEIS. BEIS has reviewed the current policy in the NPS to ensure it is aligned with the 'environmental net gain' principle. Updates to the NPS only further emphasise the positive effects already identified on this AoS objective. No change to the AoS is therefore considered necessary.

109. With regard to landscape, paragraph 5.1.42 of the AoS report states: "Potential impacts associated with the development of geological disposal infrastructure on landscape/seascape and visual amenity are likely to be similar to other major developments and could include the loss or fragmentation of, or damage to,

[20] The RWM Geological Disposal Generic Environmental Assessment 2016 can be accessed online at: https://rwm.nda.gov.uk/publication/geological-disposal-generic-environmental-assessment-report/

landscape features, changes in overall landscape character, visual intrusion through the introduction of new, contrasting elements into existing views, or the obstruction of existing views and light pollution associated with construction/operation works".

110. With regards to climate change scenarios, Appendix B of the AoS Report contains the detailed appraisal of the draft NPS and reasonable alternatives, and, consistent with the reporting requirements of the Environmental Assessment of Plans and Programmes Regulations 2004, includes the "relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme". Section B9 'Climatic Factors' of appendix B presents the baseline and evolution of the baseline concerning climate change. It references UK Climate Projections 2014 (UKCP09) maps and key findings and provides predictions on changes to climate within the UK based on a medium emission scenario with 90% probability.

Cultural heritage, land and townscape

You said:

111. A number of comments were received regarding the findings in the AoS on cultural heritage, land and townscape. In particular it was felt that in the absence of detailed site-specific information, the findings of the AoS were premature and inaccurate.

Government response:

112. Applications for development consent for geological disposal infrastructure will consider the impacts of construction, operation, decommissioning and closure of the facility at the location identified. It should be noted that the application will need to comply with the requirements of the NPS. In this context, the findings of the AoS with regard to cultural heritage and landscape and townscape reflect the policy contained in the draft NPS, which broadly requires applicants to assess the likely effects of geological disposal infrastructure and ensure that impacts in this regard are taken into account and mitigated.

113. The changes proposed in the response received would not materially affect the determination of significant effects identified in section 5 of the AoS Report or lead to any additional mitigation measures. Therefore, the Government does not consider any changes necessary.

Socio-economic

You said:

114. Respondents considered that the positive socio-economic effects associated with the geological disposal facility had not appropriately scored in the AoS and should be reappraised as a significant positive effect.

Government response:

115. Table 5.17 of the AoS Report contains a summary of the cumulative effects of the draft NPS against the AoS Objectives. Against AoS Objective 2 'People, Economy and Skills', it stated: "The construction and operation of geological disposal infrastructure will have positive economic impacts such as job creation, spend in the local economy and investment in the supply chain."

116. The AoS assessment of socio-economic effect has been done based on the RWM Geological Disposal Generic Socio-economic Assessment 2016[21]. This identifies both positive and negative impacts of geological disposal infrastructure. Indicative capital costs of the development need to be considered within the context of short, medium and long-term timeframes for the construction, operation and closure of the geological disposal facility. The Government considers the scoring within the AoS to be appropriate according to the evidence available.

117. It should be noted that the impacts of specific geological disposal infrastructure will be assessed when an application for development consent is made. The application(s) will fully consider the impacts of construction, operation, decommissioning and closure of the facility at the location identified. It should be noted that the application will need to comply with the requirements of the NPS.

Question 5: AoS Chapter 6

Q5: Do you agree with the conclusions of the Appraisal of Sustainability Report? If not, please explain why.

What you said:

118. The main themes raised under question 5 included: the AoS assessment of the NPS exclusionary criteria; and reasonable alternatives.

AoS assessment of NPS with exclusionary criteria

What you said:

119. Comments were received on the need for exclusionary criteria and disagreeing with the justification for the selection of the Government-preferred NPS option of having no exclusionary criteria.

[21] The RWM Geological Disposal Generic Socio-economic Assessment 2016 can be accessed online at: https://rwm.nda.gov.uk/publication/geological-disposal-generic-socio-economic-assessment-report/

Government response:

120. Whilst noting the possible beneficial effects of adopting exclusionary criteria, the Government has rejected this alternative; the reasons for this are set out at paragraphs 6.15 to 6.19 of the AoS Report. The reasons cited include: the potential for exclusionary criteria to restrict the Government's ability to ensure that a geological disposal facility is sited in a geologically suitable environment; the potential to site a geological disposal facility within an excluded area without causing an unacceptable environmental impact; and the potential for the adoption of exclusionary criteria to unduly exclude communities in these areas from the potential socio-economic benefits of hosting a geological disposal facility. It remains the Government's view that an NPS including exclusionary criteria is not appropriate.

Reasonable alternatives

You said:

121. Respondents considered that the AoS should review the alternative options to the policy of geological disposal, including alternatives that would be passively safe, above ground, monitorable and provide retrievable storage of existing waste. Requests were made for a comparison of nuclear new build waste against non-nuclear energy policy.

Government response:

122. Paragraphs 2.42 to 2.83 of the AoS Report set out information on the reasonable alternatives to the NPS, including reference to Government guidance. The alternatives considered in the AoS are alternatives to the plan (i.e. alternatives to having an NPS and the type of NPS), and not to the existing policy on geological disposal which the NPS is designed to implement (i.e. alternative methods of disposal of higher activity radioactive waste). In addition, the NPS does not cover the development of new nuclear power stations and therefore consideration of other forms of energy generation was not relevant.

Question 6: Habitats Regulations Assessment (HRA)

Q6: Do you agree with the findings from the Habitats Regulations Assessment Report for the draft NPS? Please provide reasons to support your answer.

What we said:

123. The NPS is also subject to the Habitats Directive and the relevant domestic regulations, the Conservation of Habitats and Species Regulations 2017. These require an assessment of whether there are likely to be any 'significant effects' on

any European site (sites protected because of their importance to European nature conservation) as a result of the implementation of the NPS (either on its own or in combination with other plans or projects) and, if so, whether these effects will result in any adverse impacts on that site's integrity.

124. Wood (formerly Amec Foster Wheeler) has undertaken this assessment on behalf of BEIS in accordance with the requirements of the Conservation of Habitats and Species Regulations 2017. The HRA considers the effects of the NPS on European sites and identifies and assesses alternative solutions to remove or compensate for those effects.

125. The appropriate assessment has determined that any European site in England (as well as some sites in Scotland or Wales) is, in theory, potentially vulnerable to adverse effects as a result of the development of geological disposal infrastructure. Consequently, regulation 107 of the Conservation of Habitats and Species Regulations 2017 requires an assessment of alternative solutions to determine whether there are any other feasible ways to deliver the overall objective of the plan (i.e. delivery of a geological disposal facility) which will be less damaging to the integrity of the European site(s) affected. Three principal alternative approaches for the NPS have been considered:

- no NPS;
- an NPS that is generic but includes criteria (for example, criteria based on excluding areas of specific environmental concern);
- a location-specific NPS that identifies candidate sites for the geological disposal facility.

126. These alternative approaches have been assessed, and it has been concluded that they are either not feasible at this stage; or would not provide any additional certainty that adverse effects on European sites can be avoided or reduced, compared to the current NPS. In these circumstances, the Conservation of Habitats and Species Regulations 2017 require a plan (such as the NPS) to take effect for imperative reasons of overriding public interest (IROPI). These reasons must relate to human health, public safety, and beneficial consequences of primary importance for the environment or (following an opinion from the European Commission) other imperative reasons of overriding public interest.

127. In the HRA Report, the Government has relied on IROPI, as the non-site-specific nature of the NPS makes it impossible to fully rule out adverse effects on European conservation sites. The IROPI test is satisfied as the geological disposal facility is of major importance to human health, public safety and the environment. However, at a later stage in the process, there will be a project level HRA at particular sites that will allow any impacts on specific protected sites to be properly assessed.

What you said:

128. The main theme raised under question 6 was the findings of the HRA.

HRA findings

You said:

129. Respondents disagreed with the conclusions of the HRA, seeing it as being biased towards having a geological disposal facility. It was felt that the HRA should have considered the effect of potential accidents and pollution of radioactive waste on the environment and habitats.

130. Respondents also noted the importance of having a site-specific HRA at the point of application for development consent for geological disposal infrastructure.

Government response:

131. The draft NPS has been subject to an HRA, and stages in the HRA process have been followed.

132. The HRA of the draft NPS does not remove the need for project-level HRAs or prejudice the scope or outcomes of these assessments. The designation of the NPS for IROPI does not mean that these reasons will necessarily extend to all developments arising from the NPS, although the information provided in the NPS and HRA may have some relevance.

133. The impacts of specific geological disposal infrastructure will be assessed when an application for development consent is made. The application(s) will fully consider the impacts of construction, operation, decommissioning and closure of the facility at the location identified. It should be noted that the application will need to comply with the requirements of the NPS.

134. With regard to the concerns expressed about the risk of accidents, it is noted that paragraph 4.2.5 of the NPS states “Pursuant to the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, applicants should ensure that the expected effects deriving from the vulnerability of the geological disposal facility development to risks of major accidents and/or disasters are considered. Where these effects fall outside the remit of the Examining Authority, they will be considered by the independent regulators. The applicant should make reference to the safety case, in which consideration is given to major accidents and/or disasters in the Environmental Statement.”

Question 7: Other

Q7: Do you have any other comments on the draft NPS and the accompanying documents (Appraisal of Sustainability, Habitats Regulations Assessment)?

What we said:

135. In question seven, we welcomed any other comments on the draft NPS and the accompanying documents, the AoS and HRA.

What you said:

136. Responses that do not relate to any of consultation questions 1-6 have been grouped and set out here under question 7. The main themes raised by the responses included: deep investigatory boreholes; delay to development; links to the energy suite of NPSs; exclusionary criteria; timelines and timing; the multi-barrier approach; planning; transboundary effect; current interim waste storage; land use and safeguarding; associated development; exiting the European Union; private companies and conflicts of interest; and international development of geological disposal infrastructure.

Deep investigatory boreholes

You said:

137. Comments were received on the types of development consent applications that may be acceptable for the deep investigatory boreholes. This included requests for clarification on the potential numbers that could be considered in a single application.

Government response:

138. Clarification has been added to paragraph 1.5.3 of the NPS on the different types of application that might be acceptable for development consent for the deep investigatory boreholes.

Delay to development

You said:

139. Some respondents wanted more information on the economic implications of delay to the development of a geological disposal facility.

Government response:

140. The economic implications of potential delay to development of geological disposal are not a matter for consideration in any application for development consent for geological disposal infrastructure. No changes to the NPS are considered necessary.

Links to the energy suite of NPSs

You said:

141. Respondents questioned if there was linkage between the suite of NPSs for energy infrastructure[22] (EN-1 – EN-6) and this NPS for geological disposal infrastructure. Particular questions were raised about the emerging draft NPS for new nuclear power stations.

Government response:

142. The NPS notes in section 1.10 that it is standalone and sits outside the suite of NPSs for energy infrastructure (EN-1 – EN-6). The draft NPS for new nuclear power stations deployable before the end of 2035 remains under development, but it is expected that such an NPS would be similarly separate from the NPS for geological disposal infrastructure.

Exclusionary criteria

You said:

143. A number of comments were received on exclusionary criteria, and the conflict between 'need' for a geological disposal facility and whether that should override the conservation of sites and habitats. The designation of landscapes, heritage sites, national parks and habitats was a common theme raised, and the level of protection that they were afforded by the wording of the NPS. Comparisons were made between the exclusion of shale gas extraction in National Parks.

144. Respondents also raised the fact that the AoS identifies that there should be exclusionary criteria, and this recommendation has not been followed in the drafting of the NPS.

Government response:

145. Existing legislation already provides a high level of protection to designated areas and ensures development is appropriate and proportionate. Development consent will only be granted in these areas in exceptional circumstances and if it is in the public interest to do so. Our approach of not having exclusionary criteria is consistent with the approach in the NPPF and all other non-site specific NPSs (covering ports, railways, roads, hazardous waste etc.) of not excluding all development in designated areas such as National Parks.

146. The planning process also provides protection for designated areas as described in chapter 5 of the NPS. These matters will be examined at the site-specific stage when both the potential impacts and the effectiveness of their mitigation can best be judged. We need to find a site for a geological disposal facility which is safe and

[22] The suite of NPSs for energy infrastructure (EN-1 – EN-6) can be accessed online at: https://www.gov.uk/government/publications/national-policy-statements-for-energy-infrastructure

secure. Shale gas extraction is a different type of development, and not comparable to geological disposal infrastructure.

147. Whilst noting the possible beneficial effects of adopting exclusionary criteria, the Government has rejected this alternative; the reasons for this are set out at paragraphs 6.15 to 6.19 of the AoS Report (and are summarised at paragraph [119] above).

Timelines and timing

You said:

148. Respondents commented on the timeframes of geological disposal. Comments included: requests for more information on the timeframes for geological disposal; that timeframes make it impossible to claim it is a permanent disposal method; that the impacts cannot be fully assessed due to uncertainty; and that the NPS should identify the sequencing of infrastructure provision.

Government response:

149. The NPS already sets some information on the timescales for geological disposal. At paragraph 1.5.4. it states that a full site characterisation programme, comprising a number of deep investigative boreholes in a number of tranches, is expected to take in the order of 10 to 15 years to complete. In addition, at paragraph 1.5.2 it states that the operational period of a geological disposal facility is estimated to be approximately 150 years.

150. Further information on the timeframes for the programme of geological disposal are set out in Implementing Geological Disposal – Working with Communities[23]. However, that further information is specific to the policy on Working with Communities set out in the document, and the Working with Communities process is separate from the NPS and the development consent process.

151. Ultimately, the NPS is intended to provide a framework for assessing applications for development consent for geological disposal infrastructure, as and when they are received.

Multi-barrier approach

You said:

152. Respondents requested further explanation of the multiple-barrier approach and how the engineered barriers work with geology to contain and isolate the radioactivity of the waste over significant lengths of time. The risk of earthquakes was also raised as a concern, as well as the suitability of the anticipated cannister material.

[23] Implementing Geological Disposal – Working with Communities, Available online at: https://www.gov.uk/government/publications/implementing-geological-disposal-working-with-communities-long-term-management-of-higher-activity-radioactive-waste

Government response:

153. Section 2.2 of the NPS includes information on the multi-barrier approach which prevents harmful levels of radioactivity reaching the surface. In suitable rock formations deep underground, the geological disposal facility would be protected from significant climate or landform changes at the surface and any movement from earthquakes is much reduced.

154. The appropriate material for the cannisters has not yet been decided and will be decided by the developer during the design phase of the development in agreement with the independent regulators.

Planning

You said:

155. Comments were received on the planning process: that it should be clearer and explained to communities and the general public, especially opportunities to participate; that there was a lack of information on what certain aspects of the planning process involved, for example the local impact reports and how local authorities or parish councils might be able to be involved in the process; and the extent of the Planning Act 2008 setting out geological disposal infrastructure.

Government response:

156. Information on the development consent process is set out and maintained in advice notes produced by the Planning Inspectorate, as well as in instructional videos on their website[24]. The NPS now includes reference to these Planning Inspectorate resources. The process allows for public representation in response to the applications made on both a local and national level, and the Examining Authority will give those representations due regard. Information on local impact reports can also be found on the Planning Inspectorate website.

157. The NPS itself is a document designed to guide the developer, Examining Authority and Secretary of State. Terminology within the document has been defined where it is not clear, and there is a glossary giving the definitions of particular terms.

158. The Planning Act 2008 was amended in 2015 to include geological disposal infrastructure. The Planning Act 2008, and any amendments to that legislation, is outside the scope of this consultation. Transboundary effects

You said:

159. Respondents raised concerns over the assessment of transboundary effects of any geological disposal infrastructure development. Whilst there was agreement that the NPS itself would have no significant transboundary effects, the concerns were

[24] The planning process for development consent is set out on the Planning Inspectorate website which can be accessed online at: https://infrastructure.planninginspectorate.gov.uk/application-process/the-process/

around the development of geological disposal infrastructure and the need to adequately consider neighbouring countries and further afield.

Government response:

160. Although the AoS showed no transboundary effects, all European countries were as a matter of courtesy informed of the consultation on the NPS. In addition, any application for development consent for geological disposal infrastructure will need to consider the likely transboundary effects (if any) and at that stage any transboundary consultation obligations resulting from this will need to be complied with.

Current interim waste storage

You said:

161. Respondents commented on interim storage of the UK's radioactive waste inventory. Comments included questions on lifespan and greater detail on current interim storage facilities.

Government response:

162. Information on interim storage can be found in paragraphs 3.2.4 and 3.2.5 of the NPS. Further information on interim storage is not considered necessary for the purpose of the NPS.

Land use and safeguarding

You said:

163. Concerns were raised by respondents regarding the large subterranean footprint of any geological disposal facility development, and the need to ensure that the surface above that footprint was safeguarded against future inappropriate development, such as drilling or mining. In addition to this, comments were raised over proximity to civil or military aviation facilities, and the need to have due regard to them.

Government response:

164. The Planning Act 2008 includes provision allowing the Secretary of State in a DCO to create new rights over land, such as restrictive covenants to control land use. As the NPS is not site-specific, it is not considered appropriate or practically useful to seek to include specific provision in the NPS for development near a civil or military aviation facility. The proximity and its implications would be considered through the Environmental Assessment that accompanies any application for development consent.

Associated development

You said:

165. Comments were received noting that there is no reference to the scope for a waste packaging or encapsulation plant to be developed alongside a geological disposal facility.

Government response:

166. The definition of geological disposal infrastructure within the Planning Act 2008 covers deep investigatory boreholes and a geological disposal facility itself. As such the NPS covers those two categories. Should the applicant wish to include additional development in a DCO under this NPS, it would need to demonstrate that such development fell within the scope of the definitions of 'associated development' or 'related housing development' that are set out in the Planning Act 2008[25], and the Examining Authority and Secretary of State would assess an application for such development accordingly.

Exiting the European Union

You said:

167. A number of comments were received on the status of European legislation upon exiting the European Union.

Government response:

168. Paragraphs 1.2.12 and 1.2.13 of the NPS already provide information on the status of the NPS upon exiting the European Union. The NPS will be subject to future review, as is required by the Planning Act 2008, and this would ensure that future changes to legislation would be addressed.

Private companies and conflicts of interest

You said:

169. Concern was raised regarding private companies' involvement in the development of geological disposal. Comments were also received on the desire for financial gain by any applicant for geological disposal infrastructure. It was felt that any environmental assessments may be biased according to the desire for financial gain.

Government response:

170. Applications for development consent for geological disposal infrastructure will be assessed by the Examining Authority and Secretary of State before development consent is granted, regardless of whether the application comes from a private or public body. In addition, geological disposal would be regulated and permitted by

[25] See section 115 of the Planning Act 2008

the independent regulators (the Office for Nuclear Regulation and the Environment Agency).

International development of Geological disposal infrastructure

You said:

171. Respondents raised concerns over challenges and incidents on international programmes for geological disposal infrastructure.

Government response:

172. The international consensus is that geological disposal represents the best known means of disposal for higher activity radioactive waste. Geological disposal infrastructure in England will be subject to rigorous controls and regulation through the planning process, and the independent regulation.

Government Response to campaign from members of the German public

What we said: UK Informed other States

173. The AoS determined that there were no transboundary effects. As a result, the Secretary of State concluded that there was no legal requirement to consult with other European Economic Area (EEA) states. However, as a matter of courtesy, on the 25th January 2018 the UK Government informed other EEA states of the public consultation on the Draft NPS for Geological Disposal Infrastructure in the UK.

What you said: German public campaign response

174. We received a campaign response from 360 individual members of the German Public. The campaign response requested a Strategic Environmental Audit to be carried out in Germany and commented that the German Federal Environment Ministry must make a request under Article 3.7 of the Espoo Convention on Environmental Impact in a Transboundary Context; that the AoS report does not consider radiation protection; and that the Swedish court decision regarding copper cannister corrosion should be considered.

Our response

175. A letter was sent to all who submitted a campaign response on 18 July 2018. The letter explained that, as required by the Planning Act 2008, the UK Government carried out an AoS of the draft NPS for Geological Disposal Infrastructure. The AoS found that implementation of the NPS would have no likely significant effects on the environment of other EEA states, so the Secretary of State therefore concluded that

the transboundary consultation requirements under Article 7 of the SEA Directive did not apply.

Government response to topics outside the scope of the consultation

176. Many responses fell outside of the scope of the consultation. Respondents raised issues across all questions that did not directly relate to the subject matter of the consultation, i.e. the draft NPS for geological disposal infrastructure.

Inventory of Radioactive Waste

You said:

177. A number of respondents commented on the inventory. In particular they raised the need for a summary of the inventory; current distribution of the inventory; clarification on volumes and types of waste in the inventory; and the radioactivity levels associated with the inventory. Others commented on reprocessing and reprocessing deadlines.

Government response:

178. The NPS provides a summary of the inventory for disposal in section 2.3 and makes reference to the Inventory for Geological Disposal[26] which provides further detail. The NPS at paragraph 2.3.5 requires that any application for development consent for a geological disposal facility must state clearly the nature and amount of waste expected to be disposed of in the facility. The current distribution of the UK's radioactive waste inventory is not relevant to the NPS. Reprocessing of spent nuclear fuel in the UK is coming to an end. Spent fuel will no longer be reprocessed, but will instead be managed and disposed of.

Nuclear Energy

You said:

179. Many respondents raised positions and opinions on nuclear energy; new nuclear build; the need for new nuclear energy; alternatives to nuclear energy and the Government's position on nuclear energy.

Government response:

180. Government continues to believe nuclear has an important role to play in the UK's energy future as we transition to a low-carbon economy. An overarching National Policy Statement for Energy ("EN-1"), in conjunction with five technology-specific

[26] See the RWM website for the most up to date information. The Inventory for Geological Disposal 2016 is available online at: https://www.gov.uk/government/publications/2016-inventory-for-geological-disposal

NPSs including one on Nuclear Power ("EN-6"), was published in 2011[27]. EN-6, taken together with EN-1, provides the framework for development consent decisions on applications for new nuclear power stations at sites which are capable of deployment by the end of 2025. The Government is currently working towards designating a new National Policy Statement for nuclear power stations with single reactor electricity generating capacity over 1 gigawatt at sites capable of deployment between 2026 and 2035. This new NPS will set out the Government's policy on such new nuclear power stations and will be subject to consultation and Parliamentary scrutiny before it is designated.

181. The policy of nuclear energy and new nuclear build falls outside the scope of the NPS for Geological Disposal Infrastructure. Government policy on that matter is set out elsewhere, including in EN-1 and EN-6 referred to above. The NPS for Geological Disposal Infrastructure does not purport to set out formally, or to change, Government policy on nuclear energy or nuclear new build, nor would it be appropriate for it to do so. Instead, its focus is on infrastructure for the disposal of radioactive waste. For that reason, no changes to the NPS are considered necessary to address these specific points on nuclear energy policy.

The Siting Process, including the National Geological Screening Exercise

You said:

182. A number of comments were received on the process for selecting a site for any potential geological disposal facility. This included comments that any geological disposal facility should be on a brownfield site and kept out of the green belt; and consideration of geology as a primary factor in the siting process - including the National Geological Screening exercise. In addition to this, there were requests for clarification of the number of geological disposal facilities required.

Government response:

183. The process for selecting a site for a geological disposal facility is outside the scope for the NPS. Any developer would need to demonstrate the suitability of a site and the impacts on that site as part of their application for development consent. Implementing Geological Disposal – Working with Communities sets out the siting process that RWM, the Government's preferred delivery body for a geological disposal facility, will undertake. This is separate to the NPS and the development consent process. The NPS applies to any developer who wishes to apply for development consent for geological disposal infrastructure.

184. The National Geological Screening exercise has been undertaken by RWM as part of their preparation for the siting process. As such, it is not linked to the NPS and it is not considered necessary or appropriate to make reference to it in the NPS.

[27] https://www.gov.uk/government/publications/national-policy-statements-for-energy-infrastructure

185. Paragraphs 2.2.10 and 2.2.11 of the NPS set out information on the number of geological disposal facilities.

186. The Government favours an approach where one geological disposal facility will provide the capacity needed for the disposal of the inventory. The development of one site for geological disposal of the entire inventory would allow for the sharing of surface facilities, access tunnels, construction support and security provisions, leading to major cost savings, and lower environmental impacts.

187. However, it may not be practical to dispose of all the waste in one geological disposal facility, and so it cannot be ruled out that more than one such facility will be required. For this reason, the Secretary of State should not refuse to grant development consent for a geological disposal facility only because the proposed facility would have insufficient capacity for the entire inventory.

Working with Communities policy

You said:

188. A number of respondents commented on the Working with Communities policy proposals (that were consulted on in parallel to the draft NPS), and the need to clarify the link between the two policies. Specifically, it was requested that the need for community consent was set out clearly in the NPS.

189. In addition to this, there were comments raised on the need to adequately involve the community in the development consent process. Respondents also cited the need to ensure that community and local authority opinions were taken into account when considering any applications for development consent for geological disposal infrastructure.

190. Comments were raised on the need for a close working relationship between BEIS and the Ministry of Housing, Communities and Local Government (MHCLG) and with the Defra and clarification on their respective roles and responsibilities.

Government response:

191. As discussed in paragraphs 12 and 13 of the introduction of this Government response, the Working with Communities policy, which is set out in Implementing Geological Disposal – Working with Communities, is separate to the NPS. The NPS applies to any developer who wishes to apply for development consent for geological disposal infrastructure, whilst the Working with Communities policy applies solely to RWM. This is clarified in section 2.1.6 of the NPS.

192. The Planning Act 2008 and its development consent process places an onus on any developer to engage with the local community through pre-application discussions – this would include the relevant local authorities. The process also allows any member of the public to make relevant representations on any applications for development consent, and requests Local Impact Reports from the relevant local authorities.

193. Radioactive waste management is a policy area that falls within the remit of BEIS; however, in developing policies such as the NPS and Working with Communities, BEIS has collaborated and consulted with MHCLG and Defra where appropriate.

Appendix A – List of organisations that responded to our consultation exercise

- Allerdale Borough Council
- Beckermet with Thornhill Parish Council
- The National Farmers' Union of England and Wales
- Copeland Borough Council
- EDF
- Environment Agency
- Environmental Law Implementation Group at the Irish Environmental Network
- Health and Safety Executive
- Historic Environment Scotland
- Hydrock NMC Ltd
- Lake District National Park Authority
- National Infrastructure Planning Association
- Natural Resources Wales
- Nuclear Free Local Authorities
- Nuclear Liabilities Fund
- Royal Town Planning Institute
- Scottish Natural Heritage
- South Oxfordshire District Council & Vale and White Horse District Council
- Natural England
- Blackwater Against New Nuclear Group
- Committee on Radioactive Waste Management
- Cumbria County Council
- Friends of the Earth Nuclear Network
- Essex County Council
- Friends of the Lake District
- Historic England
- Horizon Nuclear Power
- Institution of Mechanical Engineers
- Leicestershire County Council
- All-Party Parliamentary Group for Nuclear Energy
- Newry, Mourne and Down District Council
- Nuclear Industry Association
- Nuclear Legacy Advisory Forum
- Scottish Environment Protection Agency
- Shut down Sizewell campaign
- West Cumbria & north lakes friends of the earth

Appendix A – List of organisations that responded to our consultation exercise

- Suffolk Coastal Friends of the Earth
- The Coal Authority
- Canal & River Trust
- The Nuclear Institute
- Unite the Union
- West Cumbria Sites Stakeholder Group
- West Somerset Council
- People campaigning against Hinkley
- The Campaign for National Parks
- The Cumbria Trust
- The National Trust
- The Wildlife Trusts
- Stop Hinkley
- West Mersea Town Council
- Woodland Trust
- Campaign to Protect Rural England

This publication is available from: www.gov.uk/government/consultations/national-policy-statement-for-geological-disposal-infrastructure

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