Draft National Policy Statement for Hazardous Waste:

Appraisal of Sustainability Non Technical Summary

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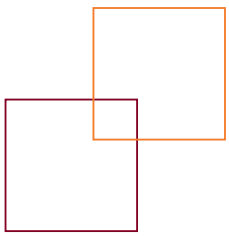
Annex 4



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Appraisal of Sustainability for Hazardous Waste National Policy Statement Non Technical Summary

1. Background

1.1.1 The Planning Act 2008 introduces a new planning system for determining Nationally Significant Infrastructure Projects (NSIPs). The Act also sees the introduction of an Infrastructure Planning Commission (IPC) who will make decisions on Nationally Significant Infrastructure Projects (NSIPs). To support their decision-making, the IPC will refer to the government's National Policy Statements (NPSs) which provide long-term strategic direction.

1.1.2 Under the Act, the Department for Environment, Food and Rural Affairs (Defra) is responsible for preparing the Hazardous Waste NPS which will set out a statement of government policy on nationally significant hazardous waste infrastructure for plants whose main purpose is the final disposal or recovery of hazardous waste.

1.1.3 Defra is also responsible for undertaking an Appraisal of Sustainability (AoS) of the Hazardous Waste NPS. The AoS incorporates the requirements of European Directive 2001/42/EC on the assessment of effects of certain plans and programmes on the environment (the "Strategic Environmental Assessment (SEA) Directive").

1.1.4 This AoS also comprises a Habitats Regulations Assessment (HRA) in accordance with Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the "Habitats Directive") and an Equality Impact Assessment (EqIA) in accordance with relevant Equalities legislation; the HRA and EqIA have been prepared as standalone documents however, where appropriate the findings of these assessments have been incorporated into the AoS.

1.1.5 This Non Technical Summary provides;

- An overview of the Hazardous Waste NPS and its main objectives (Section 2);
- An outline of the Appraisal of Sustainability process (Section 3);
- A summary of the relevant Policies, Plans, Programmes and Sustainability Objectives; Baseline Conditions (Section 4), including the evolution of the baseline without implementation of the NPS (Section 4.2) and limitations of knowledge (Section 4.3); and Key Sustainability Issues (Section 4.4)
- The Appraisal of Sustainability Framework (Section 5);
- A summary of the approach to the Appraisal of Sustainability (Section 6);
- A summary of the assessment of the NPS strategic alternatives (Section 7);
- A summary of the appraisal of the NPS objectives against the AoS objectives (Section 8);
- A summary of the Appraisal of the NPS and Key Findings (Section 9);
- A summary of the Mitigation Measures to prevent, reduce and as fully as possible offset any significant adverse effects of implementing the NPS (Section 10);
- A summary of Monitoring requirements (Section 11);
- A summary of the purpose of Appraisal of Sustainability Report (Section 12); and
- Next Steps (Section 13).

2. The Hazardous Waste National Policy Statement

2.1.1 The draft Hazardous Waste NPS is based on the policy and principles set out in the Strategy for Hazardous Waste Management in England (Defra, 2010). It provides policy for hazardous waste infrastructure in England only. However, it is being developed with due regard to policy in Wales, Scotland and Northern Ireland, and with regard to cross border and transboundary waste transfer to and from England.

2.1.2 Thresholds for infrastructure where planning applications will be considered by the IPC are set out in Article 30 of the Planning Act 2008. For hazardous waste infrastructure, this includes:

- **Construction** of a facility in England whose main purpose is the final disposal or recovery of hazardous waste and where the facility is expected to have a capacity of more than 100,000 tonnes per year in the case of the disposal of hazardous waste by landfill or in a deep storage facility, and in any other case, more than 30,000 tonnes per year.
- **Alteration** of a hazardous waste facility in England whose main purpose is the final disposal or recovery of hazardous waste and where the capacity of the facility is expected to increase by more than 100,000 tonnes per year in the case of the disposal of hazardous waste by landfill or in a deep storage facility, and the capacity is expected to increase by more than 30,000 tonnes per year for any other type of facility.

2.1.3 The NPS is set out in the following Parts:

- **Part 1: Introduction –** this section sets out the legal requirement for the NPS, and its role and scope.
- **Part 2: Government Policy Context –** this section sets out a summary of Government Policy and Government Objectives for hazardous waste management, including a consideration of the policy alternatives "Central Planning of Infrastructure", "Government prescription on appropriate technologies", and "Identification of Suitable and Unsuitable Locations for Infrastructure".
- **Part 3: Need for Large Scale Hazardous Waste Infrastructure** – this section sets out a summary of the need for large scale infrastructure, including details on volumes of hazardous waste generated in England. It also sets out what types of NSIP will be required, as follows: Waste Electrical and Electronic Equipment (WEEE) Treatment Facilities; Oil Regeneration Plant; Facilities to treat Air Pollution Control Residues; Thermal Desorption Facilities; Bioremediation/Soil Washing Facilities; Ship Recycling Facilities; and Hazardous Waste Landfill Facilities.
- **Part 4: Assessment Principles –** this section of the NPS sets out assessment principles. It also includes a section on specific considerations for each type of NSIP identified in Part 3 of the NPS.
- **Part 5: Generic Impacts** – this section sets out potential generic impacts of new hazardous waste infrastructure, and proposed measures that Applicants and the IPC should take into consideration in the development of such infrastructure

The objectives of the Hazardous Waste NPS are listed in Table 1 below.

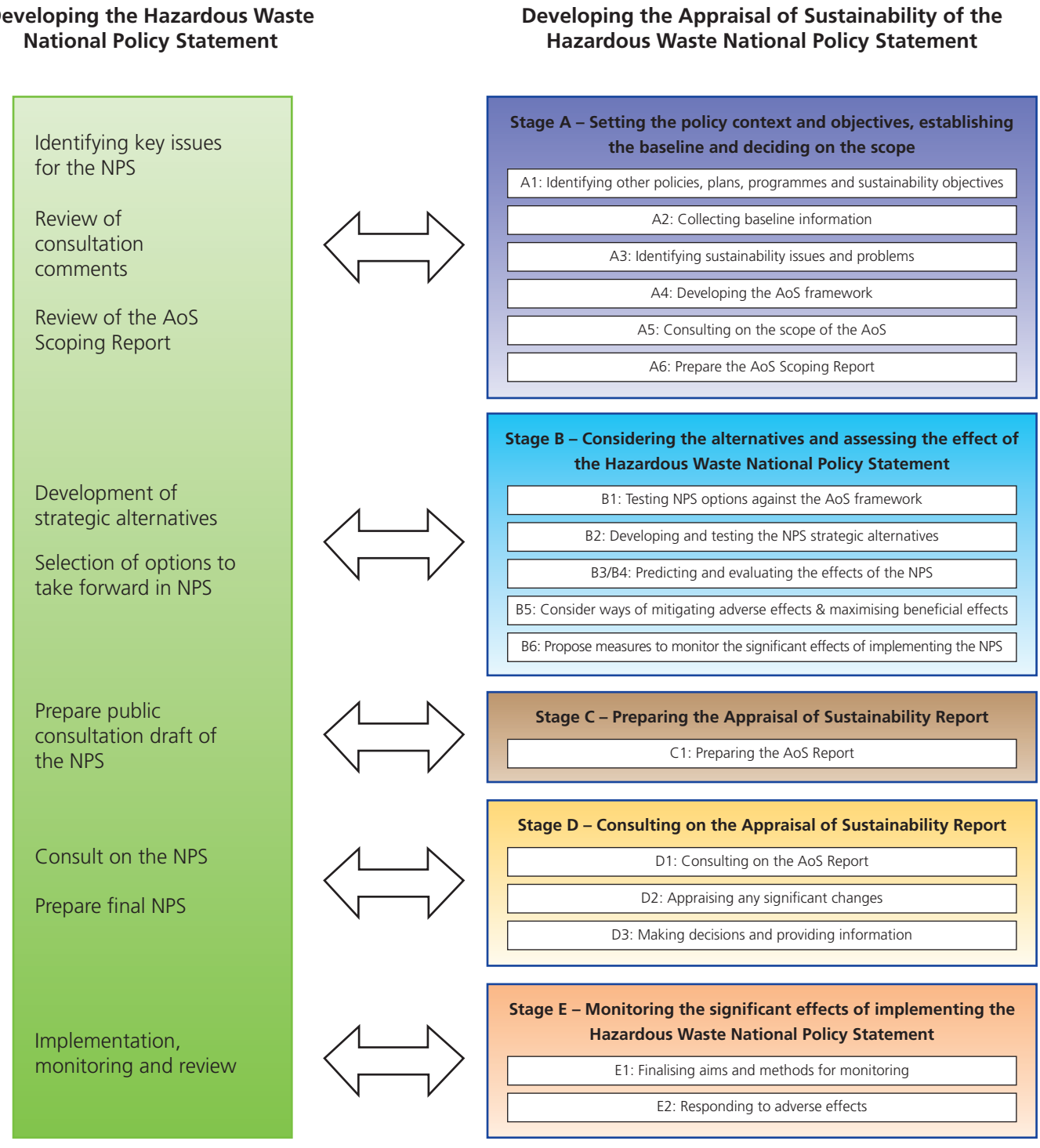
Table 1: Hazardous Waste NPS Objectives

NPS Objective	Description
NPS1	To protect human health and the environment by producing less hazardous waste, using it as a resource where possible, only disposing of it as a last resort and ensuring that the natural environment and human health are not adversely affected by the transportation or treatment of hazardous waste.
NPS2	To provide a robust hazardous waste infrastructure network, which applies the waste hierarchy and drives the management of hazardous waste up that hierarchy.
NPS3	To provide an integrated an adequate network of installations to allow (UK) self-sufficiency in hazardous waste, except where hazardous waste is produced in too small a quantity for separate facilities in each Member State.
NPS4	To deliver the hazardous waste infrastructure needed to meet the objectives of the Hazardous Waste Management Strategy and in a way that encourages the development of sustainable communities.
NPS5	To deliver infrastructure that minimizes greenhouse gas emissions and maximises opportunities for climate change adaptation and resilience.
NPS6	In providing new infrastructure to look for opportunities to support existing and create new business opportunities and to address any skills shortages or gaps associated with the planning, design, construction and operation of hazardous waste management facilities.

3. Appraisal of Sustainability Process

3.1.1 The AoS of the Hazardous Waste NPS has been undertaken based on the legislative requirements of the SEA Directive, as expanded to include social and economic considerations. An overview of the key stages of the AoS process is provided in Figure 1.

Figure 1: The relationship between the AoS and the Hazardous Waste NPS



Source: PB Adapted

3.1.2 Stage A, the Scoping Stage, was undertaken between September 2009 and January 2010, and resulted in the production of a Scoping Report. During the scoping phase, a 5 week statutory consultation period was held, during which a Preliminary Report was issued for comment by key consultees and a Workshop was held to verify, update and augment baseline data, discuss the overall scope and key issues from the perspective of the Consultees, examine how the key sustainability issues should be addressed in the appraisal, and obtain further inputs into the development of the AoS framework. The results of this consultation are provided in the Scoping Report presented as Appendix A to the AoS Report.

3.1.3 From February to November 2010, the options were developed and refined and the effects of the draft Hazardous Waste NPS appraised (Stage B). The AoS Report was prepared during this time (Stage C) and is now issued for consultation alongside the draft Hazardous Waste NPS (Stage D). Following the consultation period, an AoS Statement will be issued and published alongside the designated Hazardous Waste NPS. The AoS Statement is intended to provide information on:

- The AoS / SEA process undertaken to date;
- How the AoS has been taken into account in the NPS;
- An overview of the responses to the public consultation on the draft Hazardous Waste NPS;
- Changes made to the draft Hazardous Waste NPS on the basis of the consultation process;
- Any clarification relating to the AoS;
- Reasons for adopting the Hazardous Waste NPS among the reasonable alternatives considered; and
- Confirmation of the final arrangements for monitoring of residual significant effects and uncertainties.
- Stage E, the final stage will involve setting the measures for monitoring significant impacts.

3.1.4 It should be noted that the AoS provides a qualitative assessment of the Hazardous Waste NPS, in its draft format. It has been undertaken at a strategic level and therefore is necessarily broad in its assessment, conclusions and recommendations.

4. Relevant Policies, Plans, Programmes and Sustainability Objectives, Baseline Conditions, Data Limitations and Key Sustainability Issues

4.1 Relevant Plans, Programmes, Policies and Sustainability Objectives

4.1.1 A review of relevant international, European, national and regional plans, policies, programmes, and sustainability objectives of relevance to the Hazardous Waste NPS that have the potential to influence its development were identified as part of the AoS process. Key plans and a summary of their relevance are provided in Table 2.

Table 2: Summary of Relevant Plans, Policies, Programmes and Sustainability Objectives

Topic	Key Plans, Policies and Programmes
Hazardous Waste Management	Basel Convention on the control of transboundary movements of hazardous waste and their disposal.
	Waste Framework Directive 2008/98/EC
	Landfill Directive 1999/31/EC
	Waste Electrical and Electronic Equipment Directives (WEEE) 2002/96/EC and 2003/108/EC
	The Hazardous Waste (England and Wales) Regulations 2005 (SI 894) as amended 2009 (SI 507)
	The Landfill (England and Wales) Regulations 2002 (SI 1559) as amended
	Waste Strategy for England (Defra, 2007)
	Strategy for Hazardous Waste Management in England (Defra, 2010)
Resources and Raw Materials	Towards a Thematic Strategy on the Sustainable Use of Natural Resources COM (2003)572 final
	An energy policy for Europe COM (2007) 1 final
	EC Directive on Electricity Production from Renewable Energy Sources COM 2001/77/EC
	Water Framework Directive 2000/60/EC
	The Water Environment (England and Wales) Regulations 2003 (SI 3242)
Climate Change Adaptation and Resilience	Kyoto Protocol 1997
	EU Sixth Environmental Action Plan 2002 – 2012
	UK Climate Change Act (2008)
	Planning Policy Statement: Planning and Climate Change Supplement to PPS1 (DCLG, 2007)
	Climate Change Adaptation Strategy 2008-11 (Environment Agency, 2005)
Air Quality and Emissions	4th Air Quality Daughter Directive (2004/107/EC)
	The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (Defra, 2007)
	PPS 23: Planning and Pollution Control (DCLG, 2004)
	Clean Air Act 1993
	The Environment Act 1995
Traffic and Transport	10 Year Transport Plan (DfT, 2000)
	PPG13: Transport (DCLG, 2001)
	Delivering a Sustainable Transport System (DfT, 2008)

Topic	Key Plans, Policies and Programmes
Biodiversity, Flora and Fauna	United Nations (UN) Convention on Biological Diversity
	OSPAR Biological Diversity and Ecosystems Strategy
	Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat 1971
	Conservation of Habitats and Species Regulations 2010
	Directive on the Conservation of European Wildlife and of Wild Fauna and Flora 92/43/EEC (The EC Habitats Directive)
	The EC Birds Directive 79/409/EEC
	Wildlife & Countryside Act 1981 (as amended)
Water Quality and Resources	Groundwater Directive (80/68/EEC)
	Water Framework Directive 2000/60/EC
	The Water Act 2003
	The Environmental Protection Act 1990
	Environment Act 1995
Flood Risk	Directive on the Assessment and Management of Flood Risks 2007/60/EC
	Water Framework Directive 2000/60/EC
	Draft Floods and Water Bill
	Planning Policy Statement 25: Development and Flood Risk (DCLG, 2006)
Soils and Geodiversity	EU proposal for a Soil Framework Directive (COM(2006) 232) (EU, 2006)
	Environmental Damage (Prevention and Remediation) Regulations 2009 (SI 153)
	The Environment Act 1995
	Wildlife & Countryside Act 1981 (as amended)
Coastal Change and the Marine Environment	The International Convention for the Prevention of Marine Pollution from Ships (MARPOL) 1973, as amended
	EU Marine Strategy Framework Directive 2008/56
	Coast Protection Act 1949
	Marine and Coastal Access Act 2009
	PPG20 Coastal Planning (1992)
	Marine Policy Statement (due 2010)
Landscape and Visual	The World Heritage Committee's 'Operational Guidelines for the Implementation of the World Heritage Convention'
	European Landscape Convention (EU, 2000)
	The Hedgerows Regulations 1997
	AONB Management Plans for England, Wales and Northern Ireland (for a list of AONBs see Section 4)
	Planning Policy Statement 7: Sustainable Development in Rural Areas

Topic	Key Plans, Policies and Programmes
Historic Environment	UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage 1972 European Convention on the Protection of the Archaeological Heritage 1992 Listed Building and Conservation Areas Act 1990 Ancient Monuments and Archaeological Areas Act 1979 Planning Policy Guidance 15: Planning and Historic Environment (DCLG, 1994) Planning Policy Guidance 16: Archaeology and Planning (DCLG, 1990)
Population	World Summit on Sustainable Development, Johannesburg, September 2002 UK Government Sustainable Development Strategy: Securing the Future 2005 and UK's Shared Framework for Sustainable Development, One Future – Different Paths (Defra, 2005) Sustainable Communities: Building for the Future (DCLG, 2003)
Health and Well Being	Health impact assessment in strategic environmental assessment (WHO, 2001) The European Environment and Health Action Plan 2004 – 2010
Equality	The UN Millennium Declaration and Millennium Development Goals 2002 UN Universal Declaration of Human Rights The Equality Act 2006 The Disability Discrimination Act 1995
Noise	The Environmental Noise Directive 2002/49/EC PPG24 Planning and Noise (DCLG, 1994) The Environment Act 1995
Spatial Planning and Land Use	Directive 2001/42/EC of the European Parliament and the Council on the Assessment of the Effects of Certain Plans and Programmes on the Environment (the "Strategic Environmental Assessment Directive") Council Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment (the "EIA Directive"), as amended Town and Country Planning Act 1990 The Planning Act 2008
Military and Civil Aviation	The Civil Aviation Authority (Air Navigation) Directions 2001 (incorporating Variation Direction 2004)
Economy	The European Spatial Development Perspective (EC, 1999) EU European Employment Strategy – EES (EC, 2005) Planning Policy Guidance 4: Industrial, Commercial Development and Small Firms (DCLG, 1992) Rural Strategy (Defra, 2004)
Employment and Business	Directive 2000/78/EC establishing a general framework for equal treatment in employment and occupation The Employment Act 2008
Education and Training	Directive 2000/78/EC establishing a general framework for equal treatment in employment and occupation The Egan Review: Skills for Sustainable Communities (April 2004)

Environmental plans, programmes and policies

4.1.2 The NPS should provide guidance on the sustainable location of new hazardous waste management facilities to ensure the protection and conservation of water resources, biodiversity, flora and fauna, soils and geodiversity resources, cultural heritage assets, landscape. It should also avoid compromising existing coastal processes and / or causing damage to the marine environment and take full account in planning and design of the cumulative effects of developments on flood risk, and predicted future changes to climatic conditions. It should consider the transport requirement of proposals and encourage the suitable location of management facilities in terms of proximity to both the source of waste as well as the onward reception facility, and emissions to the air.

Social plans, programmes and policies

4.1.3 The NPS should provide opportunities to ensure that the population, and especially the most vulnerable or deprived communities, are not adversely affected by the hazardous waste management infrastructure proposals. It should also provide opportunities to satisfy equality objectives both in terms of employment and ensuring that certain groups of the population are not disproportionately affected by the proposals and ensure that people across society are treated with respect for their human rights, and set legal procedures to prohibit discrimination.

Economic plans, programmes and policies

4.1.4 The NPS should facilitate sustainable economic growth in area, such as recycling and new technologies. It should also promote opportunities for employment and business and opportunities for education and training related to hazardous waste management infrastructure.

4.2 Baseline conditions

4.2.1 The baseline information collected has focused on setting general baseline conditions and, where possible, more specific existing and future baseline trends in relation to hazardous waste management facilities and their potential impacts on environment, social and economic resources and receptors. There is little detailed information readily available on each individual type of hazardous waste management facility and their potential environmental, social and economic impacts. Assumptions made during the assessment are based on professional judgement due to the lack of quantitative data.

4.2.2 Detailed baseline information is provided in Section 4 of the AoS Report.

4.3 Data limitations

4.3.1 The baseline information collected has focused on setting general baseline conditions and, where possible, more specific existing and future baseline trends in relation to hazardous waste management facilities and their potential impacts on environment, social and economic resources and receptors. There is little detailed information readily available on each individual type of hazardous waste management facility and their potential environmental, social and economic impacts. Therefore, in many instances the baseline information covers generic issues in relation to different types of hazardous waste management facilities.

4.3.2 In addition, it is recognised that the NPS will not provide details on the potential location of hazardous waste facilities. Therefore the identification of baseline and key sustainability issues is generic in nature, such that whilst types of features that might be affected can be identified, the identification of location-specific issues, including cross border and transboundary issues, has not been undertaken.

4.3.3 Where data was not readily available via the internet, data was requested via Defra and the statutory consultees during the scoping phase consultation period.

4.4 Sustainability issues

4.4.1 Through the review of relevant plans, policies, programmes and sustainability objectives and the collation of baseline information, a range of key sustainability issues that could be addressed by or affect the content of the Hazardous Waste NPS were identified.

4.4.2 The topics that could potentially be affected by the NPS are listed in Table 4 below.

Table 4: List of sustainability topics

Environmental Topics	Social Topics	Economic Topics
Waste Management	Population	Economy
Resources and Raw Materials	Health and Well Being	Employment and Business
Climate Change Adaptation and Resilience	Equality	Education and Training
Air Quality and Emissions	Noise	
Traffic and Transport	Spatial Planning and Land Use	
Biodiversity, Flora and Fauna	Military and Civil Aviation	
Water Quality and Resources		
Flood Risk		
Soils and Geodiversity		
Coastal Change and the Marine Environment		
Landscape and Visual		
Historic Environment		

4.5 Evolution of the current baseline without the implementation of the NPS

4.5.1 In the absence of the proposed Hazardous Waste NPS the primary drivers of change in the hazardous waste sector will continue to be the quantity of hazardous waste produced and the policies relating to how that waste is to be managed. The key existing policy relating to hazardous waste management is the Strategy for Hazardous Waste Management in England (Defra, March 2010), which highlights the importance of the Waste Hierarchy. This should see the proportion of hazardous waste going to landfill reduced.

4.5.2 In terms of the development of hazardous waste management facilities, the primary drivers will remain the quantity of hazardous waste being created and therefore the demand for waste management facilities, and the existing planning system which will guide development to suitable locations. Hazardous waste companies would still apply for development consent for new nationally significant infrastructure to the IPC. However, in the absence of specific guidance on the application of hazardous waste policy to development consents that are provided by the NPS, the IPC would have few benchmarks against which to consider the application.

4.5.3 Overall, therefore, future trends in hazardous waste production should continue in a similar manner to current trends, however, the potential impacts associated with hazardous waste management facilities may be less fully understood without the development of the NPS, as the NPS will encourage the consideration of environmental, social and economic impacts prior to the development of such infrastructure. The evolution of the baseline without the NPS may therefore not be as positive in environmental, social and economic terms given that there is less certainty that facilities higher up the waste hierarchy will be developed, and less certainty that those that are developed will be developed in an environmentally, socially and economically sustainable manner.

4.5.4 The AoS Report provides more detail on the baseline environment, existing trends and sustainability issues, and the relevance of these issues to the Hazardous Waste NPS.

5. The AoS Framework

5.1.1 An AoS Framework was developed during the scoping phase, which comprises a set of objectives which have been used to assess the sustainability of the Hazardous Waste NPS. The AoS framework developed reflects the key sustainability issues identified in relation to the Hazardous Waste NPS, following the review of baseline information and relevant plans, policies, programmes and sustainability objectives.

5.1.2 Each objective is accompanied by a set of appraisal criteria and is intended to support the testing of the NPS against the key overarching sustainability objectives. The AoS framework is presented in Table 5 below. The full criteria are set out in Section 5 of the AoS Report.

Table 5: The AoS Framework

AoS Theme	AoS Objective	SEA Topic
Waste Management	AoS 1: To encourage the reduction, reclamation, reuse and recycling of hazardous waste, and to promote environmentally sound management throughout facility life cycles	Population, Human Health
Resources and Raw Materials	AoS 2: To specify and use environmentally and socially responsible materials and resources, and to encourage resource efficiency	Material Assets
Climate Change Adaptation and Resilience	AoS 3: To minimise the carbon and other greenhouse gas emissions associated with the design, construction and operation of hazardous waste management facilities and to maximise opportunities for climate change adaptation and resilience	Climatic Factors
Air Quality and Emissions	AoS 4: To optimise positive and minimise adverse impacts on air quality	Air, Climatic Factors
Traffic and Transport	AoS 5: To minimise the negative impacts of traffic and ensure that transport schemes associated with hazardous waste management facilities are environmentally sustainable and beneficial to the wider community	Population, Climatic Factors, Human Health
Biodiversity, Flora and Fauna	AoS 6: To protect and enhance biodiversity, flora and fauna	Biodiversity, Fauna, Flora
Water Quality and Resources	AoS 7: To optimise the opportunities for efficient water use, reuse and recycling and to ensure that natural water sources are protected, conserved and enhanced	Water
Flood Risk	AoS 8: To minimise flood risks associated with the construction and operation of hazardous waste management facilities, and to ensure that facilities remain safe and operational throughout their lifetime by being able to respond to climate change	Climatic Factors, Water
Soils and Geodiversity	AoS 9: To remediate, protect and enhance the natural and healthy state of soils and geodiversity	Soil
Coastal Change and the Marine Environment	AoS 10: To take account of coastal processes and protect the natural and historic marine environment	Climatic Factors, Water, Biodiversity; Fauna; Flora; Cultural heritage including architectural and archaeological heritage

Landscape	AoS 11: To minimise adverse impacts on protected and other important landscapes	Landscape, Cultural heritage including architectural and archaeological heritage
Historic Environment	AoS 12: To protect and conserve heritage assets in a manner appropriate and proportionate to their significance	Cultural heritage including architectural and archaeological heritage, Landscape
Population	AoS 13: To use population demographics to ensure that hazardous waste management facilities optimise benefits to and encourage the development of sustainable communities	Population
Health and Well-Being	AoS 14: To reduce health inequalities and to improve the health and well-being of both operatives and wider communities during the construction, operation and legacy of hazardous waste management facilities	Human Health, Population
Equality	AoS 15: To involve, communicate and consult effectively with diverse stakeholders and communities, and ensure that the principles of equality and inclusivity are upheld	Population, Human Health
Noise	AoS 16: To minimise the adverse impacts of noise on both the environment and society	Population
Spatial Planning and Land Use	AoS 17: To ensure that hazardous waste management facilities do not adversely impact or detract from existing or proposed land uses or access to green space	Population
Military and Civil Aviation	AoS 18: To protect and conserve the integrity and security of aviation and military material and infrastructural assets	Material Assets
Economy	AoS 19: To ensure that hazardous waste management facilities benefit the local, regional and/or national economy, and that the planning, design, construction, operation and legacy phases are subject to whole-life costing	Material Assets, Population
Employment and Business	AoS 20: To support existing and create new employment and business opportunities locally, regionally and nationally	Material Assets, Population
Education and Training	AoS 21: To educate, train and address skills shortages or gaps in the planning, design, construction and operation of hazardous waste management facilities	Material Assets, Population

5.1.3 For each of the AoS objectives against which the NPS has been appraised, the significance of the likely effects was predicted according to the following categories:

Table 6: Key for performance of the NPS against AoS framework objectives

Scale of performance against AoS objective	Details
++	**Significant positive effect** NPS policy actively encouraged in its current form as it would resolve an existing sustainability issue / maximise sustainability opportunities.
+	**Minor positive effect** NPS policy would have a positive effect on sustainability issues identified.
0	**Neutral effect** NPS policy would have no effect.
-	**Minor negative effect** NPS policy would need some changes in order to have a positive effect on sustainability issues identified.
--	**Significant negative effect** NPS policy would exacerbate existing sustainability issues and cannot be suitably mitigated. Consider exclusion of policy.
?	**Uncertain** Unknown effect.

6. Summary of the Approach to the Appraisal of Sustainability

6.1 Approach to the Appraisal of Sustainability

6.1.1 The first step in the appraisal was to consider reasonable alternatives to the proposed NPS. A summary of the results of this appraisal is set out in Section 7.

6.1.2 The next step was to assess the NPS policy objectives against the AoS framework objectives for compatibility. The NPS objectives were amended by taking on board recommendations made through the AoS process so that they more effectively illustrate how the NPS would not only deliver the Government's policy for hazardous waste but to also do so in the most sustainable manner. A summary of the results of this appraisal is set out in Section 8.

6.1.3 Following this, an appraisal of the NPS policy – including the generic impacts and the different types of hazardous waste facilities identified in the NPS – against the AoS framework objectives was undertaken. The Hazardous Waste NPS was appraised three times during its development. This iterative process allowed the incorporation of mitigation measures into the NPS to avoid, prevent and reduce potential negative effects of its implementation and enhance positive effects. Only the appraisal of the final version of the draft Hazardous Waste NPS is set out in the AoS Report. A summary of the results of this appraisal is set out in Section 9.

7. Summary of the Assessment of NPS Strategic Alternatives

7.1 Introduction

7.1.1 Defra and the AoS team identified the key strategic policy areas in the draft Hazardous Waste NPS that have reasonable and relevant alternatives. Alternatives were developed following the hierarchy set out in the SEA Directive, as follows:

- Need or demand: is it necessary?
- Mode or process: how should it be done?
- Location: where should it go?
- Timing and Detailed implementation

7.1.2 It was considered that the question 'timing and detailed implementation' would be assessed at the project level of any new infrastructure brought forward, and was therefore considered outside the remit for this AoS.

7.1.3 Following the SEA hierarchy, consideration was initially given to strategic alternatives to meeting the need for new infrastructure. In particular, consideration was given to whether more could be done to prevent hazardous waste arising and whether greater reuse and recycling would obviate the need for new hazardous waste infrastructure.

7.1.4 As explained in the Strategy for Hazardous Waste Management in England and in Part 3 of the NPS, hazardous waste continues to arise despite measures aimed at waste prevention. The prevention of waste is required as a first priority under the revised Waste Framework Directive. However, a number of initiatives associated with the better management of waste such as changes in the classification of hazardous waste and the increasing impact of producer responsibility schemes, which require the separate collection of certain types of waste are leading to increases in the amounts of waste needing to be managed as "hazardous". In addition, moving the management of hazardous waste up the waste hierarchy as required by the Waste Framework Directive will increase the need for treatment and recycling facilities at a higher point on the hierarchy.

7.1.5 The possibility of relaxing the self-sufficiency requirements so that not all of the need for hazardous waste infrastructure needs to be provided for in this country is not an option because, as explained in Part 3 of the NPS, the revised Waste Framework Directive requires that sufficient disposal facilities be required in each Member State to match expected arisings of all hazardous waste except those arising in very small quantities. Hazardous waste may be exported to other EU and other OECD countries for recovery, but it is a matter of policy as well as a legal requirement that England should also have in place a range of facilities and plant for the recovery of hazardous waste to help meet the country's requirements. Relaxing the self-sufficiency requirements is not a reasonable alternative for waste recovery either.

7.1.6 It was therefore concluded that there is no reasonable alternative to meeting the need for new hazardous waste infrastructure.

7.1.7 Consideration was then given as to whether there was a need for the NPS or whether a Business as Usual alternative would achieve the overall objective which the NPS is designed to help achieve, namely to enable the development of the necessary new large hazardous waste infrastructure.

7.1.8 On the basis therefore that new large hazardous waste infrastructure would need to be provided in the future, consideration was then given to the question of whether there was a need for large scale infrastructure (above the threshold in the Planning Act for nationally significant infrastructure). A reasonable alternative was considered of meeting the need for new hazardous waste infrastructure only through a larger number of smaller (below threshold) facilities.

7.1.9 The consideration of alternatives then moved on to questions as to how the infrastructure should be developed and the role of the NPS in directing this. It is established

Government policy that the market is best placed to provide the infrastructure needed. Nevertheless, the following alternatives have been appraised in order to explore the extent to which it would be beneficial for the NPS to provide direction or prescription about the types of technology to be used or about potentially suitable or unsuitable locations. The following questions were therefore developed:

- Would greater benefits be achieved through a centrally planned NPS? Or should the NPS allow new developments to be market-led?
- Are there preferred technologies or those with higher environmental, social and economic standards that could be applied to secure optimum environmental outcomes? Or should the NPS allow developers to determine the most appropriate type of technology?
- What would be the preferred approach to the location of new infrastructure? i.e. should the NPS identify specific locations for schemes, or should it be generic?

7.1.10 The final strategic alternatives developed for consideration in this AoS are shown in Table 7. For each of the pairs of strategic alternatives, potential effects have been appraised against the overarching AoS sustainability themes (environmental, social, economic). These three broad themes cover the 21 objectives set out in Table 5.

Table 7: Strategic alternatives considered

Strategic Alternatives	SEA Hierarchy		
	Need – do we need the Hazardous Waste NPS?	**Process – What approach should we take to the development of large scale hazardous waste infrastructure**	**Location – where should new hazardous waste infrastructure be built?**
Baseline	Hazardous Waste NPS in line with Policy versus Business As Usual		
Strategic alternatives to meeting need with large scale infrastructure	Relying on a large number of smaller facilities		
Strategic alternatives to the provision of large scale infrastructure		Central Planning of infrastructure Government prescription on appropriate technology	Identification of Suitable or Unsuitable Locations

7.2 Assumptions and limitations to the assessment of alternatives

7.2.1 Assumptions made during the assessment of alternatives were based on professional judgement due to the lack of quantitative data. Assumptions made are generic in nature, with the appraisal being proportionate to the level of information available for each alternative.

7.2.2 In the consideration of the effects of each alternative, in all cases it has been assumed that any new development would have to comply with existing environmental legislation, regardless of whether or not an NPS is developed. However, in taking this into consideration it has been assumed that such requirements would only be addressed by the Developer at the project stage, for the purposes of planning permissions, rather than provide for a more strategic consideration of such impacts. It also assumes that the Developer and/or the IPC would only comply with the minimum requirement of such legislation.

7.2.3 In the appraisal of the alternative to rely on a large number of smaller facilities, an assessment has been undertaken without specific consideration of any one type of hazardous waste infrastructure (i.e. not comparing a small WEEE facility with a large ship dismantling facility). Due to the need to provide several smaller facilities instead of one large facility, for the same volume of waste, the additional cumulative effects of smaller facilities were taken into account in the assessment.

7.3 Outline of the reasons for selecting the alternatives

Hazardous Waste NPS in line with Policy versus Business As Usual

7.3.2 Both the NPS in line with Policy and the Business As Usual alternatives would take forward the application of the revised Waste Framework Directive 2008/98/EC (WFD) and in particular the requirements that apply to hazardous waste in relation to the waste hierarchy. Similarly, both promote the need for new infrastructure to drive the management of hazardous waste up that hierarchy. Both options would still require compliance with existing relevant legislation at the project level.

7.3.3 However, an NPS allows for specific guidance and criteria to be established to steer Applicants towards proposals that are sustainable and minimise adverse impacts from the outset of the development, i.e. prior to project level. It will also provide greater certainty for the industry, the public and the regulators on the government's intentions for the conditions in which new infrastructure may be allowed.

7.3.4 Without the NPS, Applicants could still apply to the IPC for development consent but the IPC would make a recommendation to the Secretary of State instead of making the decision themselves. This process is likely to be more time consuming, the outcome less certain and the basis for decisions more open to challenge.

7.3.5 As such, it is concluded that the preferred alternative is a Hazardous Waste NPS.

Relying on a Large Number of Smaller Facilities

7.3.6 Overall, the development of one or several large facilities performs slightly more positively against environmental, social and economic objectives than small facilities taking into account the measures proposed in the NPS for large facilities.

7.3.7 As any benefits realised will depend on the type of infrastructure and technologies available for that type of infrastructure, the preferred option will be dependent on the infrastructure being brought forward.

7.3.8 As such, the preferred option may be a mixture of small and large facilities.

Central Planning of Infrastructure

7.3.9 A centrally planned policy could allow for achievement of a number of the sustainability objectives as it would set out exactly what should or should not be done. However, such a policy would require significant knowledge for informed decisions to be made at the policy level so as to contribute effectively to the sustainability objectives; it would also stifle innovation and thus reduce the potential for future improvements to infrastructure that could contribute positively to the objectives.

7.3.10 A market-led approach, together with appropriate mitigation and enhancement measures (e.g. siting criteria), implemented through the planning system and the NPS, is unlikely to lead to significantly greater adverse sustainability impacts when compared with a centrally planned policy. It is considered that industry is probably best placed to make decisions on new infrastructure that will contribute to the economic objectives; with social and environmental objectives achieved through appropriate control criteria within the NPS to direct development appropriately.

7.3.11 As such, it is concluded that the preferred alternative is a market-led approach to the provision of Hazardous Waste infrastructure with appropriate mitigation measures included within the NPS.

Government Prescription on Appropriate Technology

7.3.12 A prescribed technology alternative allows consideration to be given to the relative merits of the technologies concerned, with particular emphasis upon their potential environmental, social and economic impacts, at the policy planning stage, and for these issues to be taken into consideration when identifying the preferred technologies. Certain impacts may, however, be difficult to discern at this strategic stage due to a lack of detailed information. Furthermore, such an approach would not allow for innovation or application of new technologies that could perform more favourably against the AoS objectives than existing technologies. This could be an issue given the timescale over which the NPS is likely to apply, and the potential for advances to be made in the sustainability of design solutions over this period.

7.3.13 Conversely, a non-prescribed alternative approach, together with appropriate recommendation of broad categories of infrastructure and mitigation measures, would allow the more sustainable development of infrastructure. This is therefore the preferred alternative.

Identification of Suitable or Unsuitable Locations

7.3.14 Both the alternative of identifying suitable/unsuitable locations and the alternative of not identifying locations are considered to have, on balance, positive effects when compared against the AoS objectives. A policy of identifying sites may allow environmental and social constraints to be considered at a strategic level, and thus contribute to avoiding significant adverse impacts from the outset. A policy of not identifying sites could result in opportunities to reduce significant adverse effects at the strategic level being missed. However, ultimately in most cases this is unlikely to occur due to the measures set out in the NPS, and due to the fact that any potential impacts would still be addressed at the planning and consents (project) stage. In addition, a policy of site identification assumes that there is sufficient knowledge at the policy level to be able to implement such a policy effectively.

7.3.15 Given the level of detail available at policy level it is considered that the preferred option is a policy of not identifying sites, provided that the policy sets out clear principles, locational factors and other site selection criteria to be taken into account in order to reduce adverse impacts and maximise potential environmental, social and economic opportunities and that, where relevant, exclusionary criteria are also set out.

8. Testing the NPS Objectives Against the AoS Framework

8.1 Testing the NPS objectives against the AoS framework

8.1.1 A compatibility analysis between the Hazardous Waste NPS objectives and the AoS objectives was undertaken to identify both potential synergies and inconsistencies, and to ensure that the fundamental aims of the NPS and AoS were not different. A matrix was used to assess whether each NPS objective is broadly compatible or not compatible with AoS objectives, or whether there was uncertainty over compatibility or no relationship between the objectives. Overall, the NPS objectives were broadly compatible with the AoS objectives. There were no objectives assessed as being incompatible.

9. Summary of the Appraisal of the NPS, Key Findings and Mitigation Measures

9.1 Introduction

9.1.1 An appraisal of the draft NPS policy was undertaken against the AoS framework and was recorded in a set of appraisal tables (Annex II of the AoS Report). As Part 4 of the Hazardous Waste NPS sets out both assessment principles/generic impacts and a consideration of different types of hazardous waste facilities, both were appraised against the AoS framework objectives, using the significance criteria set out in Table 5.

9.1.2 During the development of the NPS, a number of recommendations were made to improve the environmental sustainability performance of the NPS and these were incorporated into the text of the NPS. The results of the appraisal of the policy set out in the Hazardous Waste NPS against the AoS framework objectives therefore generally found that the NPS contributed positively to the achievement of most environmental objectives when compared to the baseline, and that its contribution was minor positive compared to the baseline.

9.1.3 Where further recommendations for mitigation were identified, these have been recorded. For those impacts where slightly negative or uncertain impacts with regards to performance against an environmental objective remained, recommendations for mitigation have been made. In addition, enhancement measures were made where considered appropriate.

9.2 Key Findings

9.2.1 The scope of generic impacts identified in the NPS is considered adequate to reflect the range of potential effects that could occur. The appraisal did not identify any additional broad categories of impacts that should be included.

9.2.2 The appraisal of the draft NPS policy was an iterative process, with the appraisal process resulting in a number of suggestions and recommendations by the AoS team that have been incorporated into the current version of the NPS. In this manner, the NPS has been continually influenced by the AoS process.

9.2.3 A summary of the outcome of this appraisal is provided below and in Table 8.

Key to Table 8:

++	Significant positive impact	+	Minor positive impact	0	Neutral impact	-	Minor negative impact	--	Significant negative impact	?	Uncertain

Table 8: Summary of the AoS of the NPS (overleaf)

AoS Objective	NPS policy	NPS Infrastructure						
		WEEE	Oil regeneration plant	Treatment plant for APC residues	Thermal desorption facilities	Bioremediation / Soil washing facilities	Ship recycling facilities	Hazardous waste Landfill
AoS 1: Waste Management	+	+	+	+	+	+	-	+
AoS 2: Resources and Raw Materials	+	+	0	0	0	0	0	0
AoS 3: Climate Change Adaptation and Resilience	+	+	+	+	+	+	+	-
AoS 4: Air Quality and Emissions	+/-	+	+	+	+	+	+	-
AoS 5: Traffic and Transport	+	+	+	+	+	+	+	-
AoS 6: Biodiversity, Flora and Fauna	+	+	+	+	+	+	-	+
AoS 7: Water Quality and Resources	+	+	-	+	+	+	+	+
AoS 8: Flood Risk	+	?	?	+	+	+	?	+
AoS 9: Soils and Geodiversity	+	+	+	+	+	++	+	+
AoS 10: Coastal Change and the Marine Environment	+	+	?	+	+	+	?	+
AoS 11: Landscape	+	+	+	+	+	+	+	-
AoS 12: Historic Environment	+	+	+	+	+	+	+	+
AoS 13: Population	+/-	0	0	0	+	+	0	+
AoS 14: Health and Well Being	+/-	+	+	+	+	+	+	+
AoS 15: Equality	0/+	0	0	0	0	0	0	0
AoS 16: Noise	+/-	+	+	+	+	+	+	+
AoS 17: Spatial Planning and Land Use	+/-	+	+	+	+	+	+	+
AoS 18: Military and Civil Aviation	+/?	+	+	+	+	+	+	0
AoS 19: Economy	+	0	0	0	0	0	+	0
AoS 20: Employment and Business	+	0	0	0	0	0	0	0
AoS 21: Education and Training	+	0	0	0	0	0	0	0

9.2.4 Overall, the potential sustainability impacts of the draft NPS are broadly minor positive when compared to the baseline. This reflects the guidance that the NPS provides to ensure that potential impacts (beneficial and adverse) of any application for Hazardous Waste infrastructure failing within the requirements of the Planning Act 2008 are taken into account by the IPC, taking on board previous recommendations by the AoS team to enhance the performance of the NPS.

9.2.5 The negative effects identified in the AoS relate to minor negative effects that, should the recommended wording in the AoS be incorporated into the NPS, would result in a neutral or minor positive impact on the AoS objectives when compared to the baseline.

9.2.6 The minor negative effects of the NPS are related to: Air Quality and Emissions; Population; Health and Well Being; Noise; and Spatial Planning and Land Use. These reflect inherent uncertainties around scheme location, types of infrastructure and methods of construction. It is also reflects the size of such facilities, which will inherently be large, and therefore result in some form of footprint impact, and issues related to potential co-location of certain types of infrastructure (which may result in a location in the flood plain or closer to urban conurbations with associated impacts on populations).

9.2.7 In addition, the following minor negative or uncertain effects were identified in relation to the infrastructure set out in the NPS:

- WEEE: Flood Risk.
- Oil regeneration facilities: Water Quality and Resources; Flood Risk; and Coastal Change and the Marine Environment.
- Ship recycling facilities: Waste Management, Biodiversity, Flora and Fauna; Flood Risk; and Coastal Change and the Marine Environment.
- Landfill: Climate Change Adaptation and Resilience; Air Quality and Emissions; Traffic and Transport; and Landscape.

9.2.8 These negative or uncertain effects reflect the fact the further wording could be added to the NPS, over and above the guidance and requirements set out in the generic text, to reflect particularities of each of these type of infrastructure.

9.3 Cumulative effects

9.3.1 The SEA Directive requires that consideration is given to the cumulative nature of the effects of a plan or programme. The cumulative effects of the Hazardous Waste NPS and of the NPS with other draft NPSs was assessed as part of the AoS. The results of these two assessments are provided in Tables 9 and 10 below. In many cases it is difficult to assess an overall cumulative impact, as impacts may be significant depending on the exact location of new hazardous waste infrastructure, and their location in relation to other NSIPs. Assumptions have therefore been made on the basis that all the measures set out in the various NPSs will be taken on board by the developer.

Table 9: Cumulative effects of the NPS

Effects	Causes	Potential significance
Cumulative effects of hazardous waste management	The measures set out in the NPS are likely to result in a net benefit through the provision of facilities that are more sustainable than the business as usual case. This will contribute to reducing potential impacts on all AoS objectives.	+
Cumulative effects on resources and raw materials	The implementation of the NPS will provide cumulative constraints on the use of raw materials and resources in the development of hazardous waste management facilities, thus contributing to their sustainable use and reducing overall consumption.	+
Cumulative effects on climate change and adaptation	New hazardous waste infrastructure has the potential for direct cumulative effects on climate change and adaptation to climate change. The development of new infrastructure through increased air emissions which contribute to climate change. Indirect cumulative effects may also arise due to the transportation of hazardous waste to facilities. However, the NPS encourages more sustainable options for hazardous waste management and modes of transportation, which have the potential to positively affect the rate of climate change especially when compared to the business as usual case. The NPS also sets out measures aimed at ensuring resilience to climate change. The overall net impact, when compared to the business as usual case, however, is likely to be minor positive.	+
Cumulative effects on air quality and greenhouse gas emissions	There is potential for direct impacts to air quality from hazardous waste facility development, particularly in relation to construction activities, emissions from operational activities and secondary emission from traffic related to both construction and operation. There is also the potential for adverse cumulative effects on sensitive receptors from these air quality impacts with other impact types (e.g. noise and air emissions impacts on flora and fauna). Negative effects may arise where a number of proposals are consented in close proximity and/or are co-located with other similar facilities, where net emissions are increased. However, the NPS sets out a range of measures to control emissions, including consideration of design, siting and refusal of consent for infrastructure proposed in or close to existing AQMAs. It also encourages more sustainable options for hazardous waste management, which have the potential to positively affect the rate of climate change, and measures aimed at ensuring resilience to climate change, especially when compared to the business as usual case. Overall, the cumulative effect is likely to be positive, however, this will depend on the exact location of facilities in relation to other new / existing facilities.	+/-
Cumulative effects on receptors from traffic and transport	Any increased traffic levels, particularly HGVs often associated with construction and hazardous waste management have the potential for adverse cumulative effects, including a reduction in air quality and increased noise emissions. However, the NPS requires for the most sustainable methods of transportation to be used and this to be taken into consideration during the design process. As such the overall impact should be minor positive.	+

Cumulative effects on biodiversity, flora and fauna	There is the potential for cumulative effects on biodiversity, flora and fauna from the development of hazardous waste facilities, directly, e.g. through the loss of habitat for development, or indirectly, e.g. through pollution of groundwater, emissions to air, noise, etc. However, the NPS has set out measures to minimise impacts to the environment, in terms of footprint, site layout, transportation requirements, etc thus the impact compared to the business as usual case can be considered to be minor positive. However, these requirements do not necessarily avoid all adverse impacts to biodiversity, flora and fauna. As such, cumulative impacts may be negative or positive, depending on the specific location of facilities, their size and design.	+/-
Cumulative effects on water quality and resources	Hazardous waste management facilities have the potential to have adverse effects on water quality and water resources, through potential contaminant issues and certain processes that require a substantial amount of water. The measures outlined in the NPS have the potential for positive cumulative effects on water quality and resources, including measures to minimise emissions of pollutants and contaminants to the environment, and measures to reduce water demand.	+
Cumulative effects on flood risk	The NPS includes measures to keep the development of hazardous waste facilities away from area of flood risk, or to mitigate acceptable flood risks. Furthermore, ensuring the potential for adaptation to climate change should have a beneficial cumulative effect on flood risk.	+/++
Cumulative effects on soils and geodiversity	There are inherent risks of impacts to soils and geodiversity from hazardous waste management and the construction and operation of hazardous waste management facilities. However, measures outlined in the NPS are designed to minimise these risks, including favouring low sensitivity sites (e.g. brownfield sites, where available) for new developments and measures to avoid emissions that could damage soils. The cumulative effect with landscape constraints also has the potential to be beneficial in preventing development in areas of geological significance.	+
Cumulative effects on coastal change and the marine environment	There is potential for beneficial cumulative effects on coastal change and the marine environment from the measures proposed in the NPS to site the development of hazardous waste management facilities in appropriate areas and limit emissions that could harm the marine environment.	+
Cumulative effects on landscape	The NPS includes measures to minimise or mitigate potential adverse impacts to landscape from the development of hazardous waste management facilities, including appropriate siting of such facilities. However, given the nature of such infrastructure, avoidance of all adverse impacts is not possible. Cumulative impacts will also depend on the location of new facilities in relation to other new and existing facilities. Thus depending on the type of facility, design and location overall cumulative effects may be positive or negative.	+/-

Cumulative effects on historic environment	The development of hazardous waste management facilities has the potential to cause adverse impacts on the historic environment, e.g. through the damage or destruction of sub surface archaeology, or the potential to adversely affect areas of heritage value. However, the NPS contains measures to minimise impacts on the historic environment, while in addition, measures such as the constraints on developments in areas of landscape/townscape importance, may have beneficial cumulative effects on the historic environment.	+
Cumulative effects on population	Cumulative effects from the development of hazardous waste management facilities have the potential for adverse effects on the local population through severance, increased noise levels, air emissions, etc. The NPS contains measures to minimise and, where possible, mitigate these adverse effects, including the requirement for a social impact assessment. However, the overall cumulative effect on populations will depend on the specific location of facilities in relation to the population, and in relation to other new/existing facilities, and also the design employed at each facility. Cumulative impacts on population is therefore uncertain, and could be positive if all measures identified in the NPS are taken on board.	+/-
Cumulative effects on health and wellbeing	The development of hazardous waste management facilities has the potential for adverse cumulative effects on health and wellbeing, largely from the potential for sensitive receptors to come into contact with hazardous waste and/or harmful emissions. These impacts may be greater where new facilities are located in close proximity to other new or existing facilities. However, there is potential for beneficial cumulative effects on health and wellbeing from the measures identified in the NPS, e.g. those measures to mitigate pollution to soil, water and air, those to limit noise impact or to limit visual impact.	+/-
Cumulative effects on equality	The EqIA identified potential impacts from the NPS on equality, particularly regarding age, disability, gender and race. There is potential for cumulative effects from the NPS on these equalities. However, measures set out in the NPS may also contribute to minimising such impacts when compared to the business as usual case.	+/-
Cumulative effects on receptors from noise	The operation of hazardous waste management facilities has the potential to increase noise levels at nearby sensitive receptors. In addition, any increase in construction and/or operational traffic following NPS approved hazardous waste management facilities has the potential for adverse cumulative effects on noise sensitive receptors. However, the NPS outlines requirements for noise mitigation and minimisation.	+
Cumulative effects on spatial planning and land use	There is the potential for conflicts between decisions made using the NPS and the requirements of Local Planning Authorities. Cumulative impacts on spatial planning however are reduced by the requirements set out in the NPS to take land use planning into consideration in the siting of any new infrastructure.	+
Cumulative effects on military and civil aviation	Cumulative effects of the NPS on military and civil aviation are not considered to be significant.	0

Cumulative effects on economy	There is potential for cumulative effects of the measures proposed in the NPS for the provision of hazardous waste management facilities on the economy. These have the potential to be both adverse and positive. On the one hand, requirements of the NPS may constrain development and reduce related economic benefits or fail in providing sufficient incentives to developers to realise cumulative economic impacts. On the other hand, appropriate design and siting of hazardous waste management facilities has the potential for beneficial cumulative effects on the economy, for example by reducing development in inappropriate areas (e.g. areas of landscape beauty that may be an attraction for tourism).	+/-
Cumulative effects on employment and business	Cumulative effects upon business and employment will be similar to those cumulative effects on the economy.	+/-
Cumulative effects on education and training	The NPS sets out requirements for Applicants to consider education and training, however impacts are likely to only be felt very locally.	0/+

++	Significant positive impact	+	Minor positive impact	0	Neutral impact	-	Minor negative impact	--	Significant negative impact	?	Uncertain

Table 10: Cumulative effect of the NPS with other draft NPSs

Plans	Effects	Causes	Potential significance
Draft Nuclear NPS	Cumulative effects on biodiversity, flora and fauna, coastal change and the marine environment, soil and geodiversity, and water resources	New nuclear infrastructure will have adverse impacts on receptors through the provision of further development. Potential impacts identified include changes in water quality, direct habitat and species loss and habitat fragmentation of wildlife corridors, from the construction of facilities and related infrastructure to manage and handle waste, disturbance, and gaseous emissions. Nuclear power sites may also generate minor negative impacts of cooling water abstraction and discharge on water quality scale; and adverse effects on water on coastal processes, hydrodynamics and sediment transport. The development, operation and decommissioning of nuclear power sites may also result in the increased risk of pollution and potential contamination of soils and controlled waters. In addition, the impacts from decommissioning nuclear plants are also considered potentially negative, with the long term impacts of nuclear waste storage having the potential to be of significance for biodiversity over a long time period. These impacts will contribute to those associated with the development of new hazardous waste infrastructure at a national scale, for example the cumulative effect of the loss of flora from the footprint of such facilities. However, significance of the local cumulative impact will depend on the location of new hazardous waste infrastructure in relation to new nuclear waste infrastructure.	-/+

Draft Ports NPS	Cumulative effects on climate change and adaptation. GHG emissions, and transport	GHG emissions can be a direct impact of port development, particularly concerning construction, general operation of buildings (and lighting systems) and day- to-day operational activities, but also secondary/indirect impacts associated with ships accessing ports and land transport associated with port activities. GHG emissions are also a direct impact of new hazardous waste infrastructure. Thus, the cumulative impact of both developments on climate change and air emissions could be negative. That said, both NPSs set out measures to control such impacts thus, when considered against the business as usual case, it is likely that the overall cumulative effect will be minor positive.	+
Draft Ports NPS	Cumulative effects on hazardous waste, water quality	The Ports NPS considers the handling and treatment of hazardous waste, and There is also the need to consider potentially hazardous waste in terms of spillages during port operations. The hazardous waste NPS also requires the development of hazardous waste infrastructure that pushes hazardous waste up the waste hierarchy. The cumulative effect of a compliant port development and a compliant hazardous waste facility is likely to result in a net improvement in the handling of hazardous waste.	+
The Government's Renewable Energy Strategy	Cumulative effects on climate change and adaptation, resources and raw materials	The Government's Renewable Energy Strategy [1] is seeking to increase the percentage of energy generated from renewable sources to 15% by 2020 from 1.8% in 2007. New hazardous waste facilities may also contribute to a reduction in emissions related to improved technologies and pushing waste up through the waste hierarchy.	+

Key:

++	Significant positive impact	+	Minor positive impact	0	Neutral impact	-	Minor negative impact	--	Significant negative impact	?	Uncertain

10. Summary of Mitigation Measures

10.1 Mitigation Measures

10.1.1 Where adverse effects of the NPS on AoS framework objectives were identified, measures to mitigate these adverse effects were made in the AoS. The focus has been on identifying mitigation measures that will assist in delivering a sustainable policy in all areas related to the AoS framework, and where possible maximising beneficial effects.

10.1.2 The generic mitigation measures proposed in the NPS are robust and provide appropriate guidance to developers. For example, the NPS sets out the requirement to consider environmental, social and economic impacts as part of any new infrastructure bought forward. Measures for good design are set out, as are specific measures against generic topic headings such as: air emissions, flood risk, landscape and visual impacts, etc. Requirements are also set out for consultation with various bodies as part of the process.

10.1.3 The NPS also identifies that if the IPC is satisfied that the adverse impacts identified (including any cumulative adverse impacts) outweigh the benefits of the proposed development (taking into account measures to avoid, reduce or compensate for those adverse impacts) consent should be refused.

10.1.4 In order to improve the NPS, further mitigation measures have been proposed as a result of the AoS where an adverse impact against an AoS objective was predicted. Mitigation measures were proposed in relation to: Air Quality and Emissions; Population; Health and Well Being; Noise; and Spatial Planning and Land Use.

10.1.5 Mitigation measures were also proposed in relation to the specific technologies:

- Oil regeneration facilities: Water Quality and Resources.
- Ship recycling facilities: Waste Management, Biodiversity, Flora and Fauna.
- Landfill: Climate Change Adaptation and Resilience; Air Quality and Emissions; Traffic and Transport; and Landscape.

10.1.6 Specific hazardous waste technologies were not identified as mitigation, as more sustainable options may come forward during the lifetime of the NPS; this should therefore be addressed on their individual merits at the time of an application.

10.1.7 Where appropriate, enhancement measures were proposed where it was considered possible to strengthen the performance of the infrastructure type against the AoS objectives was also identified. Enhancement measures were proposed for: Air Quality and Emissions; Biodiversity, Flora and Fauna; Flood Risk; Coastal Change and the Marine Environment; and Landscape.

1 The UK Renewable Energy Strategy – Consultation, June 2008; BERR

11. Monitoring

11.1.1 The SEA Directive requires monitoring the significant effects of implementing the plan or programme – in this case the Hazardous Waste NPS. A monitoring framework is proposed and set out in Section 9.2 of the AoS Report. It focuses on the significant and uncertain effects identified as part of the AoS and which are set out below and identifies a number of potential monitoring indicators and existing sources of monitoring information. (Note: this does not necessarily preclude other monitoring that may be considered relevant to ensure that minor positive effects of the NPS are also met).

- Minor negative effect of hazardous waste infrastructure on the following AoS objectives: Air quality and Emissions; Population; Health and Well Being; Noise; and Spatial Planning and Land Use.
- Minor negative effect of ship recycling facilities on the following AoS objectives: Waste Management; and Biodiversity, Flora and Fauna.
- Minor negative effect of landfill infrastructure on the following AoS objectives: Climate Change Adaptation and Resilience; Air Quality and Emissions; Traffic and Transport; and Landscape.
- Minor negative effect of oil regeneration infrastructure on the following AoS objective: Water Quality and Resources.
- Uncertain effect of all hazardous waste infrastructure on the following AoS objective: Health and Well Being.
- Uncertain effect of WEEE, oil regeneration and ship recycling facilities on the following AoS objective: Flood Risk.
- Uncertain effect of oil regeneration and ship recycling facilities on the following AoS objectives: Coastal Change and the Marine Environment.

11.1.2 Defra will be responsible for the development of the proposed monitoring strategy and its implementation for the Hazardous Waste NPS and envisages producing a monitoring report. However, further guidance on developing aims and methods for monitoring will be undertaken following consultation on the draft NPS and this will be outlined in the AoS Statement to be published with the adopted NPS.

12. Appraisal of Sustainability Report

12.1.1 The AoS report provides a detailed account of the AoS process and outcomes of the assessment. It should be read alongside the draft Hazardous Waste NPS.

13 Next Steps

13.1.1 The draft NPS and AoS Report will be published for consultation, alongside a Consultation Document prepared by Defra. Any comments on the NPS, AoS Report or the Consultation document should be addressed to the Contact Point in Defra given in the Consultation Document.

13.1.2 Following the consultation period, an AoS Statement will be issued and published alongside the designated Hazardous Waste NPS.

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