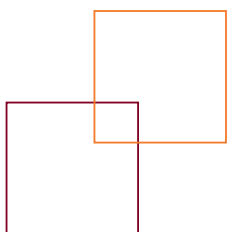


Draft National Policy Statement for Hazardous Waste:

A framework document for planning decisions on nationally significant hazardous waste infrastructure.

A document issued by the Department for Environment, Food and Rural Affairs.

Presented to Parliament pursuant to Section 9 (2) of the Planning Act 2008.



Draft National Policy Statement for Hazardous Waste:

A framework document for planning decisions on nationally significant hazardous waste infrastructure.

A document issued by the Department for Environment, Food and Rural Affairs.

Presented to Parliament pursuant to Section 9 (2) of the Planning Act 2008.

Department for Environment, Food and Rural Affairs
Nobel House
17 Smith Square
London SW1P 3JR
Telephone 020 7238 6000
Website: www.defra.gov.uk

© Crown copyright 2011

You may re-use this information (excluding logos) free of charge in any format or medium, under the terms of the Open Government Licence. To view this licence, visit <http://www.nationalarchives.gov.uk/doc/open-government-licence/> or e-mail: psi@nationalarchives.gsi.gov.uk.

Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

Any enquiries regarding this publication should be sent to us at hiwu@defra.gsi.gov.uk

This publication is available for download at www.official-documents.gov.uk

This document is also available from our website at www.defra.gov.uk.

ISBN: 9780108510878

Printed in the UK for The Stationery Office Limited on behalf of the Controller of Her Majesty's Stationery Office

ID 2442223 07/11

Printed on paper containing 75% recycled fibre content minimum.

Contents

Part 1: Introduction	3
1.1 Background	3
1.2 Infrastructure covered by this NPS	3
1.3 Geographical Coverage	4
1.4 The Appraisal of Sustainability	4
1.5 Interaction with the Habitats Directive	6
Part 2: Government Policy on Hazardous Waste	7
2.1 Summary of Government Policy	7
2.2 What is hazardous waste?	8
2.3 The Government's policy objectives for hazardous waste management	8
2.4 Government Strategy for hazardous waste management	10
2.5 Policy Alternatives	10
Part 3: Need for large scale hazardous waste infrastructure	12
3.1 Summary of Need	12
3.2 Drivers for demand for hazardous waste infrastructure	13
3.3 Alternatives to meeting the demand for hazardous waste infrastructure	14
3.4 What types of nationally significant infrastructure will be needed?	16
Part 4: Assessment Principles	19
4.1 General points	19
4.2 Environmental Impact Assessment	20
4.3 Habitats Regulations Assessment	21
4.4 Alternatives	21
4.5 Criteria for "Good Design" for hazardous waste infrastructure	22
4.6 Climate change adaptation	23
4.7 Pollution control and other environmental regulatory regimes	24
4.8 Safety	26
4.9 Hazardous substances	26
4.10 Health	26
4.11 Common law nuisance and statutory nuisance	27
4.12 Security considerations	27
4.13 Consideration of hazardous waste facilities	28
4.14 Consideration of waste electrical and electronic equipment treatment facilities	28
4.15 Consideration of oil regeneration plant	29

4.16	Consideration of facilities to treat air pollution control residues	29
4.17	Consideration of thermal desorption facilities	30
4.18	Consideration of bioremediation/soil washing to treat contaminated soil diverted from landfill	30
4.19	Consideration of ship recycling facilities	30
4.20	Consideration of hazardous waste landfill facilities	31

Part 5: Generic Impacts **32**

5.1	Introduction	32
5.2	Air quality and emissions	32
5.3	Biodiversity and geological conservation	33
5.4	Civil and military aviation and defence interests	36
5.5	Coastal change	39
5.6	Dust, odour, artificial light, smoke, steam and insect infestation	41
5.7	Flood risk	42
5.8	Historic environment	46
5.9	Landscape and visual impacts	50
5.10	Land use including open space, green infrastructure & green belt	52
5.11	Noise and vibration	55
5.12	Socio-economic	57
5.13	Traffic and transport impacts	58
5.14	Waste management	60
5.15	Water quality and resources	61

National Policy Statement for Hazardous Waste

Part 1 – Introduction

1.1 Background

1.1.1 This National Policy Statement (NPS) sets out Government policy for the hazardous waste infrastructure defined in Section 1.2 below. It will be used by the Infrastructure Planning Commission (IPC) as the primary basis for its decision making on the development consent applications for hazardous waste infrastructure that fall within the definition of a Nationally Significant Infrastructure Project (NSIP) as defined in the Planning Act 2008¹. In making decisions on hazardous waste NSIPs, the IPC must also have regard to any local impact report submitted by a relevant local authority, any relevant matters prescribed in regulations, any Marine Policy Statement (MPS) and marine plans, and any other matters which it considers are both important and relevant to its decision.²

1.1.2 The Planning Act 2008 requires that the IPC must decide an application for hazardous waste infrastructure in accordance with the relevant NPSs except to the extent it is satisfied that to do so would:

- lead to the UK being in breach of its international obligations;
- be in breach of any statutory duty that applies to the IPC;
- be unlawful;
- result in adverse impacts from the development outweighing the benefits; or
- be contrary to regulations about how its decisions are to be taken.

1.1.3 The NPS will remain in its entirety unless withdrawn or suspended in whole or in part by the Secretary of State. It will be kept under review by the Secretary of State, in accordance with the requirements of the Planning Act, 2008, in order to ensure it remains appropriate for IPC decision making. It is expected that the Secretary of State would review the NPS approximately every five years and that, subject to those reviews, the NPS itself, and the policy contained therein, would continue to apply.

1.1.4 Policy and guidance on generic impacts in Part 5 of this NPS may be helpful to local planning authorities (LPAs) in preparing their local impact reports which the IPC will invite them to prepare under section 60 of the Planning Act 2008. In England, this NPS is likely to be a material consideration in decision making on applications that fall under the Town and Country Planning Act 1990 (as amended). Whether, and to what extent, this NPS is a material consideration will be judged on a case by case basis.

1.2 Infrastructure covered by this NPS

1.2.1 The Planning Act 2008³ sets out the thresholds for nationally significant infrastructure in the hazardous waste sector. The Act empowers the IPC to examine applications and make decisions on the following nationally significant hazardous waste infrastructure developments:

- Construction of facilities in England where the main purpose of the facility is expected to be the final disposal or recovery of hazardous waste and the capacity is expected to be:

¹ Section 30 Planning Act 2008 <http://www.legislation.gov.uk/ukpga/2008/29/section/30>

² In line with the Planning Act 2008, the National Policy Statement for Hazardous Waste has been drafted on the basis that once it is designated the IPC will be the decision making body. However, the Government announced in June 2010 its intention to amend the Planning Act 2008 and abolish the IPC. In its place, the Government envisages that a Major Infrastructure Planning Unit (MIPU) will be established within the Planning Inspectorate. Once established, the MIPU would hear examinations for development consent and would then make a recommendation to the Secretary of State (in a similar way as the IPC currently would in advance of an NPS being designated). It would not itself determine applications; decisions would be taken by the Secretary of State. The Government intends that National Policy Statements would continue to provide the clear policy framework for decisions under these new arrangements.

³ Section 30 Planning Act 2008

- in the case of the disposal of hazardous waste by landfill or in a deep storage facility⁴, more than 100,000 tonnes per year;
- in any other case, more than 30,000 tonnes per year.
- The alteration of a hazardous waste facility in England where the main purpose of the facility is the final disposal or recovery of hazardous waste and the alteration is expected to have the following effect:
 - in the case of the disposal of hazardous waste by landfill or in a deep storage facility, to increase by more than 100,000 tonnes per year the capacity of the facility;
 - in any other case, to increase by more than 30,000 tonnes per year the capacity of the facility.

1.2.2 The Planning Act 2008 enables the IPC to issue a development consent order that includes consent for development which is associated with the hazardous waste infrastructure listed above (subject to certain geographical and other restrictions set out in Section 115 of the Act). The Secretary of State has issued guidance⁵ to which the IPC⁶ must have regard in deciding whether development is associated development. This NPS will be the primary basis for IPC decision making on associated development.

1.2.3 The Planning Act 2008 enables the IPC to issue a development consent order that can make provision relating to, or to matters ancillary to, the development of the hazardous waste infrastructure listed above. This NPS will be the

primary basis for IPC decision making on such matters.⁷

1.3 Geographical coverage

1.3.1 This NPS provides the framework for IPC decision making on development consent applications for the construction of new hazardous waste infrastructure in England.

1.3.2 In Scotland, Wales and Northern Ireland, planning consents for all nationally significant hazardous waste projects are devolved to the Scottish Government, Welsh Assembly Government and Northern Ireland Executive respectively. The IPC will not examine applications in these territories and the NPS will not apply.

1.4 The appraisal of sustainability⁸

1.4.1 This NPS has been subject to Appraisal of Sustainability (AoS), incorporating the requirements for Strategic Environmental Assessment (SEA)⁹. The AoS has informed the preparation of this NPS and the conclusions of the AoS and how these have influenced the NPS are summarised below.

1.4.2 The AoS assessed the alternatives to the NPS such as ways of meeting the need for infrastructure without large scale facilities and also alternative ways in which the need for large scale infrastructure might be met. It assessed the proposed objectives of the NPS and finally the policy set out in the NPS itself. The assessments were largely qualitative in nature due to a lack of quantitative data specific to the hazardous waste industry. Professional judgement and reference

4 "Deep Storage facility" means a facility for the storage of waste underground in a deep geological cavity.

5 Information and guidance on the content and implementation of the Planning Act 2008 is available on the website for the Department of Communities and Local Government
<http://www.communities.gov.uk/planningandbuilding/planning/planning-policyimplementation/reformplanningsystem/planningbill/>

6 See footnote 2

7 See footnote 2

8 Appraisal of Sustainability for the Hazardous Waste National Policy Statement – Main Report.

9 European Parliament and Council Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (the Strategic Environmental Assessment Directive); ODPM et al, September 2005: Practical Guide to the Strategic Environmental Assessment Directive.

to relevant legislation and guidance was used to predict effects where data was limited.

1.4.3 The AoS assessed the overall potential sustainability effects of the Hazardous Waste NPS as being broadly minor positive. No major negative effects were identified, and potential minor negative effects were of a nature that could be addressed by the conditions and recommendations set out in the AoS and which have now been included in the NPS.

1.4.4 The AoS identified some minor negative effects of the NPS, related to air quality and emissions, population, health and well being, noise, spatial planning and land use. These reflect inherent uncertainties around scheme location, types of infrastructure and methods of construction and also the large size of the facilities. Some minor or uncertain effects were also identified in respect of some of the types of facility identified in the NPS

1.4.5 The AoS has been undertaken alongside the development of the NPS. A number of recommendations were made to improve the sustainability performance of the NPS and some of these were incorporated into the text of the NPS. However, not all of the recommended mitigation measures have been included in the NPS because of the focus in the NPS on general policy and requirements, and because it was considered that the draft text (prepared to be consistent with existing planning policy and with other NPSs) already provided sufficient mitigation at the strategic level. It will be for project applicants to set out in detail how they will meet the policy and requirements set out in the NPS.

1.5 Interaction with the habitats directive

1.5.1 The Hazardous Waste NPS is a plan for the purposes of the Habitats Directive¹⁰. Its objective is to provide for necessary new hazardous waste infrastructure.

1.5.2 The Government has assessed this NPS and has concluded that it cannot rule out the potential for adverse effects on the integrity of European sites, including those adjacent to or at a distance from potential development covered by this NPS. In line with the requirements set out in Article 6(4) of the Habitats Directive, the Government considered potential alternatives to the plan and concluded that there were no alternatives that would better respect the integrity of European sites and deliver the objectives of this plan. Accordingly, the Government has presented a case for Imperative Reasons of Overriding Public Interest (IROPI), which sets out the rationale for why the plan should proceed, given the uncertain conclusions reached at the assessment stage of the Habitats Regulations Assessment (HRA).

1.5.3 The NPS has been prepared to facilitate the development of new infrastructure for hazardous waste. New infrastructure is needed both to ensure sufficient capacity to meet expected hazardous waste arisings and to meet the requirement of the EU's Waste Directive (2008/98/EC)¹¹ to push the management of waste up the waste hierarchy so that more is sent for reuse recycling and recovery and amounts sent for disposal are minimized. Hazardous wastes pose an inherent threat to human health and the environment and it is important that there are sufficient facilities to allow the waste to be

10 The European Council Directive (92/43/EEC) on the Conservation of Natural Habitats and of Wild Flora and Fauna (the Habitats Directive) protects habitats and species of European nature conservation importance by establishing a network of internationally important sites designated for their ecological status. These are referred to as Natura 2000 sites or European Sites (which is the term used in the main HRA Report) and comprise Sites of Community Importance (SCI), Special Protection Areas (SPAs) (as classified under the Birds Directive, European Parliament and Council Directive (2009/147/EC) on the Conservation of Wild Birds), Special Areas of Conservation (SACs), candidate Special Areas of Conservation (cSAC), and European Offshore Marine Sites (EOMS) designated under the Habitats Directive. It is Government policy to treat Ramsar sites, designated by the Ramsar Convention on Wetlands (1971) and potential SPAs (pSPAs) as if they are fully designated European Sites for the purposes of considering any development proposals that may affect them. Planning Policy Statement 9 Biodiversity and Geological Conservation; Government Circular Biodiversity and Geological Conservation – Statutory Obligations and their impact within the planning system (ODPM, 2005); For the purposes of this NPS all these sites are referred to as “European Sites.”

11 Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives

managed in a way which minimizes this risk. While the Government cannot rule out the potential for adverse effects on the integrity of European sites using the approach set out in this NPS, the alternative approaches considered would not have any less potential for adverse impacts. It is clearly in the public interest to provide new facilities. In addition to minimizing the potential risks to human health and the environment, in allowing more hazardous waste to be reused, recycled and recovered, the new facilities will bring about other environmental benefits such as reducing the amount of virgin material required in manufacturing and saving natural resources. Government is therefore satisfied that there are Imperative Reasons of Overriding Public Interest for taking forward the Hazardous Waste NPS. The IROPI case applies only to the NPS. It does not provide an IROPI case for individual projects.

1.5.4 The conclusions of the HRA are set out in the main HRA report¹². The HRA report made a number of recommendations. Some are considered to already be adequately covered by the Assessment Principles and Generic Impacts set out in Parts 4 and 5 of this NPS. In other cases recommendations were considered to be

more appropriate to the individual project stage. When individual applications for development consent are submitted to the IPC in line with the Hazardous Waste NPS, the IPC must assess them in accordance with the requirements of the Habitats Directive. Individual project level HRAs will be required, which must take account of the effects identified in the main HRA. Where initial screening of the proposal indicates likely significant adverse effects on European sites, either alone or in combination with other plans or projects, an appropriate assessment will be required which considers the implications for sites in view of their conservation objectives. Where the integrity of a site would be adversely affected then the IPC should only give consent if they are satisfied that the other tests contained in the Habitats Regulations would be met:

- There are no alternative solutions
- There are imperative reasons of overriding public interest
- Adequate compensatory measures can be provided which would maintain the coherence of the Natura 2000 network”.

Part 2 – Government Policy on Hazardous Waste

2.1 Summary of Government Policy

Without suitable treatment, the hazardous waste we produce every day would damage the environment and create problems for public health.

The main objectives of Government policy on hazardous waste are:

- (a) To protect human health and the environment** – stringent legislative controls are in place to control the management of waste with hazardous properties;
- (b) Implementation of the waste hierarchy** – to produce less hazardous waste, using it as a resource where possible and only disposing of it as a last resort;
- (c) Proximity and self-sufficiency** – to ensure that sufficient disposal facilities are provided in the Country as a whole to match expected arisings of all hazardous wastes, except those produced in very small quantities;
- (d) Climate change** – to minimise greenhouse gas emissions and maximise opportunities for climate change adaptation and resilience.

Government aims to meet these objectives by encouraging the development of a robust infrastructure network to manage hazardous waste.

Defra published '*A Strategy for Hazardous Waste Management in England (2010)*' based on six high level principles intended to drive the management of hazardous waste up the waste hierarchy. Principle 2 of this Strategy states that the Government looks to the market to provide the infrastructure needed to implement the Strategy as it is industry that has the expertise required to consider where facilities are needed and the appropriate technologies to use. Government believes its role is to provide a clear steer on the types of new facility that are needed and provide the framework (including legislative safeguards on human health and the environment) within which the infrastructure is to be provided.

In response to specific concerns over the risks to the environment and health and safety posed by Ship Recycling facilities, many of which are located in developing countries, the UK Ship Recycling Strategy was issued in 2007 to improve standards in the recycling of UK flagged ships. One of its main aims is to encourage the development of UK capacity for recycling ships in an environmentally sound manner in line with the Government's proximity and self-sufficiency objectives. As with other types of hazardous waste infrastructure, the Government believes that it is industry that has the expertise needed to bring forward new facilities.

2.2 What is hazardous waste?

2.2.1 Hazardous waste is defined in Section 30(5) of the Planning Act 2008 in terms of the definition set out in Regulation 5 of the Hazardous Waste (England and Wales) Regulations 2005, as amended. Essentially it is waste that contains one or more hazardous properties that may cause harm to human health or the environment. It does not cover waste classified as radioactive waste under the Environmental Permitting (England and Wales) Regulations 2010, as amended (except in the limited circumstances where such waste does not require a permit because it falls under an exemption provision). Facilities for radioactive waste are therefore outside the scope of this NPS.

2.2.2 Hazardous waste, accounts only for a small percentage of total waste arisings (in 2008 around 3% of waste arisings in England and Wales were hazardous waste), but the amounts of hazardous waste produced are still significant, with around 4.8 million tonnes arising in England and Wales in 2008.

2.3 The government's policy objectives for hazardous waste management:

To protect human health and the environment

2.3.1 Stringent legislative controls are in place to control the management of waste with hazardous properties.¹³ The waste may only be taken to a facility that has an environmental permit allowing it to manage hazardous waste of that particular type. Permits are issued by the Environment Agency who set conditions for: the operation of the facility, such as the types and volumes of waste that may be accepted; how the waste is to be treated; how it is to be stored; and the specific emission limits and conditions relating to any need to keep activities away from sensitive receptors.

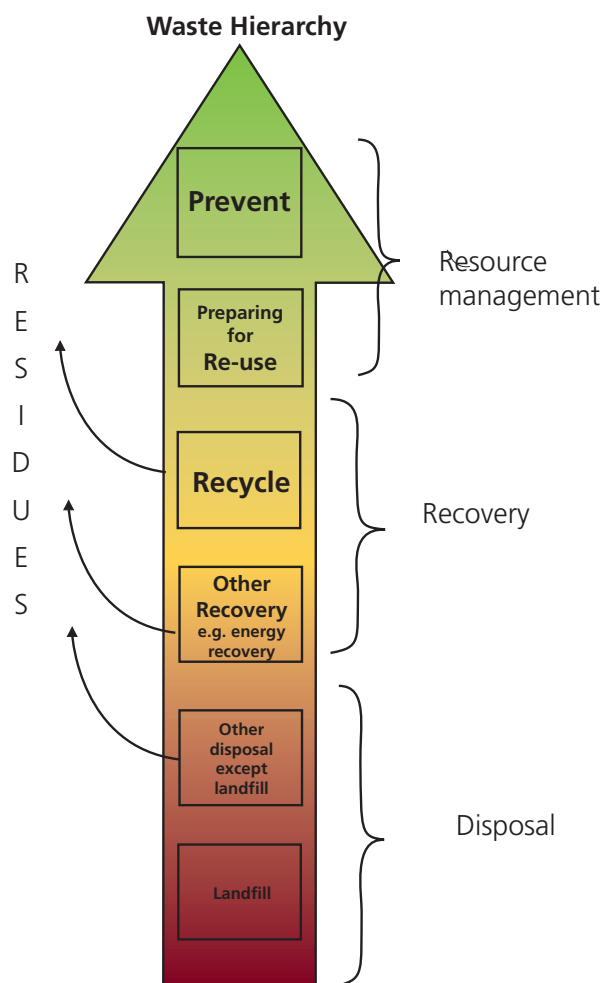
Implementation of the waste hierarchy

2.3.2 The waste hierarchy, set out in the Waste Directive 2008/98/EC, has five steps which must be applied in waste prevention and management legislation and policy:

- Prevention
- Preparation for Reuse
- Recycling
- Other recovery, including energy recovery and
- Disposal (of which landfill is considered to be at the bottom)

Figure 1 below illustrates the hierarchy.

Figure 1



¹³ Government must also meet obligations under European legislation in respect of the management of waste. In England, movement of hazardous waste requires close monitoring under the Hazardous Waste (England and Wales) Regulations 2005 (as amended), which reflect EU requirements.

2.3.3 The aims of the hierarchy are: to minimise the amount of hazardous waste that is produced in the first place; where waste is still produced, to reuse as much useful material in the waste as possible; where reuse isn't possible, to recycle as much useful material as possible; where reuse and recycling aren't possible to recover any useful energy that the waste can be used to generate; and only where these other options are not possible, to dispose of the remaining waste safely. Of the disposal options available, landfilling of hazardous waste should only be used as a last resort.

2.3.4 It should be noted that, even with optimal use of this hierarchy, there will always be some hazardous waste, such as asbestos or certain residues from other treatment processes, for which disposal will be the only appropriate option.

Self-sufficiency and proximity principles

2.3.5 Article 16 of the revised Waste Directive requires Member States to "take appropriate measures, in cooperation with other Member States where this is necessary or advisable, to establish an integrated and adequate network of waste disposal installations.., taking into account best available techniques." The network should be designed to enable the European Union as a whole to become self sufficient in waste disposal (including hazardous waste disposal), and to enable Member States to move towards that aim individually – the "self sufficiency principle".

2.3.6 The network should also enable waste to be disposed of in one of the nearest appropriate installations, by means of the most appropriate methods and technologies. This "proximity principle" is based on the concept that Member States should provide for the safe management and disposal of their hazardous waste and reflects the likely environmental and safety benefits of avoiding the transport of hazardous waste for disposal over longer distances. The principle envisages sufficient provision of waste disposal facilities within each Member State, while recognising that there may be circumstances where waste is produced in

too small a quantity to justify separate facilities in each Member State. In terms of cross border movements within the United Kingdom, it should be recognised that there is freedom of movement of waste including hazardous waste within the UK. For example it is recognised that some hazardous waste arising in Scotland, Wales or Northern Ireland will be disposed of in England and potentially vice-versa. Furthermore, for some hazardous wastes arising in relatively small quantities, and requiring specialist treatment there will only be one or two facilities in each Member State able to deal with the waste, and such waste might therefore have to travel further to such a facility. For example certain organic chemical wastes arise in industry in small quantities and are required to be incinerated at high temperature. For other hazardous waste, such as asbestos, arisings are higher and more ubiquitous, and there will be more facilities in each country to manage such hazardous wastes, and consequently they would not travel such long distances.

Sustainable development

2.3.7 It is the Government's intention that new infrastructure for hazardous waste should be provided in a way that is sustainable. Moving the management of hazardous waste up the waste hierarchy will help deliver sustainable development.

Climate change

2.3.8 Improved hazardous waste management has a part to play in a low carbon economy through the development of infrastructure that will be able to adapt to climate change and help to address climate change. It will also provide for the disposal of hazardous waste generated in ways that reduce carbon dioxide emissions to the atmosphere. For example, burning waste oils and solvents has associated emissions which would be reduced if the oil and solvents were to be regenerated. Implementation of the waste hierarchy may also help reduce greenhouse gas emissions through, for example, avoiding the need to manufacture new products (because of reuse)

or to manufacture new materials (because of recycling), or through using waste to generate energy.

2.4 Government strategy for hazardous waste management

2.4.1 The Waste Strategy for England, published in 2007, identified infrastructure and capacity needs for the treatment and disposal of hazardous waste. To take this forward, and to underpin the practical application of the revised Waste Directive, Defra published a Strategy for Hazardous Waste Management in England in March 2010¹⁴. This includes a set of six high level principles for the management of hazardous waste, intended to drive the management of hazardous waste up the waste hierarchy and to more sustainable management. Four of these principles are of particular relevance to the need for new infrastructure:

- **Principle 1** requires hazardous waste to be managed to provide the best overall environmental outcome – expected to be in line with the waste hierarchy, except where life cycle analysis indicates that (exceptionally) the best overall environmental option would require a departure from that hierarchy.
- **Principle 3** requires a reduction in reliance on landfill, with landfill only being used where, overall, there is no better recovery or disposal option.
- **Principle 4** requires that hazardous waste is not mixed with different categories of hazardous waste or with other waste substances or materials.

- **Principle 5** requires that organic hazardous wastes that cannot be reused, recycled or recovered shall be subject to destruction using best available techniques, with energy recovery for all appropriate treatments. No hazardous organic waste is to be landfilled unless the requirements of the Landfill Directive are met.

2.4.2 Principle 2 of the Strategy states that Government looks to the market to provide the infrastructure to implement the Strategy. Government's role is to provide the right framework and encouragement to the private sector to bring the necessary infrastructure forward. This is because the waste industry has the greatest level of expertise in hazardous waste management issues and is best placed to consider where facilities are needed and the most appropriate types of technologies to use. The private sector is better able to bring forward innovative solutions. Government recognises the need to protect public health and the environment from the risks posed by hazardous waste, but this is achieved through stringent regulation of all hazardous waste facilities (see paragraph 2.3.1 above.)

2.5 Policy alternatives

2.5.1 The above policy context has been developed, consulted on and put into effect, prior to the development of the NPS. In particular:

- **Principle 1** of the Government's strategy for hazardous waste management states that waste should be managed in accordance with the waste hierarchy, as required by Directive 2008/98; and
- **Principle 2** is clear that it is for the private sector to provide the necessary infrastructure within the Government's policy and regulatory framework.

¹⁴ A Strategy for Hazardous Waste Management in England (2010).

2.5.2 Alternatives within this policy context have been assessed in the Appraisal of Sustainability. These alternatives include:

Central planning of infrastructure

2.5.3 Central planning of all aspects of the provision of hazardous waste infrastructure would allow Government to set out exactly what should be developed and where, and as such could theoretically allow Government to more specifically target developments towards meeting key sustainability objectives. However, in reality, it is the waste industry that has the expertise necessary to determine where infrastructure should be located and the most appropriate technologies to use. For this reason it is not Government policy to prescribe either where hazardous waste infrastructure is built, or which technologies should be used. As noted in paragraph 2.4.2, Government's role is to provide the right framework and encouragement to the private sector to bring the necessary infrastructure forward.

2.5.4 The Strategy for Hazardous Waste Management in England sets out the types of hazardous waste infrastructure that are required and the framework in which these should be provided with a view to ensuring environmentally sound management in accordance with the waste hierarchy. The document provides a degree of certainty to the private sector on Government intentions for the development of hazardous waste infrastructure, which should encourage it to bring forward appropriate proposals for development.

Government prescription on appropriate technologies

2.5.5 Again, it is the private sector rather than the Government which has the expertise on the various technologies and their impacts. Government prescription might in theory allow scope for more targeted delivery of sustainability objectives, but in reality it risks discouraging industry from bringing forward new developments

or hampering the introduction of new types of technology that might be more sustainable. For this reason, the policy set out in the Strategy for Hazardous Waste Management in England does not prescribe the exact technologies to be used in bringing forward the necessary infrastructure. However, the framework set in the Strategy should steer the private sector towards the use of technologies that will represent environmentally sound management in accordance with the waste hierarchy.

Identification of suitable or unsuitable locations for infrastructure

2.5.6 The private sector is best placed to select locations that are suitable for economic reasons. The identification of suitable and unsuitable sites by Government might theoretically provide an opportunity to avoid any significant adverse social and environmental impacts from the outset. However, this would require very detailed knowledge within Government of the possible impacts of the various types of hazardous waste infrastructure in any location in England and would not offer any significant advantage to the assessment of these issues at the level of the individual development proposal. It is not therefore Government policy to prescribe exactly where new hazardous waste infrastructure should be provided. Principle 2 of the Strategy for Hazardous Waste Management in England looks to industry to provide infrastructure that meets the needs of the UK.

Conclusions

2.5.7 While these alternatives have been appraised, they were subsequently ruled out on the basis that they were inconsistent with the previously established policy context of the Hazardous Waste Strategy. Their consideration in the appraisal has, however, enabled the identification and inclusion within this NPS of relevant and appropriate mitigation measures.

Part 3 – Need for Large Scale Hazardous Waste Infrastructure

3.1 Summary of Need

Hazardous waste treatment infrastructure is essential for public health and a clean environment.

There will be a demand for **new and improved** large scale hazardous waste infrastructure, because of the following main drivers:

Trends in hazardous waste arisings:

- Measures have been implemented to prevent and minimize the production of hazardous waste. Nevertheless, arisings have remained significant despite the economic downturn. This is because the introduction of measures to further improve the environmentally sound management of waste has increased the types of waste that must be removed from the municipal waste stream and be managed separately as hazardous waste.
- Changes to the list of hazardous properties in Waste Directive 2008/98/EC and forthcoming changes to the European Waste List, are expected to lead to further increases in the amount of waste that must be managed as “hazardous”.
- There is a need to substantially reduce the relatively large amounts of hazardous waste continuing to be sent to landfill and increase that sent for recycling and reuse.

The need to meet legislative requirements:

- To apply the waste hierarchy – as set out in the Waste Directive 2008/98/EC. New, improved facilities will be required to optimise the extent to which the management of hazardous waste can be moved up the waste hierarchy.
- To comply with the “proximity principle” of adequate provision of hazardous waste facilities within each EU Member State.

‘A Strategy for Hazardous Waste Management in England (2010)’ established the need for new hazardous waste facilities and set out the types of facility required. Of these, the Strategy determined that the following types would be likely to include nationally significant infrastructure facilities:

- Waste electrical and electronic equipment plants
- Oil regeneration plant
- Treatment plant for air pollution control residues
- Thermal desorption
- Bioremediation / soil washing to treat contaminated soil diverted from landfill
- Hazardous waste landfill

The UK Ship Recycling Strategy encourages the development of Ship Recycling Facilities, some of which will need to be nationally significant infrastructure.

The IPC should start its assessment of applications for infrastructure covered by this NPS on the basis that need has been demonstrated.

3.2 Drivers for demand for hazardous waste infrastructure

Why do we have hazardous waste?

3.2.1 Hazardous waste is produced because many everyday items such as computer monitors, TVs, refrigeration equipment and some batteries may contain hazardous substances and therefore produce hazardous waste when they come to the end of their lives. In addition, there are more obvious hazardous wastes such as asbestos and oil produced by industry. Hazardous waste therefore exists as a result of a wide range of activities in many places, including households, businesses of all types, and public services, such as the health service, schools etc. However, the largest quantities are produced by the chemical and oil industries and by construction and demolition work.

The total amounts of hazardous waste remain significant and are expected to increase

3.2.2 Despite measures to prevent and minimise hazardous waste and the economic downturn, arisings have not declined particularly significantly with around 4.8m tonnes of hazardous waste being produced in 2008.¹⁵ Future increases are expected due to increasing use of producer responsibility schemes, changes to the list of hazardous properties in Waste Directive 2008/98/EC and forthcoming changes to the European Waste List.

Figure 2: Hazardous Waste 2008 England & Wales



* 2005 was a transition year with data from old and new hazardous waste systems. There were comparability problems and some data was missing so returns for 2005 have not been included in our trend analysis.

3.2.3 Better management of waste can result in increases in arisings of hazardous waste. For example, the introduction of new Regulations for Hazardous Waste in 2005, which implemented the revised EC list of waste, classified a number of waste streams as hazardous for the first time, including household items such as computer monitors, TVs and fluorescent lights. This was not a result of the items having become more intrinsically hazardous, but a result of the classification having become more precautionary.

3.2.4 Environment Agency data for 2006, the first year after the new Regulations were in place, shows that between 150,000 and 175,000 tonnes of “new” hazardous waste was produced. Much of this waste falls within Chapter 16 of the European Waste List, and Environment Agency data shows that hazardous waste under this Chapter has increased from 492,646 tonnes in 2004 to 555,378 tonnes in 2009.

3.2.5 This trend is expected to continue with the increasing impact of producer responsibility schemes, such as those provided for by the EU Waste Electrical and Electronic Equipment (WEEE)

¹⁵ Environment Agency data for 2006, 2007 and 2008 shows total arisings of hazardous waste of 6 m, 6.3 and 6.4m tonnes respectively. However, each of these figures includes around 2m tonnes of liquid waste sent to a single facility in Teesside and which is not relevant to this NPS. The Environment Agency has now published 2009 data, but arisings in that year were affected by the economic downturn and are not thought to provide a good baseline for future trends.

Directive 2002. Such schemes require the separate collection of WEEE waste and this results in more household hazardous wastes being removed from the mixed municipal waste stream, collected separately as hazardous waste and sent for treatment. For example, figures provided by the Waste and Resources Action Programme (WRAP) of arisings of waste desktop monitors, laptops and LCD TVs show that arisings are expected to increase from 40,000 tonnes in 2011 to around 120,000 tonnes by 2016.

3.2.6 The Waste Directive 2008/98/EC introduces changes to the list of properties that may make a waste hazardous. The exact impact of these changes is not yet known, but comments from industry during consultation on the transposition of the Waste Directive suggest that these changes are likely to increase the types and therefore the amounts of waste classified as hazardous.

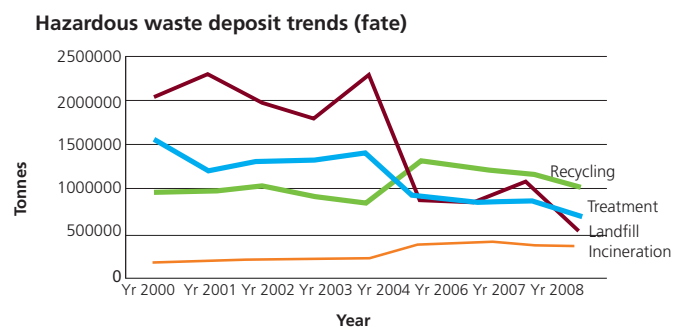
3.2.7 The European Commission has embarked upon a fundamental review of the European Waste List. Discussions are at a relatively early stage and the impact of any changes will have to be assessed. However, the likely outcome is that more wastes will be classified as hazardous as a result of the changes.

Current trends in the fate of hazardous waste

3.2.8 There have also been recent negative trends in the fate of the hazardous waste produced and which have seen decreases in the amounts of hazardous waste sent for recycling and reuse. This is partly due to a lack of available facilities for treatment and because landfilling certain hazardous wastes such as contaminated soil is often seen as the only option by some hazardous waste producers. There is a need to reverse this negative trend and new facilities are needed to allow more waste to be recycled and reused. Furthermore, amounts of hazardous waste sent to landfill still show considerable variations from year to year and are heavily dependent on the volume of contaminated soil produced during major construction projects. The management of at least

some of this soil could be moved up the waste hierarchy and new facilities are needed to allow this.

Figure 3: Hazardous Waste 2008 England & Wales



* 2005 was a transition year with data from old and new hazardous waste systems. There were comparability problems and some data was missing so returns for 2005 have not been included in our trend analysis.

3.3 Alternatives to meeting the demand for hazardous waste infrastructure

Why can't we stop hazardous waste being produced?

3.3.1 Waste prevention is at the top of the waste hierarchy. Policies are directed towards preventing and minimising hazardous waste. For example, the UK is promoting responsibility deals with retailers and other key business sectors to help drive forward waste prevention policies and practices. These responsibility deals can be in the form of a voluntary commitment by a sector to reduce the waste, including the hazardousness of the waste that is produced by that sector. Legal requirements also have a role to play in waste prevention. In some cases the legislation is directed at the products to reduce the hazardous components and substances used, with a view to minimising the hazardous substances that are discarded, and thereby to aid the environmentally sound recovery and disposal of the waste and so increase the protection of human health and the environment. An example is the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2008, which restrict the use of hazardous substances in new electrical and electronic products. In addition, the environmental permitting controls require operators of industrial

installations subject to integrated pollution prevention and control to take steps to prevent waste from being produced, including hazardous waste. Waste prevention also includes reducing the hazardousness of waste.

3.3.2 But even with these measures, it will not be possible to prevent all arisings of hazardous waste. There will remain some products for which there is no practical alternative to the use of hazardous substances. For example, in energy efficient lighting, there remains no alternative to the mercury discharge process and mercury therefore remains in use in such lighting, although the amount of mercury in each lamp is now greatly reduced. Furthermore, older products that entered the market prior to obligatory or voluntary restrictions on the use of hazardous substances are still in use and will continue to appear in the hazardous waste stream for some years.

Other alternatives to providing new or improved large scale hazardous waste infrastructure

Relaxing self-sufficiency requirements

3.3.3 To comply with the principles of self-sufficiency and proximity in Article 16 of the revised Waste Directive, sufficient *disposal* facilities must be provided in England to match expected arisings of all hazardous wastes, except those produced in very small quantities, so relaxing self sufficiency requirements is not an option for waste disposal. Whilst hazardous waste may legitimately be exported to other EU and other OECD countries for *recovery*, 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 needs. The Strategy for Hazardous Waste Management in England (2010) established a need for a number of different types of facility.

3.3.4 In particular, suitable facilities must be provided within the UK to meet the objectives of the UK Ship Recycling Strategy (2007) which

specifically encourages the environmentally sound management of end of life ships. This need has increased following the adoption in 2009 of the Hong Kong Convention for the Safe and Environmentally Sound Management of Ships.

Reusing and recycling more to avoid the need for new or improved facilities

3.3.5 EC Directive 2008/98 on waste sets out a revised waste hierarchy, which must be applied in waste prevention and management legislation and policy. Greater reuse and recycling are being encouraged in line with the waste hierarchy, but new hazardous waste treatment facilities are needed simply to enable more hazardous waste to be reused and recycled rather than being sent for disposal. In addition the processes carried out at such facilities will usually generate some residues, some of which will be hazardous and will need disposal.

Relying on a larger number of smaller facilities

3.3.6 Annex 2 to the Strategy for Hazardous Waste Management in England sets out the types of hazardous waste facility needed. In some cases the Strategy identifies that the amounts of such waste requiring treatment are less than the thresholds identified in the Planning Act. However, for some types of facility, the amount of hazardous waste requiring treatment exceeds those thresholds. An alternative to the provision of a few major facilities to manage these wastes might be a larger number of smaller facilities. This would allow greater scope for facilities to relate to regional and local arisings and so reduce the negative impacts associated with long distance transportation. However, it would not take account of economies of scale. This is important because, for some types of hazardous waste treatment, facilities are only viable if above a certain capacity. Furthermore, as explored in the Appraisal of Sustainability (see section 7.5 of the AoS report), the cumulative effects of a number of smaller facilities may, in some cases, be larger than those for one large facility – for example more resources may be used and landtake may be larger.

Conclusion on need for infrastructure

3.3.7 Consequently, a small number of large facilities (i.e. with a capacity above the threshold for nationally significant hazardous waste infrastructure) are likely to be needed to meet the expected increase in arisings of hazardous waste.

3.4 What types of NSIP will be needed:

3.4.1 The need for new facilities to manage hazardous waste was established in 'A Strategy for Hazardous Waste Management in England (2010)'. The Strategy identified that nationally significant infrastructure projects are likely to be needed in the following categories:

- Waste electrical and electronic equipment plants
- Oil regeneration plant
- Treatment plant for air pollution control residues
- Thermal desorption
- Bioremediation / soil washing to treat contaminated soil diverted from landfill
- Ship recycling facilities
- Hazardous waste landfill

The analysis carried out in the Strategy concluded that these are the only types of facility where nationally significant infrastructure will be required. Other types of facility required would be smaller and below the threshold in the Planning Act.

Waste electrical and electronic equipment plants

3.4.2 There is a growing need for specialist facilities to treat the Flat Panel Displays used in some computer monitors, TVs and laptops, which contain mercury. Existing facilities for the more general treatment of waste electrical and electronic equipment have not been designed to deal with this waste stream because Flat Panel Displays are relatively new and have only recently started to be discarded as waste. As indicated

in paragraph 3.2.5, arisings are expected to treble over the next five years. Technologies for managing Flat Panel Displays are currently under development and are expected to require a large investment, which is likely to drive the development of a small number of larger facilities to manage the expected arisings.

Oil regeneration plant

3.4.3 There is currently capacity of approximately 50,000 tonnes per annum for waste oil regeneration in the UK. There is a need for further capacity for recycling used lubricants to a very high level back into base lubricating oil. At present, most waste oil is processed into a fuel substitute and used for energy recovery. However, this is lower on the waste hierarchy than recycling. To realise the benefits of moving the management of this waste up the waste hierarchy, capacity for the regeneration of waste oil needs to be increased. Around 160,000 tonnes of oil per annum is suitable for regeneration, and therefore the need for at least one oil regeneration plant exists now. This need could increase if, for example, the existing capacity needs to be replaced. Any oil regeneration plant is likely to need a capacity of at least 70,000 tonnes per annum to be viable and new facilities are therefore expected to be nationally significant infrastructure.

Treatment plant for air pollution control residues

3.4.4 There is a need for further facilities to treat the Air Pollution Control (APC) residues that arise from the treatment of flue gases from municipal waste incinerators and energy from waste plant (EfW). Existing incinerators and EfW facilities produced around 122,000 tonnes of APC residues in 2008 and arisings are expected to increase significantly in future years as more EfW facilities are developed. The biggest driver for such developments will be Waste Disposal Authorities seeking to meet target restrictions on the amounts of waste disposed of to landfill in 2013 and 2020. Arisings of APC residues could increase by

over 172,000 tonnes per annum on this basis. In addition, the NPS for renewable energy cites EfW facilities as a potential route to meeting predicted electricity demands and this may encourage the development of further facilities. There are also Biomass Power Plants being developed by the renewable energy community and which may also increase APC arisings.

3.4.5 A number of different treatment options exist for APC residues including solidification, vitrification, stabilization and extraction. Currently most of the 122,000 tonnes of APC residues arising annually are landfilled following treatment such as solidification and stabilisation to meet Landfill Directive requirements. The predicted increased level of arisings between now and 2020 and the economies of scale suggest that any new facilities developed are likely to be nationally significant.

Thermal desorption

3.4.6 There is a need for additional thermal desorption facilities. It is estimated that around 109,000 tonnes of waste likely to lend itself to this sort of treatment arises each year of which around 60,000 tonnes will be oily sludges and oily filter cakes. In addition, some 247,000 tonnes of contaminated soil are produced each year and, while not all of this would be suitable for treatment by this process, some would be. There are a few existing thermal desorption plants operational in England and total existing capacity is estimated to be around 55,000 tonnes per annum. However, there is not sufficient capacity to treat all suitable waste by thermal desorption, and additional capacity of 60,000-120,000 tonnes is needed now to help divert contaminated soil from landfill. Such facilities are likely to be nationally significant.

Bioremediation / soil washing to treat contaminated soil diverted from landfill

3.4.7 There is a need for greater capacity to treat contaminated soil. Waste soils and sludges from a number of industries, including construction and demolition are suitable for treatment by bioremediation and/or soil washing. Over 400,000 tonnes of hazardous construction and demolition waste and soil waste was produced in England and Wales in 2008, and at least 80% was sent to landfill. While landfill may be the best option for a proportion of this waste, some will lend itself to treatment by soil washing and/or bioremediation. Environment Agency data shows that some 30,000 tonnes of soil thought to be contaminated only by heavy metals arises each year and is sent to landfill. Such soil should lend itself to treatment by soil washing. There is a further 175,000 tonnes of soil contaminated by asbestos or by organic substances such as fuels, oils and coal tars currently sent to landfill per annum and at least some of this will be treatable by soil washing, possibly in combination with bioremediation or thermal desorption. Environment Agency data shows a further 140,000 tonnes of soil arising per year and sent to landfill that is contaminated by a combination of dangerous metals and other dangerous substances. Where these other dangerous substances are limited to fuels above 2.5% or to a combination of hydrocarbons, the soil should lend itself to treatment by either soil washing or bioremediation.

3.4.8 To implement the requirement of the Waste Directive to manage waste in accordance with the waste hierarchy, there is a need to develop new facilities to treat contaminated soil to move the management of this waste stream away from landfill and up the waste hierarchy. This new capacity is needed now to encourage the process of landfill diversion.

Ship recycling facilities

3.4.9 There are some ship recycling facilities within England. There is only a small number of facilities within England that have the capacity to dismantle larger ships. Dismantling a ship is a lengthy process and this restricts the number of ships that each facility can handle per annum. There is therefore a need for more facilities to be developed and indeed the UK Ship Recycling Strategy specifically encourages the development of facilities to improve the environmentally sound recycling of ships. The Regulatory Impact Assessment carried out at the time the UK Ship Recycling Strategy was developed showed an average of five UK ships being exported per year for recycling and while figures do vary from year to year this has remained the position. Numbers of ships needing to be disposed of within the UK are likely to increase when the Hong Kong Convention for the Safe and Environmentally Sound Management of Ships comes into force.

3.4.10 In addition to ships, the Ministry of Defence is embarking on a 60 year project to dismantle its redundant nuclear powered submarines (which will number 27 in total). Once the radioactive components are removed at a civil Nuclear Licensed or military Authorised site, the remainder of the vessel could potentially be dismantled at a commercial ship breaking facility within the UK.

3.4.11 Larger facilities are also needed to manage waste arising from the dismantling of large oil and gas structures, since there are many similarities between major ship recycling operations and the dismantling of these structures. At present, decommissioned structures are routinely sent to Norway for recycling at the rate of around one per year.

3.4.12 Given this and the priority given by the Government to the development of environmentally sound facilities for the recycling of ships, the Government would wish to encourage the development of further ship recycling facilities within the UK, both to increase our own self-sufficiency and to contribute towards the provision

of sufficient environmentally sound facilities at a global level. To provide sufficient capacity for UK ships and contribute towards the provision of facilities globally, a mixture of new facilities with a capacity to manage above and below the threshold for nationally significant infrastructure of 30,000 tonnes of ship/s per annum will be needed within the next 10 years.

Hazardous waste landfill

3.4.13 Landfill is at the bottom of the waste hierarchy. Paragraph 34 of the Waste Strategy 2007 states that reliance on landfill is already reducing and should become the last resort for waste. It goes on to say that the Government will continue to pursue reductions in the use of landfill while recognizing that landfill will continue to have a place for the disposal of some wastes, including some hazardous wastes, and as a means of restoring exhausted mineral workings. The Strategy for Hazardous Waste Management in England includes a Principle to reduce reliance on landfill, which should only be used where, overall, there is no better recovery or disposal option. Annex 2 to the Strategy states that existing hazardous waste landfill appears to be sufficient for current need. However, the baseline for landfill is fluid as most existing landfills have time limited planning permission, which will require renewal over the next ten years. Renewal of such permission is possible under the Town and Country Planning system, but not all operators will decide to seek renewal. Given that, and the fact that there will remain some waste streams for which landfill is the best overall environmental outcome, there may be future applications for development consent for nationally significant hazardous waste landfill.

Conclusions

3.4.14 Government has therefore concluded that there is a need for these hazardous waste infrastructure facilities. The IPC should start its assessment of applications for infrastructure covered by this NPS on the basis that need has been demonstrated.

Part 4 – Assessment Principles

4.1 General Points

4.1.1 The statutory framework for deciding applications for development consent under the Planning Act is summarised in Section 1.1 of this NPS. This Part of the NPS sets out certain general policies in accordance with which applications relating to hazardous waste infrastructure are to be decided.

4.1.2 Subject to any more detailed policies set out in the Hazardous Waste NPSs and the legal constraints set out in the Planning Act 2008, there should be a presumption in favour of granting consent to applications for hazardous waste NSIPs, which clearly meet the need for such infrastructure established in this NPS.

4.1.3 In considering any proposed development, and in particular when weighing its adverse impacts against its benefits, the IPC should take into account:

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

4.1.4 In this context, the IPC should take into account environmental, social and economic benefits and adverse impacts, at national, regional and local levels. These may be identified in this NPS, or elsewhere.

4.1.5 The policy set out in this NPS is, for the most part, intended to make existing policy and practice in consenting nationally significant hazardous waste infrastructure clearer and more transparent, rather than to change the underlying policies against which applications are assessed

(or therefore the “benchmark” for what is, or is not, an acceptable nationally significant hazardous waste development). The Hazardous Waste NPS has taken account of relevant Planning Policy Statements (PPSs) and older-style Planning Policy Guidance Notes (PPGs) in England where appropriate. In the event of a conflict between these or any other documents and an NPS, the NPS prevails for purposes of IPC decision making given the national significance of the infrastructure.

4.1.6 The Marine and Coastal Access Act 2009 provides for the preparation of a Marine Policy Statement (MPS) and a number of marine plans. The IPC must have regard to the MPS and applicable marine plans in taking any decision which relates to the exercise of any function capable of affecting any part of the UK marine area. In the event of a conflict between any of these marine planning documents and an NPS, the NPS prevails for purposes of IPC decision making given the national significance of the infrastructure.

4.1.7 The IPC should only impose requirements¹⁶ in relation to a development consent that are necessary, relevant to planning, relevant to the development to be consented, enforceable, precise, and reasonable in all other respects. The IPC should take into account the guidance in Circular 11/95, as revised, on “The Use of Conditions in Planning Permissions” or any successor to it.

4.1.8 Equally, when the IPC requires the applicant to enter into development consent obligations¹⁷, these must be relevant to planning, necessary to make the proposed development acceptable in planning terms, directly related to the proposed development, fairly and reasonably related in scale and kind to the proposed development, and reasonable in all other respects.

¹⁶ As defined in section 120 of the Planning Act 2008

¹⁷ Where the words “planning obligations” are used in this NPS they refer to “development consent obligations” under section 106 of the Town & Country Planning Act 1990 as amended by section 174 of the Planning Act 2008.

4.1.9 In deciding to bring forward a proposal for infrastructure development, the applicant will have made a judgement on the financial and technical viability of the proposed development, within the market framework and taking account of Government interventions. Where the IPC considers, on information provided in an application, that the financial viability and technical feasibility of the proposal has been properly assessed by the applicant it is unlikely to be of relevance in IPC decision making (any exceptions to this principle are dealt with where they arise in this NPS and the reasons why financial viability or technical feasibility is likely to be of relevance explained).

4.2 Environmental Impact Assessment

4.2.1 All proposals for projects that are subject to the European Environmental Impact Assessment Directive¹⁸ must be accompanied by an Environmental Statement (ES) describing the aspects of the environment likely to be significantly affected by the project¹⁹. The Directive specifically refers to effects on human beings²⁰, fauna and flora, soil, water, air, climate, the landscape, material assets and cultural heritage, and the interaction between them. The Directive requires a description of the likely significant effects of the proposed project on the environment, covering the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the project, and also of the measures envisaged for avoiding or mitigating significant adverse effects²¹. When considering a proposal, the IPC should ensure that likely significant effects at all stages of the project have been adequately

assessed, and should request further information where necessary.

4.2.2 While not required by the EIA Directive, the IPC will find it helpful if the applicant also sets out information on the likely significant social and economic effects of the development, and shows how any likely significant negative effects would be avoided or mitigated. This information could include matters such as employment, equality, community cohesion and well-being.

4.2.3 When considering cumulative effects, the ES should provide information on how the effects of the applicant's proposal would combine and interact with the effects of other development (including projects for which consent has been sought or granted, as well as those already in existence)²². The IPC may also have other evidence before it, for example from appraisals of sustainability of relevant NPSs or development plans, on such effects and potential interactions. Any such information may assist the IPC in reaching decisions on proposals and on mitigation measures that may be required.

4.2.4 The IPC should consider how the accumulation of, and interrelationship between effects might affect the environment, economy or community as a whole, even though they may be acceptable when considered on an individual basis with mitigation measures in place.

4.2.5 In cases where the EIA Directive does not apply to a project, and an ES is not therefore required, the applicant should instead provide information proportionate to the project on the likely significant environmental, social and economic effects. References to an Environmental

18 Council Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, amended by Directives 97/11/EC 2003/35/EC.

19 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (SI 2009/2263).

20 The effects on human beings includes effects on health.

21 See Circular 02/99: *Environmental impact assessment* for further information on the preparation and content of an Environmental Statement.

22 For guidance on the assessment of cumulative effects, see, for example, Circular 02/99, *Environmental impact assessment, or Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions* (<http://ec.europa.eu/environment/eia/eia-studies-and-reports/guidel.pdf>).

Statement in this NPS should be taken as including a statement which provides this information, even if the EIA Directive does not apply.

4.2.6 In this NPS, the terms 'effects', 'impacts' or 'benefits' should accordingly be understood to mean likely significant effects, impacts or benefits.

4.2.7 In some instances it may not be possible at the time of the application for development consent for all aspects of the proposal to have been settled in precise detail. Where this is the case, the applicant should explain in its application which elements of the proposal have yet to be finalised, and the reasons why this is the case.

4.2.8 Where some details are still to be finalised the ES should set out, to the best of the applicant's knowledge, what the maximum extent of the proposed development may be in terms of site and plant specifications, and assess the maximum potential adverse effects which the project could have to ensure that the impacts of the project as it may be constructed have been properly assessed.

4.2.9 Should the IPC determine to grant development consent for an application where details are still to be finalised, it will need to reflect this in appropriate development consent requirements. Clearly, if development consent is granted for a proposal and at a later stage the developer wishes for technical or commercial reasons to construct it in such a way that its extent will be greater than has been provided for in terms of the consent, it may be necessary to apply for a change to be made to the development consent, and the application to change the consent may need to be accompanied by further environmental information to supplement the original ES.

4.3 Habitats Regulations Assessment

4.3.1 Prior to granting a development consent order, the IPC must, under the Habitats Regulations²³, consider whether the project may have a significant effect on a European site, or on any site to which the same protection is applied as a matter of policy, either alone or in combination with other plans or projects. Further information on the requirements of the Habitats Regulations can be found in a Government Circular²⁴. Applicants should also refer to Section 5.3 of this NPS on biodiversity and geological conservation and to section 5.2 on air emissions. The applicant should seek the advice of Natural England and provide the IPC with such information as it may reasonably require to determine whether an appropriate assessment is required. Where initial screening indicates that significant effects on European sites cannot be excluded on the basis of objective information a full appropriate assessment will be required. In the event that appropriate assessment is required, the applicant must provide the IPC with such information as may reasonably be required to enable it to conduct the appropriate assessment. This should include information on any mitigation measures that are proposed to minimise or avoid likely effects.

4.4 Alternatives

4.4.1 Parts 2 and 3 of this NPS provide an overview to the strategic alternatives to meeting the general need for new nationally significant hazardous waste infrastructure. These strategic alternatives do not need to be assessed by the IPC.

4.4.2 This NPS does not make any specific proposals for individual developments. Such developments will be for applicants to determine and will need to be assessed by the IPC in accordance with this NPS. This NPS does require that options selected for hazardous waste

23 The Conservation of Habitats and Species Regulations 2010, and the Offshore Marine Conservation (Natural Habitats &c) Regulations 2007 (as amended)

24 Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their impact within the Planning System (ODPM 06/2005, Defra 01/2005) available via TSO website tso.co.uk/bookshop. It should be noted that this document does not cover more recent legislative requirements. Where this circular has been superseded, reference should be made to the latest successor document.

infrastructure should be at the most appropriate level on the waste hierarchy to deliver the best overall environmental outcome. There may also be specific legal requirements for the IPC to consider alternatives (for example, under the Habitats and Water Framework Directives).

4.4.3 While this NPS and supporting AoS have shown that there is no alternative, at a strategic level, to meeting the need for new hazardous waste infrastructure, it must not be assumed that there will be no alternatives for individual projects. The Environmental Statement (ES) for each project should include an outline of the main alternatives studied by the applicant and an indication of the main reasons for the applicant's choice, taking into account the environmental, social and economic effects.

4.5 Criteria for "Good Design" For Hazardous Waste Infrastructure

4.5.1 The visual appearance of a building is sometimes considered to be the most important factor in good design. But high quality and inclusive design goes far beyond aesthetic considerations. The functionality of an object – be it a building or other type of infrastructure – including fitness for purpose and sustainability, is equally important. Applying "good design" to hazardous waste projects should produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible. It is acknowledged, however that the nature of much hazardous waste infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area.

4.5.2 Good design is also a means by which many policy objectives in the NPS can be met, for example the impact sections show how good design, in terms of siting and use of appropriate

technologies can help mitigate adverse impacts such as noise.

4.5.3 In the light of the above, and given the importance which the Planning Act 2008 places on good design and sustainability, the IPC needs to be satisfied that hazardous waste infrastructure developments are sustainable and, having regard to regulatory and other constraints, are as attractive, durable and adaptable (including taking account of natural hazards such as flooding) as they can be. In so doing, the applicant should therefore take into account both functionality (including fitness for purpose and sustainability) and aesthetics (including its contribution to the quality of the area in which it would be located) as far as possible. Whilst the applicant may not have any or very limited choice in the physical appearance of some hazardous waste infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, landform and vegetation. Furthermore, the design and sensitive use of materials in any associated development such as electricity substations will assist in ensuring that such development contributes to the quality of the area.

4.5.4 Applicants should be able to demonstrate in their application documents how the design process was conducted and how the proposed design evolved. Where a number of different designs were considered, applicants should set out the reasons why the favoured choice has been selected. In considering applications the IPC should take into account the ultimate purpose of the infrastructure and bear in mind the operational, safety and security requirements which the design has to satisfy.

4.5.5 Applicants and the IPC should consider professional, independent advice on the design aspects of a proposal. In particular, the Design Council can provide support for and encourage design review for nationally important schemes.²⁵

²⁵ <http://www.communities.gov.uk/publications/planningandbuilding/letterdesignplanning>

4. 6 Climate Change Adaptation

4.6.1 Section 10(3)(a) of the Planning Act requires the Secretary of State to have regard to the desirability of mitigating, and adapting to, climate change in designating a NPS.

4.6.2 This part of the NPS sets out how the NPS puts Government policy on climate change adaptation into practice, and in particular how applicants and the IPC should take the effects of climate change into account when developing and consenting infrastructure. While climate change mitigation is essential to minimise the most dangerous impacts of climate change, previous global greenhouse gas emissions have already committed us to some degree of continued climate change for at least the next 30 years.

4.6.3 Climate change is likely to mean that the UK will experience hotter, drier summers and warmer wetter winters. There is a likelihood of increased flooding, drought, heatwaves, intense rainfall events and other extreme events such as storms, as well as rising sea levels. More information on implications for coastal change is given in section 5.5. Adaptation is therefore necessary to deal with the potential impacts of these changes that are already happening. For example, applications will need to take account of projected changes in water resource availability. Further advice on flooding risk is given in section 5.7.

4.6.4 To support planning decisions, the Government produces a set of UK Climate Projections and is developing a statutory National Adaptation Programme²⁶. In addition, the Government's Adaptation Reporting Power²⁷ will ensure that reporting authorities (a defined list of public bodies and statutory undertakers) assess the risks to their organisation presented by climate change.

4.6.5 In certain circumstances, measures implemented to ensure a scheme can adapt to climate change may give rise to additional impacts, e.g. as a result of protecting against flood risk there may be consequential impacts on coastal change.

4.6.6 New hazardous waste infrastructure will typically be long-term investments which will need to remain operational over many decades, in the face of a changing climate. Consequently, applicants must consider the impacts of climate change when planning the location, design, build, operation and, where appropriate, decommissioning of new hazardous waste infrastructure. The ES should set out how the proposal will take account of the projected impacts of climate change. While not required by the EIA Directive, this information will be needed by the IPC.

4.6.7 Applicants should use the latest set of UK Climate Projections²⁸ to ensure they have identified appropriate adaptation measures. Applicants should apply as a minimum, the emissions scenario that the independent Committee on Climate Change suggests the world is currently most closely following – and the 10%, 50% and 90% estimate ranges. These results should be considered alongside relevant research which is based on the climate change projections.

4.6.8 In addition, where hazardous waste infrastructure has safety critical elements, the applicant should apply the high emissions scenario (high impact, low likelihood) to those elements critical to the safe operation of the infrastructure.

4.6.9 The applicant should take into account the potential impacts of climate change using the latest UK Climate Projections available at the time the ES was prepared to ensure they have identified appropriate mitigation or adaptation

²⁶ s.58 of the Climate Change Act 2008

²⁷ s.62 of the Climate Change Act 2008

²⁸ See <http://ukclimateprojections.defra.gov.uk/>

measures. This should cover the estimated lifetime of the new infrastructure. Should a new set of UK Climate Projections become available after the preparation of the ES, the IPC should consider whether they need to request further information from the applicant.

4.6.10 If any adaptation measures give rise to consequential impacts the IPC should consider the impact of those latter in relation to the application as a whole and the impacts guidance set out in this part of this NPS (e.g. on flooding, water resources and coastal change).

4.6.11 The applicant should demonstrate that there are not critical features of the design of new hazardous waste infrastructure which may be seriously affected by more radical changes to the climate beyond that projected in the latest set of UK climate projections, taking account of the latest credible scientific evidence on, for example, sea level rise (e.g. by referring to additional maximum credible scenarios – i.e. from the Intergovernmental Panel on Climate Change or EA) and that necessary action can be taken to ensure the operation of the infrastructure over its estimated lifetime.

4.6.12 Any adaptation measures should be based on the latest set of UK Climate Projections, the Government's latest national Climate Change Risk Assessment, when available²⁹ and in consultation with statutory consultees.

4.6.13 Adaptation measures can be required to be implemented at the time of construction where necessary and appropriate to do so.

4.6.14 Where adaptation measures are necessary to deal with the impact of climate change, and that measure would have an adverse effect on other aspects of the project and/or surrounding environment (e.g. coastal processes), the IPC may consider requiring the applicant to ensure that the adaptation measure could be implemented should the need arise, rather than at the outset

of the development (e.g. reserving land for future extension, increasing height of existing, or requiring new, sea wall).

4.7 Pollution Control and Other Environmental Regulatory Regimes

4.7.1 Issues relating to discharges or emissions from a proposed project which affect air quality, water quality, land quality and the marine environment, or which include noise and vibration, may be subject to separate regulation under the pollution control framework or other consenting and licensing regimes. Any activities within the development that are regulated under those regimes will need to obtain the relevant permissions before the activities can be operated. All hazardous waste infrastructure covered by this NPS will be subject to the Environmental Permitting (EP) regime, which also incorporates operational waste management requirements for certain activities.

4.7.2 The planning and pollution control systems are separate but complementary. The planning system controls the development and use of land in the public interest. It plays a key role in protecting and improving the natural environment, public health and safety, and amenity, for example by attaching requirements to allow developments which would otherwise not be environmentally acceptable to proceed, and preventing harmful development which cannot be made acceptable even through requirements. Pollution control is concerned with preventing pollution through the use of measures to prohibit or limit the releases of substances to the environment from different sources to the lowest practicable level. It also ensures that ambient air and water quality meet standards that guard against impacts to the environment or human health. Environmental Permits mainly regulate discharges and emissions during the operation, decommissioning and closure phases of a facility and are limited

²⁹ s.56 of the Climate Change Act 2008

to activities covered by the Regulations. The Environmental Permit cannot control impacts from sources outside the facility's boundary such as those from traffic movements.³⁰

4.7.3 In considering an application for development consent, the IPC should focus on whether the development itself is an acceptable use of the land, and on the impacts of that use, rather than the control of processes, emissions or discharges themselves. The IPC should work on the assumption that the relevant pollution control regime will be properly applied and enforced. It should act to complement but not seek to duplicate it.

4.7.4 These considerations apply in an analogous way to other environmental regulatory regimes, including those on land drainage and flood defence, water abstraction and biodiversity.

4.7.5 There is a statutory duty to consult the Marine Management Organisation (MMO) on nationally significant projects which would affect, or would be likely to affect, any relevant marine areas as defined in the Planning Act 2008 (as amended by s.23 of the Marine and Coastal Access Act 2009.) The IPC consent may include a deemed marine licence and the MMO will advise on what conditions should apply to the deemed marine licence. The IPC and MMO should cooperate closely to ensure that nationally significant infrastructure projects are licensed in accordance with environmental legislation, including European directives.

4.7.6 When a developer applies for an Environmental Permit, the relevant regulator (the Environment Agency) requires that the application demonstrates that processes are in place to meet all relevant EP requirements. In considering the impacts of the project, the IPC may wish to consult the regulator on the scope of the permit

or consent and any management plans (such as any produced for odour or noise) that would be included in an Environmental Permit application.

4.7.7 Applicants are strongly advised to make early contact with relevant regulators, including the Environment Agency and the MMO, to discuss their requirements for environmental permits and other consents. This will help ensure that applications take account of all relevant environmental considerations and that the relevant regulators are able to provide timely advice and assurance to the IPC. Wherever possible, applicants are encouraged to submit applications for Environmental Permits and other necessary consents at the same time as applying to the IPC for development consent as environmental permitting bodies cannot pre-determine the outcome of an application that has not been submitted.

4.7.8 The IPC should be satisfied that development consent can be granted taking full account of environmental impacts. This will require close cooperation with the Environment Agency (EA) and/or the pollution control authority, and other relevant bodies, such as the MMO, Natural England, Drainage Boards, and water and sewerage undertakers, to ensure that in the case of potentially polluting developments:

- the relevant pollution control authority is satisfied that potential releases can be adequately regulated under the pollution control framework; and
- the effects of existing sources of pollution in and around the site are not such that the cumulative effects of pollution when the proposed development is added would make that development unacceptable, particularly in relation to statutory environmental quality limits.

³⁰ More information on Environmental Permits can be found on Defra's website: <http://archive.defra.gov.uk/environment/policy/permits/documents/ep2010guidance.pdf> and the Environment Agency's website: <http://www.environment-agency.gov.uk/business/topics/permitting/default.aspx>

4.7.9 The IPC should not refuse consent on the basis of regulated impacts unless it has good reason to believe that any relevant necessary operational pollution control permits or licences or other consents will not subsequently be granted.

4.8 Safety

4.8.1 The applicant should liaise closely with the Health and Safety Executive (HSE) on matters relating to safety. HSE is responsible for enforcing a range of health and safety legislation applying to the construction, operation and decommissioning of hazardous waste infrastructure. The IPC will need to be satisfied that there is no reason to expect that the project will not comply.

4.8.2 Some hazardous waste infrastructure may be subject to the Control of Major Accident Hazards Regulations 1999 (COMAH). These are enforced by HSE and the Environment Agency in England. The same principles apply here as for those set out in the previous section on Pollution Control and other Environmental Permitting Regimes.

4.9 Hazardous Substances

4.9.1 All establishments wishing to hold stocks of certain hazardous substances, above a threshold quantity need hazardous substances consent. Applicants should consult the HSE at pre-application stage³¹ if the project is likely to need hazardous substances consent. Where hazardous substances consent is applied for³², the IPC will consider whether to make an order directing that hazardous substances consent shall be deemed to be granted alongside making an order granting development consent. The IPC should consult HSE about this. Where HSC is applied for, the IPC will consider whether to make an order directing that HSC shall be deemed to be granted alongside making an order granting development consent. The IPC should consult HSE about this.

4.9.2 HSE will assess the risks based on the development consent application. Where HSE does not advise against the IPC granting the consent, it will also recommend whether the consent should be granted subject to any conditions.

4.9.3 HSE sets a consultation distance around every site with hazardous substances consent and notifies the relevant local planning authorities. Whenever a hazardous waste development is proposed within any consultation distance, the applicant should consult the HSE for its advice on locating the particular development there.

4.10 Health

4.10.1 Hazardous waste management has the potential to impact positively and negatively on the health and well-being ("health") of the population.

4.10.2 Modern, appropriately located, well-run and well-regulated, waste management facilities operated in line with current pollution control techniques and standards should pose little risk to human health. The detailed consideration of a waste management process and the implications, if any, for human health is the responsibility of the pollution control authorities. However, planning operates in the public interest to ensure that the location of proposed development is acceptable and health can be material to such decisions. Perceptions of the health risks associated with hazardous waste infrastructure may exceed any actual risks and could lead to anxiety and stress. Where relevant, applicants should carry out an assessment of community anxiety and stress and how this is to be managed. The IPC should take account of health concerns when setting conditions relating to a range of impacts including, for example, noise

31 Further information is available at the HSE's website: <http://www.hse.gov.uk/landuseplanning/nsip-applications.htm>

32 Hazardous substances consent can also be applied for subsequent to a DCO application. Where they expect to apply for hazardous substances consent subsequently, the applicant should highlight this in their application to the IPC.

4.10.3 As described in the relevant sections of this NPS, where the proposed project has an effect on human beings, the ES should assess these effects for each element of the project, identifying any adverse health impacts, and identifying measures to avoid, reduce or compensate for these impacts as appropriate. These impacts may affect people simultaneously, so the applicant and the IPC should consider the cumulative impact on health.

4.10.4 The direct impacts on health may include increased traffic, air pollution, dust, odour, polluting water and noise.

4.10.5 New hazardous waste infrastructure may also have indirect health impacts, for example if it in some way affects access to key public services, transport or the use of open space for recreation and physical activity. Applicants should avoid such impacts where possible.

4.11 Common Law Nuisance and Statutory Nuisance

4.11.1 Section 158 of the Planning Act 2008 confers statutory authority for carrying out development consented to by, or doing anything else authorised by, a development consent order. Such authority is conferred only for the purpose of providing a defence in any civil or criminal proceedings for nuisance. This would include a defence for proceedings for nuisance under Part III of the Environmental Protection Act 1990 (statutory nuisance) but only to the extent that the nuisance is the inevitable consequence of what has been authorised. The defence does not extinguish the local authority's duties under Part III of the EPA 1990 to inspect its area and take reasonable steps to investigate complaints of statutory nuisance and to serve an abatement notice where satisfied of its existence, likely occurrence or recurrence. The defence is not intended to extend to proceedings where the matter is "prejudicial to health" and not a nuisance.

4.11.2 It is very important that, at the application stage of an NSIP, possible sources of nuisance under section 79(1) of the 1990 Act and how they may be mitigated or limited are considered by the IPC so that appropriate requirements can be included in any subsequent order granting development consent.

4.11.3 The IPC should note that the defence of statutory authority is subject to any contrary provision made by the IPC in any particular case in a development consent order (section 158(3)). Therefore subject to paragraph 4.11.1, the IPC can disapply the defence of statutory authority, in whole or in part, in any particular case, but in doing so should have regard to whether any particular nuisance is an inevitable consequence of the development.

4.12 Security Considerations

4.12.1 National security considerations apply across all national infrastructure sectors. Overall responsibility for security of the waste sector lies with Defra. It works closely with Government agencies including the Centre for the Protection of National Infrastructure (CPNI) to reduce the vulnerability of the most 'critical' infrastructure assets in the sector to terrorism and other national security threats.

4.12.2 Government policy is to ensure that, where possible, proportionate protective security measures are designed into new infrastructure projects at an early stage in the project development. Where applications for development consent for infrastructure covered by this NPS relate to potentially 'critical' infrastructure, there may be national security considerations.

4.12.3 Defra will be notified at pre-application stage about every likely future application for nationally significant hazardous waste infrastructure projects so that any national security implications can be identified and appropriately managed. Where national security implications have been identified, the applicant should consult

with relevant security experts from CPNI and Defra, as appropriate, to ensure that physical, procedural and personnel security measures have been adequately considered in the design process; and that adequate consideration has been given to the management of security risks. If CPNI and Defra, as appropriate, are satisfied security issues have been adequately addressed in the project when the application is submitted to the IPC, Defra will provide confirmation of this to the IPC and the IPC should not need to give any further consideration to the details of the security measures in its examination.

4.12.4 The applicant should only include sufficient information in the application as is necessary to enable the IPC to examine the development consent issues and make a properly informed decision on the application.

4.12.5 In exceptional cases, where examination of an application would involve public disclosure of information about defence or national security which would not be in the national interest, the Secretary of State can intervene and examine a part or the whole of the application. In that case, the Secretary of State may appoint an examiner to consider evidence in closed session and the Secretary of State would be the decision maker for the application.

4.13 Consideration of Hazardous Waste Facilities

4.13.1 New hazardous waste infrastructure is required to drive the management of hazardous waste up the waste hierarchy. Applicants will need to provide evidence that the proposed facility will manage hazardous waste at the most appropriate point on the waste hierarchy and demonstrate how the facility will help to achieve the principles set out in the Strategy for Hazardous Waste Management. Applicants should consider new and innovative technologies where these offer opportunities to manage a waste stream at a higher point on the waste hierarchy or to produce less residual waste.

4.13.2 Applicants should consider energy efficient options for site facilities and compounds. For example, landform, layout, building orientation, massing and landscaping may be used to reduce likely energy consumption and technologies used in the operation of the plant can be fuel efficient. Applicants should consider using decentralized energy supplies and renewable and low carbon sources. Where processing hazardous waste can create energy, developers may be able to use this to help meet the energy demands of the facility. When considering the relative benefits and impacts of applications for hazardous waste infrastructure, the IPC should give weight to the benefits resulting from energy efficient proposals and in particular those using renewable and low carbon energy sources.

4.13.3 Applicants should provide details of any benefits achieved from co-locating with existing facilities, as well as ensure that the cumulative impacts from doing so are described in the EIA.

4.13.4 Some of the generic impacts in Part 5 are also potentially considerations for environmental permits (see section 4.7). This will vary between different types of hazardous waste developments and applicants are advised to make early contact with the relevant regulator to discuss the scope of what an environmental permit is likely to cover. Likewise, the IPC will need to liaise with the regulator to ensure it sees no reason, in principle, why the particular impact should not be able to be adequately regulated under the environmental permitting regime.

4.14 Consideration of Waste Electrical and Electronic Equipment Treatment Facilities

4.14.1 A large footprint would be required for this type of facility which would consist of industrial units with external storage of some segregated waste fractions. Applicants should demonstrate that they have taken measures to reduce the potential size of the footprint where this might have an adverse effect on soils and geodiversity (and other environmental objectives). The footprint would

be less for a facility located alongside an existing WEEE facility and which might use some of the existing infrastructure. Indeed there may be other advantages in locating the new facilities needed for the management of waste from Flat Panel Displays alongside existing WEEE treatment facilities.

4.14.2 Any WEEE treatment facility is likely to need access to adequate water and energy supplies and access to national transport networks. The amount of water and energy required for this sort of work may be considerable and may contribute to adverse effects on water supplies and greenhouse emissions. Applicants must demonstrate that a reliable and adequate water supply is available for the proposed development. The amount of water abstracted from the environment during operation will be controlled by a separate abstraction licence.

4.14.3 This type of facility has the potential to include fugitive emissions such as mercury vapour or dust possibly including metals such as lead. Applicants will need to address this in their Environmental Statement (See section 4.2 for more information on the consideration of impacts in Environmental Statements.) Emissions to air, land and water during operation and decommissioning will be controlled by the facility's Environmental Permit.

4.14.4 Technologies for this type of waste are still under development and it is not possible to set specific criteria that should be taken into account. However, applicants must demonstrate that, where possible, the process will allow the recycling and recovery of materials from the WEEE.

4.15 Consideration of Oil Regeneration Plant

4.15.1 An oil regeneration plant will need to be of sufficient size to accommodate the necessary industrial process plant, extensive piping, chemical processing units and storage tanks. A location alongside an existing oil refinery (many of which are located at ports) could be an advantage.

4.15.2 Oil regeneration facilities will require an abundant supply of water and have significant energy requirements. Applicants must demonstrate that a reliable and adequate supply of water will be available for the facility. The amount of water abstracted from the environment during operation will be controlled by a separate abstraction licence. Where possible applicants should treat and recycle water effluent produced by the facility, and the IPC should give weight to the benefits of recycling water effluent in their consideration of the relative benefits and impacts of the proposed development. Applicants should consider a location close to adequate existing renewable or low carbon energy sources.

4.15.3 Oil poses a particular risk to soil and groundwater when spilt. Applicants will need to address the potential impacts and mitigation measures in their Environmental Statements (see sections 4.2 and 5.15 for more information). Emissions to air, land and water during operation and decommissioning will be controlled by the facility's Environmental Permit.

4.16 Consideration of Facilities to Treat Air Pollution Control Residues

4.16.1 There is a variety of techniques available to treat Air Pollution Control (APC) residues. The treatment options include pre-treatment, physico chemical treatment, combined processes and thermal treatment. Where practicable applicants should consider using processes which result in reusable products and those which reduce the quantity of residue requiring further treatment

4.16.2 Where APC residues are solidified by mixing through water and effluent, access to a sufficient supply of water or waste water will be required and bunded tanks will need to be constructed to store the water/waste water. Where treatment is via vitrification, waste will need to be heated to high temperatures and access to a sufficient supply of energy to power the heating of the waste will be needed.

4.16.3 Applicants should consider the locations at which APC residues are produced. Ideally, APC residue treatment facilities would either be located as close as practicable to places where these residues arise, such as Energy from Waste Plant, or as close as possible to the place of final treatment/disposal. For example, where APC residues are being treated so that they can be accepted at hazardous waste landfill, a location adjacent or near to the landfill might be an advantage. Emissions to air, land and water and energy efficiency during operation and decommissioning will be controlled by the facility's Environmental Permit.

4.17 Consideration of Thermal Desorption Facilities

4.17.1 Thermal desorption is used to clean up volatile components from soil. It uses heat to increase the volatility of contaminants such as oil so that they can be separated from a solid matrix such as soil, sludge or filter cake. Applicants should therefore take account of the locations at which soil and sludge waste arises in selecting a site for the proposed facility. Emissions to air, land and water and energy efficiency during operation and decommissioning will be controlled by the facility's Environmental Permit.

4.18 Consideration of Bioremediation / Soil Washing to Treat Contaminated Soil Diverted from Landfill

4.18.1 Impacts from bioremediation or soil washing facilities will generally include those arising from emissions from the treatment processes as well as storage and use of inputs, reagents and wash water. Applicants must address these issues in the Environmental Statement.

4.18.2 Where applications are for soil washing facilities, applicants should consider treating and recycling residual water after washing for reuse

in the process. The IPC should give weight to the potential benefits of treating and recycling residual water when considering the relative benefits and impacts of a proposal for a soil washing facility. Emissions to air, land and water and water and energy efficiency during operation and decommissioning will be controlled by the facility's Environmental Permit.

4.19 Consideration of Ship Recycling Facilities

4.19.1 Nationally significant facilities are likely to require a coastal location and a location at a port would be an advantage. (For smaller facilities an estuarine location might be suitable.) Conversion of former shipbuilding facilities would be an option as well as the creation of a new facility. As ships may be imported from overseas for recycling, applicants should demonstrate that they have taken account of the potential overseas market in selecting a suitable location. Given the amount of material that will be removed from the ship for reuse, recycling or disposal, a rail or sea haulage link near the facility is an advantage and will provide easier access to overseas markets where a higher price for scrap metal may be achieved.

4.19.2 The amount of land needed to accommodate the facility will depend on the number of vessels it intends to have the capacity to process simultaneously. Facilities need to be fairly large to accommodate storage for materials/wastes removed from the ships, workshops, offices and staff facilities in addition to the berth for the ship. Further advice is given in Defra guidance³³.

4.19.3 The following options are acceptable for ship dismantling within England:

- 1) Dry dock – this is the best option. The decision maker should give weight to the benefits of a dry dock when considering the relative benefits and impacts of a proposal for a ship recycling facility.

³³ Overview of Ship Recycling in the UK (published by Defra, February 2007)

- 2) Floating dry dock or flat top barge.
- 3) Slipway.
- 4) Wet berth – this is really only suitable for removal of the internal components of the hull. The vessel must then be removed from the water to a suitable working area to strip the hull. Applications for facilities for wet berth work should not be given consent unless a suitable dry working area where the vessel can be taken for the hull to be stripped is identified.

4.19.4 Any option involving a dock will need a dock gate constructed in a way that allows ships of the maximum size the facility wishes to handle to pass through plus cranes if these are to be used. At least 1m clearance each side is required for ships and a further 2m each side for cranes.

4.19.5 Emissions to air, land and water and water and energy efficiency during operation will be controlled by the facility's Environmental Permit. Alterations to flood defences are likely to require flood defence consent.

4.20 Consideration of Hazardous Waste Landfill Facilities

4.20.1 Hazardous waste landfill is the lowest option on the waste hierarchy and should be considered only for those wastes where there is no suitable alternative treatment. Applicants must demonstrate that waste to be deposited at any proposed new hazardous waste landfill facility cannot be managed in an alternative way higher up the waste hierarchy.

4.20.2 In addition to the landfill void itself, the site must be able to accommodate a range of associated infrastructure such as reception facilities, vehicle access, parking, pumping equipment and any necessary leachate collection systems. Applicants must demonstrate that the design minimizes the footprint as much as possible and must include information about how it is envisaged the site will be restored after the landfill has closed to enable use for other purposes.

4.20.3 Landfill facilities will be regularly accessed by heavy vehicles and access to the national transport network will be important.

4.20.4 The Environmental Permitting (England and Wales) Regulations 2010 include a number of requirements that must be taken into consideration in determining the location of a landfill site and which are taken into account in the permitting process. Emissions to air, land and water during operation will be controlled by the facility's Environmental Permit.

Part 5 – Generic Impacts

5.1 Introduction

5.1.1 Some impacts will be relevant to any hazardous waste infrastructure, whatever the type. Those impacts are considered below. In addition, the above technology-specific parts of this NPS provide more detail on specific impacts that may be particularly relevant to the technology in question.

5.1.2 The AoS has identified that hazardous waste facilities may have impacts on, in particular: biodiversity and geological conservation, landscape and the visual environment, noise, water quality and resources, air emissions, dust, odour, traffic and transport and, in the case of Ship Recycling Facilities, the coastal environment. In addition, the above sections on particular types of hazardous waste facilities have identified specific impacts that may be particularly relevant. The following sections set out how these and other impacts that might be relevant should be considered. However, none of this implies that these are the only impacts that might be relevant in any particular case.

5.2 Air Quality and Emissions

Introduction

5.2.1 Infrastructure development can have adverse effects on air quality. The construction, operation and decommissioning phases can involve emissions to air which could lead to adverse impacts on health, on protected species and habitats, or on the wider countryside. Impacts on protected species and habitats are covered in Section 5.3.

Applicant's Assessment

5.2.2 Where the project is likely to have adverse effects on air quality the applicant should undertake an assessment of the impacts of the proposed project as part of the Environmental Statement (ES).

5.2.3 Air quality considerations are likely to be particularly relevant where hazardous waste facilities are proposed within or adjacent to AQMAs or where they may have potential impacts on Natura 2000 sites.

5.2.4 The ES should describe:

- any significant air emissions, their mitigation and any residual effects distinguishing between the project stages, and taking account of any significant emissions from any traffic generated by the project;
- contribution of air emissions to critical levels and loads for the protection of vegetation and ecosystems with the potential for eutrophication effects on habitats and ecosystems
- the predicted absolute emission levels from the proposed project, after mitigation methods have been applied and
- existing air quality levels and the relative change in air quality from existing levels.

IPC Decision Making

5.2.5 The IPC should generally give air quality considerations substantial weight where a project would lead to a deterioration in air quality in an area, or leads to a new area, where the air quality breaches any national air quality limits. However, air quality considerations will also be important where substantial changes in air quality are expected, even if this does not lead to any breaches of any national air quality limits.

5.2.6 In all cases the IPC must take account of relevant statutory air quality limits. Where a project is likely to lead to a breach of such limits, the developers should work with the relevant authorities to secure appropriate mitigation measures to allow the proposal to proceed. In the event that a project will lead to non-compliance with a statutory limit, the IPC should refuse consent.

5.2.7 All hazardous waste facilities will be subject to environmental permitting. The IPC will need to liaise with the EA to ensure that it is satisfied that any air emissions from the facility during operation and decommissioning can be adequately regulated under the environmental permitting regime.

Mitigation

5.2.8 The IPC should consider whether mitigation measures are needed both for operational and construction emissions over and above any which may form part of the project application. A construction management plan may help codify mitigation at that stage.

5.2.9 In doing so the IPC may refer to the conditions and advice in the UK Air Quality Strategy or any successor to it.

5.2.10 Reductions in air emissions might be achieved: through consideration of location, design and layout; consideration of technologies employed; and consideration of energy use.

5.2.11 The mitigations identified in the section on transport impacts will help mitigate against the effects of air emissions from transport which are not controlled by the Environmental Permit.

5.3 Biodiversity and Geological Conservation

Introduction

5.3.1 Biodiversity is the variety of life in all its forms and encompasses all species of plants and animals and the complex ecosystems of which they are a part. Geological conservation relates to the sites that are designated for their geology and/or their geomorphological³⁴ importance.

5.3.2 The wide range of legislative provisions at the international and national level that can impact on planning decisions affecting biodiversity and geological conservation issues are set out in a Government Circular.³⁵ A separate guide sets out good practice in England in relation to planning for biodiversity and geological conservation.³⁶

Applicant's assessment

5.3.3 Where the development is subject to EIA the applicant should ensure that the ES clearly sets out any effects on internationally, nationally and locally designated sites of ecological or geological conservation importance, on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity. The applicant should provide environmental information proportionate to the infrastructure where EIA is not required.

5.3.4 The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests.

IPC decision making

5.3.5 The Government's biodiversity strategy is set out in "Working with the grain of nature"³⁷. Its aim is to ensure:

- a halting, and if possible a reversal, of declines in priority habitats and species, with wild species and habitats as part of healthy functioning ecosystems; and
- the general acceptance of biodiversity's essential role in enhancing the quality of life, with its conservation becoming a natural consideration in all relevant public, private and non-governmental decisions and policies.

34 A list of designated sites (including marine sites) is included in the Geological Conservation Review held by the Joint Nature Conservation Committee (JNCC), www.jncc.gov.uk/earthheritage.

35 Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System (ODPM 06/2005, Defra 01/2005) available via TSO website www.tso.co.uk/bookshop. It should be noted that this document does not cover more recent legislative requirements, such as the Marine Strategy Framework Directive. Where this circular has been superseded, reference should be made to the latest successor document.

36 Planning for Biodiversity and Geological Conservation: A Guide to Good Practice (March 2006).

37 Strategy for England; similar strategies apply in Wales, Scotland and Northern Ireland.

5.3.6 This aim needs to be viewed in the context of the challenge of climate change: failure to address this challenge will result in significant impact on biodiversity. The policy set out in the following sections recognises the need to protect the most important biodiversity and geological conservation interests.

5.3.7 As a general principle and subject to the specific policies below, development should aim to avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives³⁸; where significant harm cannot be avoided, the appropriate compensation measures should be sought.

5.3.8 In taking decisions, the IPC should ensure that appropriate weight is attached to designated sites of international, national and local importance; protected species; habitats and other species of principal importance for the conservation of biodiversity; and to biodiversity and geological interests within the wider environment.

International Sites

5.3.9 The most important sites for biodiversity are those identified through international conventions and European Directives. The Habitats Regulations provide statutory protection for these sites³⁹ but do not provide statutory protection for potential Special Protection Areas (pSPAs) before they have been agreed with the European Commission. For the purposes of considering development proposals affecting them, as a matter of policy, the Government wishes pSPAs to be considered in the same way as if they had already been designated. Listed Ramsar sites should, also as a matter of policy, receive the same protection.

Sites of Special Scientific Interest (SSSIs)

5.3.10 Many SSSIs are also designated as sites of international importance and will be protected accordingly. Those that are not, or those features of SSSIs not covered by an international designation, should be given a high degree of protection. All National Nature Reserves are notified as SSSIs.

5.3.11 Where a proposed development on land within or outside a SSSI is likely to have an adverse effect on an SSSI (either individually or in combination with other developments), development consent should not normally be granted. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits (including need) of the development at this site,⁴⁰ clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of SSSIs. The IPC should use requirements and/or planning obligations to mitigate the harmful⁴¹ aspects of the development and, where possible, to ensure the conservation and enhancement of the site's biodiversity or geological interest.

Marine Conservation Zones

5.3.12 Marine Conservation Zones (MCZs) introduced under the Marine and Coastal Access Act 2009, are areas that have been designated for the purpose of conserving marine flora or fauna, marine habitat or types of marine habitat or features of geological or geomorphological interest. The protected feature or features and the conservation objectives for the MCZ are stated in the designation order for the MCZ, which provides statutory protection for these areas. Measures to

³⁸ As set out in section 4.4 above.

³⁹ See the Government Circular referred to in the introduction above for further information on the requirements of the Habitats Regulations.

⁴⁰ The words "the need for and benefits of the development at this site" should be understood to mean the national need for the infrastructure and the benefits it will bring, as well as the justification why the project has to take place at the site proposed. At this site' applies the language in PPS9: *Biodiversity and Geological Conservation*. The benefits of the development 'at this site' should be interpreted as including any benefits which are not dependent on a particular location.

⁴¹ In line with the principle above, the term "harm" should be understood to mean significant harm.

restrict damaging activities will be implemented by the MMO and other relevant organisations. As a public authority, the IPC is bound by the duties in relation to MCZs imposed by sections 125 and 126 of the Marine and Coastal Access Act 2009.

Regional and Local Sites

5.3.13 Sites of regional and local biodiversity and geological interest, which include Regionally Important Geological Sites, Local Nature Reserves and Local Sites, have a fundamental role to play in meeting overall national biodiversity targets; contributing to the quality of life and the well-being of the community; and in supporting research and education. The IPC should give due consideration to such regional or local designations. However, given the need for new infrastructure, these designations should not be used in themselves to refuse development consent.

Ancient Woodland and Veteran Trees

5.3.14 Ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland. Once lost it cannot be recreated. The IPC should not grant development consent for any development that would result in its loss or deterioration unless the benefits (including need) of the development, in that location⁴² outweigh the loss of the woodland habitat. Aged or 'veteran' trees found outside ancient woodland are also particularly valuable for biodiversity and their loss should be avoided⁴³. Where such trees would be affected by development proposals, the applicant should set out proposals for their conservation or, where their loss is unavoidable, the reasons why.

Biodiversity within Developments

5.3.15 Development proposals provide many opportunities for building-in beneficial biodiversity or geological features as part of good design. When considering proposals, the IPC should maximise such opportunities in and around developments, using requirements or planning obligations where appropriate.

Protection of Other Habitats and Species

5.3.16 Many individual wildlife species receive statutory protection under a range of legislative provisions⁴⁴.

5.3.17 Other species and habitats have been identified as being of principal importance for the conservation of biodiversity in England⁴⁵ and thereby requiring conservation action. The IPC should ensure that these species and habitats are protected from the adverse effects of development, where appropriate, by using requirements or planning agreements. The IPC should refuse consent where harm to the habitats or species and their habitats would result, unless the benefits (including need) of the development clearly outweigh that harm.

Mitigation

5.3.18 The applicant should include appropriate mitigation measures as an integral part of the proposed development. In particular, the applicant should demonstrate that:

- during construction, they will seek to ensure that activities will be confined to the minimum areas required for the works;

⁴² The words "the need for, and benefits of, the development in that location" should be understood to mean the national need for the infrastructure and the benefits it will bring, as well as the justification why the project has to take place in the location proposed.

⁴³ This does not prevent the loss of such trees where the IPC is satisfied that their loss is unavoidable.

⁴⁴ Certain plant and animal species, including all wild birds, are protected under the Wildlife and Countryside Act 1981. European plant and animal species are protected under the Conservation (Natural Habitats, &c) Regulations 1994. Some other animals are protected under their own legislation, for example Protection of Badgers Act 1992.

⁴⁵ Lists of habitats and species of principal importance for the conservation of biological diversity in England published in response to Section 41 of the Natural Environment and Rural Communities Act 2006 are available from the Biodiversity Action Reporting System website at <http://ukbars.defra.gov.uk/news/details.asp?X=45>

- during construction and operation best practice will be followed to ensure that risk of disturbance or damage to species or habitats is minimised, including as a consequence of transport access arrangements.
- habitats will, where practicable, be restored after construction works have finished;
- developments will be designed and landscaped to avoid habitat fragmentation and to provide green corridors for the movement of species;
- opportunities will be taken to enhance existing habitats and, where practicable, to create new habitats of value within the site landscaping proposals.

5.3.19 Where the applicant cannot demonstrate that appropriate mitigation measures will be put in place the IPC should consider what appropriate requirements should be attached to any consent and/or planning obligations entered into.

5.3.20 The IPC will need to take account of what mitigation measures may have been agreed between the applicant and Natural England or the Marine Management Organisation (MMO), and whether Natural England or the MMO has granted or refused, or intends to grant or refuse, any relevant licences, including protected species mitigation licences.

5.4 Civil and Military Aviation and Defence Interests

Introduction

5.4.1 Civil and military aerodromes, aviation technical sites, and other types of defence interests (both onshore and offshore) can be affected by new hazardous waste development.

Aviation

5.4.2 UK airspace is important for both civilian and military aviation interests. It is essential that the safety of UK aerodromes, aircraft and airspace is not adversely affected by new hazardous waste infrastructure. Similarly, aerodromes can have important economic and social benefits, particularly at the regional and local level. Commercial civil aviation is largely confined to designated corridors of controlled airspace and set approaches to airports. However, civilian leisure and military aircraft may often fly outside of 'controlled air space'. The approaches and flight patterns to aerodromes are not necessarily routine and can be irregular owing to a variety of factors including the performance characteristics of the aircraft concerned and the prevailing meteorological conditions.

5.4.3 Certain civil aerodromes, and aviation technical sites, selected on the basis of their importance to the national air transport system, are officially safeguarded in order to ensure that their operation is not inhibited by new development. A similar official safeguarding system applies to certain military aerodromes and defence assets, selected on the basis of their strategic importance. Areas of airspace around aerodromes used by aircraft taking off or on approach and landing are described as "obstacle limitation surfaces" (OLS) and defined according to criteria set out in relevant Civil Aviation Authority (CAA) guidance⁴⁶. Aerodromes that are officially safeguarded will have CAA certified Safeguarding maps showing the OLS.

5.4.4 The certified Safeguarding maps depicting the OLS and other criteria (e.g. to minimise "birdstrike" hazards) are deposited with the relevant local planning authorities. Circular 1/2003⁴⁷ provides advice to planning authorities on the official safeguarding of aerodromes and includes a list of the aerodromes which are

⁴⁶ CAA (Dec 2008) CAP 168: Licensing of Aerodromes

⁴⁷ DfT/ODPM Circular 01/2003: Safeguarding, Aerodromes, Technical Sites and Military Explosives Storage Areas

officially safeguarded. The Circular and CAA guidance also recommends that the operators of aerodromes which are not officially safeguarded should take steps to protect their aerodrome from the effects of possible adverse development by establishing an agreed consultation procedure between themselves and the local planning authority or authorities.

5.4.5 There are also “Public Safety Zones” at the end of runways of the busiest airports in the UK, within which development is restricted to minimise risks to people on the ground in the event of an aircraft accident on take-off or landing. Advice is provided on Public Safety Zones in Circular 01/2002⁴⁸.

5.4.6 The military Low Flying system covers the whole of the UK and enables low flying activities as low as 75m (mean separation distance). A considerable amount of military flying for training purposes is conducted at as low as 30m in designated Tactical Training Areas (TTAs) in mid Wales, Cumbria, the Scottish Border region and in the Electronic Warfare Range in the Scottish Border area. New hazardous waste infrastructure may cause obstructions in Ministry of Defence (MoD) low flying areas.

5.4.7 Safe and efficient operations within UK airspace is dependent upon communications, navigation and surveillance (CNS) infrastructure, including radar (often referred to as ‘technical sites’). Hazardous waste infrastructure development may interfere with the operation of radar by limiting the capacity to handle air traffic, and aircraft landing systems. It may also act as a reflector or diffractor of radio signals on which navigational aids rely (an effect which is particularly likely to arise when large structures are located close to radar installations).

Other defence interests

5.4.8 The MoD operates military training areas, military danger zones (offshore Danger and Exercise areas), military explosives storage areas and TTAs. There are extensive Danger and Exercise Areas across the UK Continental Shelf Area (UKCS) for military firing that are essential for national defence.

5.4.9 Other operational defence assets may be affected by new development, e.g. the Seismological Monitoring Station at Eskdalemuir and maritime acoustic facilities used to test and calibrate noise emissions from naval vessels, such as at Portland Harbour. The MoD also operates Air Defence radars and Meteorological radars which have wide coverage over the UK (onshore and offshore). It is important that new hazardous waste infrastructure does not significantly impede or compromise the safe and effective use of any defence assets.

Applicant’s Assessment

5.4.10 Where the proposed development may have an effect on civil or military aviation and/or other defence assets an assessment of potential effects should be carried out.

5.4.11 The applicant should consult the MoD, CAA, NATS and any aerodrome – licensed or otherwise – likely to be affected by the proposed development in preparing an assessment of the proposal on aviation or other defence interests.

5.4.12 Any assessment on aviation or other defence interests should include potential impacts during construction and operation of the project upon the operation of CNS infrastructure, flight patterns (both civil and military), other defence assets and aerodrome operational procedures.

48 DfT/ODPM Circular 01/2002: Control of Development in Airport Safety Zones

5.4.13 If any relevant changes are made to proposals during the pre-application and determination period, it is the responsibility of the applicant to ensure that the relevant aviation and defence consultees are informed as soon as reasonably possible.

IPC decision making

5.4.14 The IPC should be satisfied that effects on civil and military aviation and other defence assets have been addressed by the applicant and that any necessary assessment of the proposal on aviation or defence interests has been carried out. In particular, it should be satisfied that the proposal has been designed to minimise adverse impacts on the operation and safety of aerodromes and that reasonable mitigation is carried out. It may also be appropriate to expect operators of the aerodrome to consider making reasonable changes to operational procedures. When assessing the necessity, acceptability and reasonableness of operational changes to aerodromes, the IPC should satisfy itself that it fully understands the operational procedures along with any risks or harm of such changes, taking into account the cases put forward by all parties. When making such a judgement in the case of military aerodromes, the IPC should have regard to interests of defence and national security.

5.4.15 If there are conflicts between the Government's hazardous waste policies and military interests in relation to the application, the IPC should expect the relevant parties to have made appropriate efforts to work together to identify realistic and pragmatic solutions to the conflicts. In so doing, the parties should seek to protect the aims and interests of the other parties as far as possible.

5.4.16 There are statutory requirements concerning lighting to tall structures.⁴⁹ Where lighting is requested on structures that go

beyond statutory requirements by any of the relevant aviation and defence consultees, the IPC should satisfy itself of the necessity of such lighting taking into account the case put forward by the consultees. The effect of such lighting on the landscape and ecology may be a relevant consideration.

5.4.17 Where, after reasonable mitigation, operational changes, obligations and conditions have been proposed, the IPC considers that:

- a development would prevent a licensed aerodrome from maintaining its licence;
- The benefits of the proposed development are outweighed by the harm to aerodromes serving business, training or emergency service needs; or
- the development would significantly impede or compromise the safe and effective use of defence assets or significantly limit military training, consent should not be granted.

Mitigation

5.4.18 Where a proposed hazardous waste infrastructure development would significantly impede or compromise the safe and effective use of civil or military aviation or defence assets and or significantly limit military training, the IPC may consider the use of 'Grampian'⁵⁰ or other forms of condition which relate to the use of future technological solutions to mitigate impacts. Where technological solutions have not yet been developed or proven, the IPC will need to consider the likelihood of a solution becoming available within the time limit for implementation of the development consent.

⁴⁹ Articles 133 and 134 Air Navigation Order 2005

⁵⁰ A negative condition that prevents the start of a development until specific actions, mitigation or other development have been completed.

5.4.19 Mitigation for infringement of OLS may include:

- amendments to layout or scale of infrastructure to reduce the height, provided that it does not result in an unreasonable reduction of capacity or unreasonable constraints on the operation of the proposed hazardous waste infrastructure;
- changes to operational procedures of the aerodromes in accordance with relevant guidance, provided that safety assurances can be provided by the operator that are acceptable to the CAA where the changes are proposed to a civilian aerodrome (and provided that it does not result in an unreasonable reduction of capacity or unreasonable constraints on the operation of the aerodrome); and
- upgrading of installation of obstacle lighting and/or by notification in Aeronautical Information Service publications.

5.4.20 For CNS infrastructure, the UK military Low Flying system (including TTAs) and designated air traffic routes, mitigation may include:

- lighting; and
- existing CNS infrastructure, the cost of which the applicant may reasonably be required to contribute in part or in full.

5.4.21 Mitigation for effects on radar and navigational systems may include reducing the scale of a project, although in some cases it is likely to be unreasonable for the IPC to require mitigation by way of a reduction in the scale of development, for example where this would result in a material reduction in capacity or operation would be severely constrained. However, there may be exceptional circumstances where a small reduction in function will result in proportionately greater mitigation. In these cases, the IPC may consider that the benefits of the mitigation outweigh the marginal loss of function.

5.5 Coastal Change

Introduction

5.5.1 For the purpose of this section, coastal change means physical change to the shoreline, i.e. erosion, coastal landslip, permanent inundation and coastal accretion. Where onshore infrastructure projects are proposed on the coast, coastal change is a key consideration. Some kinds of coastal change happen very gradually, others over shorter timescales. Some are the result of purely natural processes; others, including potentially significant modifications of the coastline or coastal environment resulting from climate change, are wholly or partly man-made. This section is concerned both with the impacts which hazardous waste infrastructure can have as a driver of coastal change and with how to ensure that developments are resilient to ongoing and potential future coastal change.

5.5.2 The construction of a hazardous waste facility such as a ship recycling facility on the coast may involve, for example, dredging, dredge spoil deposition, marine landing facility construction and flood and coastal protection measures which could result in direct effects on the coastline, seabed, marine ecology and biodiversity, and the historic environment.

5.5.3 Additionally indirect changes to the coastline and seabed might arise as a result of a hydrodynamic response to some of these direct changes. This could lead to localised or more widespread coastal erosion or accretion and changes to offshore features such as submerged banks and ridges, marine biodiversity and the historic environment.

5.5.4 This section only applies to hazardous waste infrastructure projects situated on or near the coast. Section 5.3 on biodiversity and geological conservation, Section 5.7 on flood risk, Section 5.8 on the historic environment, and Section 4.6 on climate change adaptation, including the increased risk of coastal erosion, are also relevant, as is

advice on access to coastal recreation sites and features in Section 5.10 on land use.

Applicant's assessment

5.5.5 Where relevant, applicants should undertake coastal geomorphological and sediment transfer modelling to predict and understand impacts and help identify relevant mitigating or compensatory measures.

5.5.6 The ES should include an assessment of the effects on the coast, distinguishing between the construction, operation and decommissioning project stages as appropriate. In particular applicants should assess:

- the impact of the proposed project on coastal processes and geomorphology, including by taking account of potential impacts from climate change. If the development will have an impact on coastal processes the applicant must demonstrate how the impacts will be managed to minimise adverse impacts on other parts of the coast;
- the implications of the proposed project on strategies for managing the coast as set out in Shoreline Management Plans, any relevant marine plans, River Basin Management Plans and capital programmes for maintaining flood and coastal defences;
- the effects of the proposed project on marine ecology, biodiversity and protected sites;
- the effects of the proposed project on maintaining coastal recreation sites and features;
- the vulnerability of the proposed development to coastal change, taking account of climate change, during the project's operational life and any decommissioning period.

5.5.7 For any projects involving dredging or disposal into the sea, the applicant should consult the Marine Management Organisation (MMO) at an early stage.

5.5.8 The applicant should be particularly careful to identify any effects of physical changes on the integrity and special features of Marine Conservation Zones, candidate marine Special Areas of Conservation (SACs), coastal SACs and candidate coastal SACs, coastal Special Protection Areas (SPAs) and potential coastal SPAs, Ramsar sites, Sites of Community Importance (SCIs) and potential SCIs and sites of Special Scientific Interest.

IPC decision making

5.5.9 The IPC should be satisfied that the proposed development will be resilient to coastal erosion and deposition, taking account of climate change, during the project's operational life and any decommissioning period.

5.5.10 The IPC should not normally consent new development in areas of dynamic shorelines where the proposal could inhibit sediment flow or have an adverse impact on coastal processes at other locations. Impacts on coastal processes must be managed to minimise adverse impacts on other parts of the coast. Where such proposals are brought forward consent should only be granted where the IPC is satisfied that the benefits (including need) of the development outweigh the adverse impacts.

5.5.11 The IPC should ensure that applicants have restoration plans for areas of foreshore disturbed by direct works and will undertake pre and post-construction coastal monitoring arrangements with defined triggers for intervention and restoration.

5.5.12 The IPC should examine the broader context of coastal protection around the proposed site, and the influence in both directions, i.e. coast on site, and site on coast. The IPC should take account of any Coastal Change Management Areas (in England) identified by local planning authorities.

5.5.13 The IPC should consult the MMO on projects which could impact on coastal change, since the MMO may also be involved in considering other projects which may have coastal impacts.

5.5.14 In addition to this NPS the IPC must have regard to the appropriate marine policy documents as provided for in the Marine and Coastal Access Act 2009. The IPC may also have regard to any relevant Shoreline Management Plan.

5.5.15 Substantial weight should be attached to the risks of flooding and coastal erosion. The applicant must demonstrate that full account has been taken of the policy on assessment and mitigation in Section 5.7 of this NPS, taking account of the potential effects of climate change on these risks as discussed above.

Mitigation

5.5.16 Applicants should propose appropriate mitigation measures to address adverse physical changes to the coast in consultation with the MMO, the Environment Agency, Local Planning Authorities, other statutory consultees, Coastal Partnerships and other coastal groups, as it considers appropriate. Where this is not the case the IPC should consider what appropriate mitigation requirements might be attached to any grant of development consent.

5.6 Dust, Odour, Artificial Light, Smoke, Steam and Insect Infestation

Introduction

5.6.1 During the construction, operation and decommissioning of hazardous waste infrastructure there is potential for the release of a range of emissions such as odour, dust, steam, smoke, artificial light and infestation of insects. All have the potential to have a detrimental impact on amenity or cause a common law nuisance or statutory nuisance under Part III, Environmental Protection Act 1990. Note that pollution impacts from some of these emissions

(e.g. dust, smoke) are covered in the section on air emissions and that these and others (e.g. odour) may also be covered by pollution control or other environmental consenting regimes so that Section 4.7 will apply.

5.6.2 Because of the potential effects of these emissions and infestation, and in view of the availability of the defence of statutory authority against nuisance claims described in Section 4.11, it is important that the potential for these impacts is considered by the IPC.

5.6.3 For nationally significant infrastructure projects of the type covered by this NPS, some impact on amenity for local communities is likely to be unavoidable. The aim should be to keep impacts to a minimum, and at a level that is acceptable.

Applicant's Assessment

5.6.4 The applicant should assess the potential for insect infestation and emissions of odour, dust, steam, smoke and artificial light to have a detrimental impact on amenity, as part of the Environmental Statement (see section 4.2).

5.6.5 In particular, the assessment provided by the applicant should describe:

- the type and quantity of emissions;
- aspects of the development which may give rise to emissions during construction, operation and decommissioning;
- premises or locations that may be affected by the emissions;
- effects of the emission on identified premises or locations; and
- measures to be employed in preventing or mitigating the emissions.

5.6.6 The applicant is advised to consult the relevant local planning authority and, where appropriate, the Environment Agency (EA) about the scope and methodology of the assessment.

IPC decision making

5.6.7 The IPC should satisfy itself that all reasonable steps have been taken, and will be taken, to minimise any detrimental impact on amenity from insect infestation and emissions of odour, dust, steam, smoke and artificial light.

5.6.8 If the IPC does grant development consent for a project, it should consider whether there is a justification for all of the authorised project (including any associated development) being covered by a defence of statutory authority against nuisance claims. If it cannot conclude that this is justified, it should disapply in whole or in part the defence through provision in the development consent order.

5.6.9 Where it believes it appropriate, the IPC may consider attaching requirements to the development consent, in order to secure certain mitigation measures.

5.6.10 In particular, the IPC should consider whether to require the applicant to abide by a scheme of management and mitigation concerning insect infestation and emissions of odour, dust, steam, smoke, artificial light from the development. The IPC should consider the need for such a scheme to reduce any loss to amenity which might arise during the construction, operation and decommissioning of the development. A construction management plan may help codify mitigation at that stage.

Mitigation

5.6.11 Mitigation measures may include one or more of the following:

- **engineering:** prevention of a specific emission at the point of generation; control, containment and abatement of emissions if generated;
- **lay-out:** adequate distance between source and sensitive receptors; reduced transport or handling of materials

- **administrative:** limiting operating times, restricting activities allowed on the site; implementing management plans.

5.7 Flood Risk

Introduction

5.7.1 Flooding is a natural process that plays an important role in shaping the natural environment. However, flooding threatens life and causes substantial damage to property. The effects of weather events on the natural environment, life and property can be increased in severity both as a consequence of decisions about the location, design and nature of settlement and land use, and as a potential consequence of future climate change. Although flooding cannot be wholly prevented, its adverse impacts can be avoided and reduced through good planning and management.

5.7.2 Climate change over the next few decades is likely to mean milder wetter winters and hotter drier summers in the UK, while sea levels will continue to rise. Within the lifetime of nationally significant infrastructure projects, these factors will lead to increased flood risks in areas susceptible to flooding, and to an increased risk of flooding in some areas which are not currently thought of as being at risk. The applicant and the IPC should take account of the policy on climate change adaptation in Section 4.6.

5.7.3 The aims of planning policy on development and flood risk are to ensure that flood risk from all sources of flooding is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding and to direct development away from areas at highest risk. Where new development is, exceptionally necessary in such areas, policy aims to make it safe without increasing flood risk elsewhere and where possible, by reducing flood risk overall.

Applicant's Assessment

5.7.4 Applications for hazardous waste projects of 1 hectare or greater in Flood Zone⁵¹ and all proposals for hazardous waste projects located in Flood Zones 2 and 3 should be accompanied by a flood risk assessment (FRA). A FRA will also be required where a hazardous waste project less than 1 hectare may be subject to sources of flooding other than rivers and the sea (e.g. surface water), or where the Environment Agency, Internal Drainage Board or other body has indicated that there may be drainage problems. This should identify and assess the risks of all forms of flooding to and from the project and demonstrate how these flood risks will be managed, taking climate change into account.

5.7.5 The minimum requirements for flood risk assessments are that they should:

- be proportionate to the risk and appropriate to the scale, nature and location of the project;
- consider the risk of flooding arising from the project in addition to the risk of flooding to the project
- take the impacts of climate change into account clearly stating the development lifetime over which the assessment has been made;
- be undertaken by competent people, as early as possible in the process of preparing the proposal;
- consider both the potential adverse and beneficial effects of flood risk management infrastructure including raised defences, flow channels, flood storage areas and other artificial features together with the consequences of their failure;
- consider the vulnerability of those using the site, including arrangements for safe access;
- consider and quantify the different types of

flooding (whether from natural and human sources and including joint and cumulative effects) and identify flood risk reduction measures, so that assessments are fit for the purpose of the decisions being made;

- consider the effects of a range of flooding events including extreme events on people, property, the natural and historic environment and river and coastal processes;
- where there is a requirement for co-location of hazardous waste facilities, take account of the potential cumulative impacts;
- take account of the nature of the particular types of hazardous waste and consider whether there is an increased pollution or accident risk during flooding.
- include the assessment of the remaining (known as 'residual') risk after risk reduction measures have been taken into account and demonstrate that this is acceptable for the particular project;
- consider how the ability of water to soak into the ground may change with development, along with how the proposed layout of the project may affect drainage systems;
- consider if there is a need to be safe and remain operational during a worst case flood event over the development's lifetime; and
- be supported by appropriate data and information, including historical information on previous events.

5.7.6 Further guidance can be found in the Practice Guide which accompanies Planning Policy Statement 25 (PPS25), or successor documents.

5.7.7 Applicants for projects which may be affected by, or may add to, flood risk should arrange pre-application discussions with the Environment Agency, and, where relevant,

⁵¹ The Flood Zones refer to the probability of flooding from rivers, the sea and tidal sources and ignore the presence of existing defences, because these can be breached, overtopped and may not be in existence for the lifetime of the project. The definition of Flood Zones can be found in PPS25 (in England).

other bodies such as Internal Drainage Boards, sewerage undertakers, highways authorities and reservoir owners and operators. Such discussions should identify the likelihood and possible extent and nature of the flood risk, to help scope the FRA, and identify the information that will be required by the IPC to reach a decision on the application when it is submitted. The IPC should advise applicants to undertake these steps where they appear necessary, but have not yet been addressed. If the Environment Agency has concerns about the proposal on flood risk grounds, the applicant should discuss these concerns with the Environment Agency and take all reasonable steps to agree ways in which the proposal might be amended, or additional information provided, which would satisfy the Environment Agency's concerns.

IPC decision making

5.7.8 In determining an application for development consent, the IPC should be satisfied that, where relevant:

- the application is supported by an appropriate FRA;
- the proposal is in line with any relevant national and local flood risk management strategy⁵²;
- the Sequential Test has been applied as part of site selection;
- a sequential approach has been applied at the site level to minimise risk by directing the most vulnerable uses to areas of lowest flood risk;
- priority has been given to the use of sustainable drainage systems (SuDS) and the requirements set out in paragraph 5.11 below have been met;
- in flood risk areas the project is appropriately flood resilient and resistant, including safe

access and escape routes where required, and that any residual risk can be safely managed over the lifetime of the development.

5.7.9 For construction work which has drainage implications⁵³, approval for the project's drainage system will form part of the development consent issued by the IPC. The IPC will therefore need to be satisfied that the proposed drainage system complies with any National Standards published by Ministers under Paragraph 5(1) of Schedule 3 to the Flood and Water Management Act 2010⁵⁴. In addition, the development consent order, or any associated planning obligations, will need to make provision for the adoption and maintenance of any SuDS, including any necessary access rights to property. The IPC should be satisfied that the most appropriate body is being given the responsibility for maintaining any SuDS, taking into account the nature and security of the infrastructure on the proposed site. The responsible body could include, for example, the applicant, the landowner, the relevant local authority, or another body such as the Internal Drainage Board.

5.7.10 If the Environment Agency continues to have concerns and objects to the grant of development consent on the grounds of flood risk, the IPC can grant consent, but would need to be satisfied before deciding whether or not to do so that all reasonable steps have been taken by the applicant and the Environment Agency to try and resolve the concerns.

5.7.11 The IPC should not consent development in Flood Zone 2 unless it is satisfied that the Sequential Test requirements have been met. It should not consent development in Flood Zone 3 unless it is satisfied that the Sequential and Exception test requirements have been met (see below). However, when seeking development consent on a site allocated in a development plan through the application of the Sequential Test,

⁵² As provided for in the Flood and Water Management Act 2010.

⁵³ As defined in paragraph 7(2) of Schedule 3 to the Flood and Water Management Act 2010.

⁵⁴ The National Standards set out requirements for the design, construction, operation and maintenance of SuDS and may include guidance to which the IPC should have regard.

informed by a strategic flood risk assessment (SFRA), applicants need not apply the Sequential Test, but should apply the sequential approach to locating development within the site.

The Sequential Test

5.7.12 Preference should be given to locating projects in Flood Zone 1. If there is no reasonably available site⁵⁵ in Flood Zone 1, then projects can be located in Flood Zone 2. If there is no reasonably available site in Flood Zones 1 or 2, then essential infrastructure (including nationally significant infrastructure) projects can be located in Flood Zone 3a, subject to the Exception Test. With the exception of ship recycling facilities, Hazardous waste developments should not be consented in Flood Zone 3b.

The Exception Test

5.7.13 If, following application of the Sequential Test, it is not possible, consistent with wider sustainability objectives, for the project to be located in zones of lower probability of flooding than Flood Zone 3a, the Exception Test can be applied. The test provides a method of managing flood risk while still allowing necessary development to occur.

5.7.14 The Exception Test is only appropriate for use where the Sequential Test alone cannot deliver an acceptable site, taking into account the need for hazardous waste infrastructure to remain operational during floods. It may also be appropriate to use it where, as a result of the alternative site(s) at lower risk of flooding being subject to national designations, such as

landscape, heritage and nature conservation designations, for example, Areas of Outstanding Natural Beauty, Sites of Special Scientific Interest, and World Heritage Sites, it would not be appropriate to require the development to be located on the alternative site(s).

5.7.15 All the three elements of the test will have to be passed for development to be consented. For the Exception Test to be passed:

- a). it must be demonstrated that the project provides wider sustainability benefits to the community⁵⁶ that outweigh flood risk;
- b). the project should be on developable previously-developed land⁵⁷ or, if it is not on previously developed land, that there are no reasonable alternative sites on developable previously-developed land; and
- c). a FRA must demonstrate that the project will be safe, without increasing flood risk elsewhere and, where possible, will reduce flood risk overall.

Mitigation

5.7.16 To satisfactorily manage flood risk, arrangements are required to manage surface water and the impact of the natural water cycle on people and property.

5.7.17 In this document the term Sustainable Drainage Systems (SUDs) refers to the whole range of sustainable approaches to surface water drainage management including, where appropriate:

⁵⁵ Guidance on interpreting the term “reasonably available site” in this test can be found in the Practice Guide which accompanies PPS 25 or its successor document. The applicant should justify with evidence to the IPC what area of search has been used in examining whether there are reasonably available sites. This will allow the IPC to consider whether the sequential test has been made as part of site selection.

⁵⁶ These would include the benefits (including need) for, the infrastructure set out in Part 3.

⁵⁷ Previously-developed land is that which is or was occupied by a permanent structure, including the curtilage of the developed land and any associated fixed surface infrastructure. This definition includes defence buildings, but excludes (a) land that is or has been occupied by agricultural or forestry buildings (b) land that has been developed for minerals extraction or waste disposal by landfill purposes where provision for restoration has been made through development control procedures (c) land in built up areas such as private residential gardens, parks, recreation grounds and allotments, which, although it may feature paths, pavilions and other buildings, has not been previously developed (d) land that was previously-developed but where the remains of the permanent surface structure or fixed surface structure have blended into the landscape in the process of time (to the extent that it can reasonably be considered as part of the natural surroundings).

- source control measures including rainwater recycling and drainage;
- infiltration devices to allow water to soak into the ground, that can include individual soakaways and communal facilities;
- filter strips and swales, which are vegetated features that hold and drain water downhill mimicking natural drainage patterns;
- filter drains and porous pavements to allow rainwater and run-off to infiltrate into permeable material below ground and provide storage if needed;
- basins, ponds and tanks to hold excess water after rain and allow controlled discharge that avoids flooding; and
- flood routes to carry and direct excess water through developments to minimise the impact of severe rainfall flooding.

5.7.18 Site layout and surface water drainage systems should cope with events that exceed the design capacity of the system, so that excess water can be safely stored on or conveyed from the site without adverse impacts.

5.7.19 The surface water drainage arrangements for any project should be such that the volumes and peak flow rates of surface water leaving the site are no greater than the rates prior to the proposed project, unless specific off-site arrangements are made and result in the same net effect.

5.7.20 It may be necessary to provide surface water storage and infiltration to limit and reduce both the peak rate of discharge from the site and the total volume discharged from the site. There may be circumstances where it is appropriate for infiltration attenuation storage to be provided outside the project site, if necessary through the use of a planning obligation.

5.7.21 The sequential approach should be applied to the layout and design of the project. More vulnerable uses should be located on parts of

the site at lower probability and residual risk of flooding. Applicants should seek opportunities to use multi-purpose open space for amenity, wildlife habitat and flood storage uses. Opportunities should be taken to lower flood risk by reducing the built footprint of previously-developed sites and using sustainable drainage systems.

5.7.22 Hazardous waste infrastructure which has to be located in flood risk areas should be designed to remain operational when floods occur. Any hazardous waste projects proposed in Flood Zone 3b, the Functional Floodplain (where water has to flow or be stored in times of flood), should only be permitted if the development will not result in a net loss of floodplain storage, and will not impede water flows

5.7.23 The receipt of and response to warnings of floods is an essential element in the management of the residual risk of flooding. Flood Warning and evacuation plans should be in place for those areas at an identified risk of flooding. The applicant should take advice from the emergency services when producing an evacuation plan for the project as part of the FRA. Any emergency planning documents, flood warning and evacuation procedures that are required should be identified in the FRA.

5.8 Historic Environment

Introduction

5.8.1 The construction, operation and decommissioning of hazardous waste infrastructure has the potential to result in adverse impacts on the historic environment.

5.8.2 The historic environment includes all aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and landscaped and planted or managed flora. Those elements of the historic environment that hold value to this and

future generations because of their historic, archaeological, architectural or artistic interest are called 'heritage assets'. A heritage asset may be any building, monument, site, place, area or landscape, or any combination of these. The sum of the heritage interests that a heritage asset holds is referred to as its significance⁵⁸.

5.8.3 Some heritage assets have a level of significance that justifies official designation. Categories of designated heritage assets are: World Heritage Sites; Scheduled Monuments; Listed Buildings; Protected Wreck Sites⁵⁹; Protected Military Remains; Registered Parks and Gardens; Registered Battlefields; and Conservation Areas⁶⁰.

5.8.4 There are heritage assets with archaeological interest that are not currently designated as scheduled monuments, but which are demonstrably of equivalent significance. These include:

- those that have yet to be formally assessed for designation;
- those that have been assessed as being designatable but which the Secretary of State has decided not to designate; and
- those that are incapable of being designated by virtue of being outside the scope of the Ancient Monuments and Archaeological Areas Act 1979.

5.8.5 The absence of designation for such heritage assets does not indicate lower significance. If the evidence before the IPC indicates to it that a non-designated heritage asset of the type described may be affected by the

proposed development then the heritage asset should be considered subject to the same policy considerations as those that apply to designated heritage assets.

5.8.6 The IPC should also consider the impacts on other non-designated heritage assets, as identified either through the development plan making process (local listing) or through the IPC's decision making process on the basis of clear evidence that the assets have a significance that merits consideration in its decisions, even though those assets are of lesser value than designated heritage assets.

Applicant's assessment

5.8.7 As part of the ES the applicant should provide a description of the significance of the heritage assets affected by the proposed development and the contribution of their setting to that significance. The level of detail should be proportionate to the importance of the heritage assets and no more than is sufficient to understand the potential impact of the proposal on the significance of the heritage asset. As a minimum the applicant should have consulted the relevant Historic Environment Record⁶¹ and assessed the heritage assets themselves using expertise where necessary according to the proposed development's impact.

5.8.8 Where a development site includes, or the available evidence suggests it has the potential to include, heritage assets with an archaeological interest, the applicant should carry out appropriate

58 Save for the term "Designated Heritage Asset", these and other terms used in this section are defined in Annex 2 to PPS5, or any successor to it. The PPS5 Practice Guide contains guidance on their interpretation. The IPC should also consider the impacts on other non-designated heritage assets, as identified either through the development plan making process (local listing) or through the IPC's decision making process on the basis of clear evidence that the assets have a significance that merits consideration in its decisions, even though those assets are of lesser value than designated heritage assets.

59 The issuing of licenses to undertake works on Protected Wreck Sites in English waters is the responsibility of the Secretary of State for Culture, Media and Sport and does not form part of development consents issued by the IPC. The issuing of licences for Protected Military Remains is the responsibility of the Secretary of State for Defence.

60 Additionally, part of the purpose of designating National Parks is to protect their cultural heritage and the conservation of cultural heritage is an important consideration in all Areas of Outstanding Natural Beauty.

61 Historic Environment Records (HERs) are information services maintained by local authorities and National Park Authorities with a view to providing access to resources relating to the historic environment of an area for public benefit and use. Details of HERs in England are available from the Heritage Gateway website at <http://www.heritagegateway.org.uk/Gateway/CHR/>. English Heritage holds additional information about heritage assets in English waters. This should also be consulted where relevant.

desk-based assessment and, where such desk based research is insufficient to properly assess the interest, a field evaluation. Where proposed development will affect the setting of a heritage asset, representative visualisations may be necessary to explain the impact.

5.8.9 The applicant should ensure that the extent of the impact of the proposed development on the significance of any heritage assets affected can be adequately understood from the application and supporting documents.

IPC decision making

5.8.10 In considering applications, the IPC should seek to identify and assess the particular significance of any heritage asset that may be affected by the proposed development, including by development affecting the setting of a heritage asset, taking account of:

- evidence provided with the application;
- any designation records;
- the Historic Environment Record, and similar sources of information⁶²;
- the heritage assets themselves;
- the outcome of consultations with interested parties; and
- where appropriate and when the need to understand the significance of the heritage asset demands it, expert advice.

5.8.11 In considering the impact of a proposed development on any heritage assets, the IPC should take into account the particular nature of the significance of the heritage assets, and the value that they hold for this and future

generations. This understanding should be used to avoid or minimise conflict between conservation of the significance and proposals for development.

5.8.12 The IPC should take into account the desirability of sustaining and, where appropriate, enhancing the significance of heritage assets, the contribution of their settings and the positive contribution they can make to sustainable communities and economic vitality⁶³. The IPC should take into account the desirability of new development making a positive contribution to the character and local distinctiveness of the historic environment. The consideration of design should include scale, height, massing, alignment, materials and use. The IPC should have regard to any relevant local authority development plans or local impact report on the proposed development in respect of the factors set out in the footnote 61 below.

5.8.13 There should be a presumption in favour of the conservation of designated heritage assets and the more significant the designated heritage asset, the greater the presumption in favour of its conservation should be. Once lost, heritage assets cannot be replaced and their loss has a cultural, environmental, economic and social impact. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. Loss affecting any designated heritage asset should require clear and convincing justification. Substantial harm to or loss of a grade II listed building, park or garden should be exceptional. Substantial harm to or loss of designated assets of the highest significance, including Scheduled Monuments, registered battlefields, grade I and II* listed buildings, grade I and II* registered parks and gardens, and World Heritage Sites, should be wholly exceptional.

62 Guidance on the available sources of information can be found in PPS5 Planning for the Historic Environment: Historic Environment Planning Practice Guide, March 2010, or any successor document.

63 PPS5 requires local authorities, in preparing development plans, to consider the positive contribution that conservation of heritage assets and the historic environment generally can make to the establishment and maintenance of sustainable communities and economic vitality by virtue of:

- their influence on the character of the environment and an area's sense of place;
- their potential to be a catalyst for regeneration in an area, particularly through leisure, tourism and economic development;
- the stimulus they can provide to inspire new development of imaginative and high quality design;
- the re-use of existing fabric, minimising waste; and
- the mixed and flexible patterns of land use in historic areas that are likely to be, and remain, sustainable.

5.8.14 Any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset the greater the justification will be needed for any loss. Where the application will lead to substantial harm to or total loss of significance of a designated heritage asset the IPC should refuse consent unless it can be demonstrated that the substantial harm to or loss of significance is necessary in order to deliver substantial public benefits that outweigh that loss or harm.

5.8.15 Not all elements of a World Heritage Site or Conservation Area will necessarily contribute to its significance. The policies in paragraphs 5.8.10-14 apply to those elements that do contribute to the significance. When considering proposals, the IPC should take into account the relative significance of the element affected and its contribution to the significance of the World Heritage Site or Conservation Area as a whole.

5.8.16 Where loss of significance of any heritage asset is justified on the merits of the new development, the IPC should consider imposing a condition on the consent or requiring the applicant to enter into an obligation that will prevent the loss occurring until it is reasonably certain that the relevant part of the development is to proceed.

5.8.17 When considering applications for development affecting the setting of a designated heritage asset, the IPC should treat favourably applications that preserve those elements of the setting that make a positive contribution to, or better reveal the significance of, the asset. When considering applications that do not do this, the IPC should weigh any negative effects against the wider benefits of the application. The greater the negative impact on the significance of the designated heritage asset, the greater the benefits that will be needed to justify approval.

Recording

5.8.18 A documentary record of our past is not as valuable as retaining the heritage asset and therefore the ability to record evidence of the asset should not be a factor in deciding whether consent should be given.

5.8.19 Where the loss of the whole or a material part of a heritage asset's significance is justified, the IPC should require the developer to record and advance understanding of the significance of the heritage asset before it is lost. The extent of the requirement should be proportionate to the nature and level of the asset's significance. Developers should be required to publish this evidence and deposit copies of the reports with the relevant Historic Environment Record. They should also be required to deposit the archive generated in a local museum or other public depository willing to receive it.

5.8.20 Where appropriate, the IPC should impose requirements on a consent to ensure that such work is carried out in a timely manner in accordance with a written scheme of investigation that meets the requirements of this Section and has been agreed in writing with the relevant Local Authority (or, where the development is in English waters, the Marine Management Organisation and English Heritage and that the completion of the exercise is properly secured⁶⁴.

5.8.21 Where the IPC considers there to be a high probability that a development site may include as yet undiscovered heritage assets with archaeological interest, the IPC should consider requirements to ensure that appropriate procedures are in place for the identification and treatment of such assets discovered during construction.

⁶⁴ Guidance on the contents of a written scheme of investigation is set out in the Practice Guide to PPS5.

5.9 Landscape And Visual Impacts

Introduction

5.9.1 The landscape and visual effects of proposed projects will vary on a case by case basis according to the type of development, its location and the landscape setting of the proposed development. In this context, references to landscape should be taken as covering seascape and townscape, where appropriate.

Applicant's Assessment

5.9.2 The applicant should carry out a landscape and visual assessment and report it in the ES. A number of guides have been produced to assist in addressing landscape issues⁶⁵. The landscape and visual assessment should include reference to any landscape character assessment and associated studies, as a means of assessing landscape impacts relevant to the proposed project. The applicant's assessment should also take account of any relevant policies based on these assessments in local development documents in England.

5.9.3 The applicant's assessment should include the effects during construction of the project and the effects of the completed development and its operation on landscape components and landscape character.

5.9.4 The assessment should include the visibility and conspicuousness of the project during construction and of the presence and operation of the project and potential impacts on views and visual amenity. This should include any light pollution effects including on local amenity, rural tranquillity and nature conservation.

IPC decision making

Landscape impact

5.9.5 Landscape effects depend on the existing character of the local landscape, its current quality, how highly it is valued and its capacity to accommodate change. All of these factors need to be considered in judging the impact of a project on landscape. Projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints, the aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate.

Development proposed within nationally designated areas

5.9.6 National Parks, the Broads and Areas of Outstanding Natural Beauty (AONB), have been confirmed by the Government as having the highest status of protection in relation to landscape and scenic beauty. Each of these designated areas has specific statutory purposes which help ensure their continued protection and which the IPC has a statutory duty to have regard to in its decisions⁶⁶. The conservation of the natural beauty of the landscape and countryside should be given substantial weight by the IPC in deciding on applications for development consent in these areas.

5.9.7 Nevertheless, the IPC may grant development consent in these areas in exceptional circumstances. The development should be demonstrated to be in the public interest and consideration of such applications should include an assessment of:

⁶⁵ Landscape Institute and Institute of Environmental Management and Assessment (2002, 2nd edition): *Guidelines for Landscape and Visual Impact Assessment*; and Land Use Consultants (2002): *Landscape Character Assessment – Guidance for England and Scotland*.

⁶⁶ For an explanation of the statutory purposes and of the duties which will apply to the IPC, see "Duties on relevant authorities to have regard to the purposes of National Parks, AONBs and the Norfolk and Suffolk Broads" at <http://archive.defra.gov.uk/rural/documents/protected/npaonb-duties-guide.pdf>

- (i). the need for the development, including in terms of any national considerations⁶⁷, and the impact of consenting, or not consenting it, upon the local economy;
- (ii). the cost of, and scope for, developing elsewhere outside the designated area, or meeting the need for it in some other way; and
- (iii). any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.

5.9.8 The IPC should ensure that any projects consented in these designated areas should be carried out to high environmental standards through the application of appropriate requirements where necessary.

Developments outside nationally designated areas which might affect them

5.9.9 The duty to have regard to the purposes of nationally designated areas also applies when considering applications for projects outside the boundaries of these areas which may have impacts within them. The aim should be to avoid compromising the purposes of designation and such projects should be designed sensitively given the various siting, operational, and other relevant constraints. This should include projects in England which may have impacts on National Scenic Areas in Scotland.

5.9.10 The fact that a proposed project will be visible from within a designated area should not in itself be a reason for refusing consent.

Developments in other areas

5.9.11 Outside nationally designated areas, there are local landscapes that may be highly valued locally and protected by local designation. Where a local development document in England or a local

development plan in Wales has policies based on landscape character assessment, these should be paid particular attention. However, local landscape designations should not be used in themselves as reasons to refuse consent, as this may unduly restrict acceptable development.

5.9.12 The IPC should consider whether the project has been designed carefully, taking account of environmental effects on the landscape and siting, operational and other relevant constraints, to minimise harm to the landscape, including by reasonable mitigation.

Visual Impact

5.9.13 The IPC will have to judge whether the visual effects on sensitive receptors, such as local residents, and other receptors, such as visitors to the local area, outweigh the benefits of the development. Coastal areas are particularly vulnerable to visual intrusion because of the potential high visibility of development on the foreshore, on the skyline and affecting views along stretches of undeveloped coast.

5.9.14 It may be helpful for applicants to draw attention, in the supporting evidence to their applications, to any examples of existing permitted infrastructure they are aware of with a similar magnitude of impact on sensitive receptors. This may assist the IPC in judging the weight it should give to the assessed visual impacts of the proposed development.

Mitigation

5.9.15 Reducing the scale of a project can help to mitigate the visual and landscape effects of a proposed project. However, reducing the scale or otherwise amending the design of development may result in a significant operational constraint and reduction in function. There may, however, be exceptional circumstances, where mitigation could have a very significant benefit and warrant a small

⁶⁷ National considerations should be understood to include the national need for the infrastructure as set out in section 3 and the contribution of the infrastructure to the national economy.

reduction in function. In these circumstances, the IPC may decide that the benefits of the mitigation to reduce the landscape effects outweigh the marginal loss of function.

5.9.16 Within a defined site, adverse landscape and visual effects may be minimised through appropriate siting of infrastructure within that site, design including colours and materials, and landscaping schemes, depending on the size and type of proposed project. Materials and designs of buildings should always be given careful consideration.

5.9.17 Depending on the topography of the surrounding terrain and areas of population it may be appropriate to undertake landscaping off site. For example, filling in gaps in existing tree and hedge lines would mitigate the impact when viewed from a more distant vista.

5.10 Land Use Including Open Space, Green Infrastructure & Green Belt

Introduction

5.10.1 A hazardous waste infrastructure project will have direct effects on the existing use of the proposed site and may have indirect effects on the use, or planned use, of land in the vicinity for other types of development.

5.10.2 The Government's policy is to ensure there is adequate provision of high quality open space⁶⁸ (including green infrastructure)⁶⁹, and sports and recreation facilities to meet the needs of local communities. Open spaces, sports and recreational facilities all help to underpin people's quality of life

and have a vital role to play in promoting healthy living. Green infrastructure, in particular, will also play an increasingly important role in mitigating and adapting to the impacts of climate change.

5.10.3 The re-use of previously developed land for new development can make a major contribution to sustainable development by reducing the amount of countryside and undeveloped greenfield land that needs to be used. Green Belts, defined in a local authority's development plan⁷⁰ are situated around certain cities and large built-up areas. The fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; the most important attribute of Green Belts is their openness. For further information on the purposes of Green Belt policy see PPG2 or any successor to it.⁷¹

Applicant's Assessment

5.10.4 The ES should identify existing and proposed⁷² land-uses near the project, any effects of replacing an existing development or use of the site with the proposed project or preventing a development or use on a neighbouring site from continuing. Applicants should also assess any effects of precluding a new development or use proposed in the development plan.

5.10.5 Applicants will need to consult the local community on their proposals to build on open space, sports or recreational buildings and land. Taking account of the consultations, applicants should consider providing new or additional open space including green infrastructure, sport or recreation facilities, to substitute for any losses as a result of their proposal. Applicants should use any up-to-date local authority assessment or, if

⁶⁸ Open space is defined in the Town and Country Planning Act 1990 as land laid out as a public garden, or used for the purposes of public recreation, or land which is a disused burial ground. However, in applying the policies in this section open space should be taken to mean all open space of public value, including not just land, but also areas of water such as rivers, canals, lakes and reservoirs which offer important opportunities for sport and recreation and can also act as a visual amenity.

⁶⁹ Green infrastructure is a network of multi-functional green spaces, both new and existing, both rural and urban, which supports the natural and ecological processes and is integral to the health and quality of life of sustainable communities.

⁷⁰ Or else so designated under the Green Belt (London and Home Counties) Act 1938.

⁷¹ See Planning Policy Guidance 2: Green Belts, or any successor to it.

⁷² For example, where a planning application has been submitted.

there is none, provide an independent assessment to show whether the existing open space sports and recreational buildings and land is surplus to requirements.

5.10.6 During any pre-application discussions with the applicant, the local planning authority (LPA) should identify any concerns it has about the impacts of the application on land-use, having regard to the development plan and relevant applications, and including, where relevant, whether it agrees with any independent assessment that the land is surplus to requirements.

5.10.7 Applicants should seek to minimise impacts on the best and most versatile agricultural land (defined in grades 1, 2 and 3a of the Agricultural Land Classification), and preferably use land in areas of poorer quality (grades 3b, 4 and 5) except where this would be inconsistent with other sustainability considerations. Applicants should also identify any effects and seek to minimise impacts on soil quality taking into account any mitigation measures proposed. Where possible, facilities should be developed on brownfield sites. However, brownfield sites may have significant biodiversity or geodiversity interest and if this is the case these should be retained or incorporated into the development, in line with section 5.3 on biodiversity and geological conservation. For developments on previously developed land, applicants should ensure that they have considered the risk posed by land contamination.

5.10.8 Applicants should safeguard any mineral resources on the proposed site as far as possible, taking into account the long-term potential of the land use after any future decommissioning has taken place.

5.10.9 The general policies controlling development in the countryside apply with equal force in Green Belts but there is, in addition, a general presumption against inappropriate

development within them. Such development should not be approved except in very special circumstances. Applicants should therefore determine whether their proposal, or any part of it, is within an established Green Belt and if it is, whether their proposal may be inappropriate development within the meaning of Green Belt policy (as set out below).

5.10.10 However, infilling or redevelopment of major developed sites in the Green Belt, if identified as such by the local planning authority, may be suitable for hazardous waste infrastructure. It may help to secure jobs and prosperity without further prejudicing the Green Belt or offer the opportunity for environmental improvement. Applicants should refer to relevant criteria⁷³ on such developments in Green Belts.

IPC decision making

5.10.11 Where the project conflicts with a proposal in a development plan, the IPC should take account of the stage which the development plan document has reached in deciding what weight to give to the plan for the purposes of determining the planning significance of what is replaced, prevented or precluded. The closer the development plan document is to being adopted by the LPA, the greater the weight which can be attached to the impact of the proposal on the plan.

5.10.12 The IPC should not grant consent for development on existing open space, sports and recreational buildings and land unless an assessment has been undertaken either by the local authority or independently, which has clearly shown the open space or the buildings and land to be surplus to requirements or the IPC determines that the benefits of the project (including need) outweigh the potential loss of such facilities taking into account any positive proposals made by the applicant to provide new, improved or compensatory land or facilities. The loss of playing fields should only be allowed where applicants

⁷³ See Annex C to Planning Policy Guidance 2: Green belts or any successor to it.

can demonstrate that they will be replaced with facilities of equivalent or better quantity or quality in a suitable location.

5.10.13 Where networks of green infrastructure have been identified in development plans, they should normally be protected from development, and, where possible, strengthened by or integrated within it.

5.10.14 The IPC should ensure that applicants do not site their scheme on the best and most versatile agricultural land without justification. It should give little weight to the loss of agricultural land in grades 3b, 4 and 5, except in areas (such as uplands) where particular agricultural practices may themselves contribute to the quality and character of the environment or the local economy. The IPC should also take account of any loss of high quality soil including the value of peat for biodiversity and as a carbon store as well as taking account of whether the proposal gives rise to any risk of soil contamination. The IPC will need to liaise with the EA to ensure that it is satisfied that any emissions to land from the facility during operation and decommissioning can be adequately regulated under the environmental permitting regime.

5.10.15 In considering the impact on maintaining coastal recreation sites and features, the IPC should expect applicants to have taken advantage of opportunities to maintain and enhance access to the coast. In doing so the IPC should consider the implications for development of the creation of a continuous signed and managed route around the coast, as proposed in the Marine and Coastal Access Act 2009.

5.10.16 When located in the Green Belt hazardous waste infrastructure projects may comprise 'inappropriate development'⁷⁴ Inappropriate development is by definition harmful to the Green Belt and there is a presumption

against it. The IPC will need to assess whether there are very special circumstances to justify inappropriate development. Very special circumstances will not exist unless the harm by reason of inappropriateness, and any other harm, is clearly outweighed by other considerations. In view of the presumption against inappropriate development, the IPC will attach substantial weight to the harm to the Green Belt, when considering any application for such development.

Mitigation

5.10.17 Applicants can minimise the direct effects of a project on the existing use of the proposed site, or proposed uses near the site by the application of good design principles, including the layout of the project.⁷⁵

5.10.18 Where green infrastructure is affected, the IPC should, if necessary, consider imposing requirements to ensure the connectivity of the green infrastructure network is maintained, and that any necessary works are undertaken, where possible, to mitigate any adverse impact and, where appropriate, to improve that network and other areas of open space, including appropriate access to new coastal access routes

5.10.19 The IPC should also consider whether mitigation of any adverse effects on green infrastructure or open space is adequately provided for by means of any planning obligations for example, to exchange land and provide for appropriate management and maintenance agreements. Any exchange land should be at least as good in terms of size, usefulness, attractiveness, quality and accessibility.⁷⁶ Alternatively, where Sections 131 and 132 of the Planning Act 2008 apply, replacement land provided under those sections will need to conform to the requirements of those sections.

⁷⁴ Defined in section 3 of PPG2: Green Belts

⁷⁵ For further guidance see Model Procedures for the Management of Land Contamination (CLR11) which set out procedures for risk assessment, deciding on remedial options and implementing remediation.

⁷⁶ The land provided in exchange for open space, common land and certain other land must comply with the requirements of s131 or s132 of the Planning Act 2008, where applicable.

5.10.20 Where a proposed development has an impact on a Mineral Safeguarding Area (MSA), the IPC should ensure that appropriate mitigation measures have been put in place to safeguard mineral resources.

5.10.21 Where a project has a sterilising effect on land use there may be scope for this to be mitigated through, for example, using the land for nature conservation or wildlife corridors or for parking and storage in employment areas.

5.10.22 Rights of way, National Trails and other rights of access to land (e.g. open access land) are an important recreational facility e.g. for walkers, cyclists and horse riders. The IPC should expect applicants to take appropriate mitigation measures to address adverse effects on coastal access, National Trails and other rights of way. Where this is not the case the IPC should consider what appropriate mitigation requirements might be attached to any grant of development consent.

5.11 Noise and vibration

Introduction

5.11.1 Excessive noise can have wide-ranging impacts on the quality of human life and health (e.g. owing to annoyance or sleep disturbance), use and enjoyment of areas of value such as quiet places and areas with high landscape quality. The Government's policy is set out in the Noise Policy Statement for England⁷⁷. It promotes good health and good quality of life through effective noise management. Similar considerations apply to vibration, which can also cause damage to buildings. In this section, in line with current legislation, references to "noise" below apply equally to assessment of impacts of vibration.

5.11.2 Noise resulting from a proposed development can also have adverse impacts on

wildlife and biodiversity. Noise effects of the proposed development on ecological receptors should be assessed in accordance with the Biodiversity and Geological Conservation section of this NPS.

5.11.3 Factors that will determine the likely noise impact include:

- the inherent operational noise from the proposed development, its characteristics;
- the proximity of the proposed development to noise sensitive premises (including residential properties, schools and hospitals) and noise sensitive areas (including certain parks and open spaces);
- the proximity of the proposed development to quiet places and other areas that are particularly valued for their acoustic environment or landscape quality; and
- the proximity of the proposed development to designated sites where noise may have an adverse impact on protected species or other wildlife.

Applicant's Assessment

5.11.4 Where noise impacts are likely to arise from the proposed development, the applicant should include the following in the noise assessment, which should form part of the ES:

- A description of the noise generating aspects of the development proposal leading to noise impacts, including the identification of any distinctive tonal, impulsive or low frequency characteristics of the noise;
- Identification of noise sensitive premises and noise sensitive areas that may be affected;
- The characteristics of the existing noise environment;

⁷⁷ As set out in the Noise Policy Statement for England <http://archive.defra.gov.uk/environment/quality/noise/policy/documents/noise-policy.pdf>

- A prediction on how the noise environment will change with the proposed development:
 - in the shorter term such as during the construction period;
 - in the longer term during the operating life of the infrastructure; and
 - at particular times of the day, evening and night as appropriate.
- An assessment of the effect of predicted changes in the noise environment on any noise sensitive premises and noise sensitive areas;
- For hazardous waste infrastructure such as Ship Recycling Facilities located near bodies of water, the assessment should also consider the effect on sub-surface or underwater noise; and:
- Measures to be employed in mitigating the effects of noise. Applicants should consider using best available techniques have been used to reduce noise impacts
- The nature and extent of the noise assessment should be proportionate to the likely noise impact.

5.11.5 The noise impact of ancillary activities associated with the development, such as increased road and rail traffic movements, or other forms of transportation, should also be considered.

5.11.6 Operational noise, with respect to human receptors, should be assessed using the principles of the relevant British Standards and other guidance. For the prediction, assessment and management of construction noise, reference should be made to any relevant British Standards and other guidance which also give examples of mitigation strategies

5.11.7 The applicant should consult the Environment Agency on the likely scope of an Environmental Permit and Natural England and in particular with regard to assessment of noise on protected species or other wildlife. The results of any noise surveys and predictions may inform

the ecological assessment. The seasonality of potentially affected species in nearby sites may also need to be taken into account.

IPC Decision making

5.11.8 Developments must be undertaken in accordance with statutory requirements for noise. Due regard must have been given to PPG24: Planning and Noise or any successor to it.

5.11.9 The project should demonstrate good design through selection of the quietest cost effective plant available; containment of noise within buildings wherever possible; optimisation of plant layout to minimise noise emissions; and, where possible, the use of landscaping, bunds or noise barriers to reduce noise transmission.

5.11.10 The IPC should not grant development consent unless it is satisfied that the proposals will meet the following aims:

- avoid significant adverse impacts on health and quality of life from noise;
- mitigate and minimise other adverse impacts on health and quality of life from noise; and
- where possible, contribute to improvements to health and quality of life through the effective management and control of noise.

5.11.11 When preparing the development consent order, the IPC should consider including measurable requirements or specifying the mitigation measures to be put in place to ensure that the noise levels from the project do not exceed those described in the assessment or any other estimates on which the IPC's decision was based. The IPC should take into account the likely Environmental Permit controls on noise and vibration during operation and decommissioning.

Mitigation

5.11.12 The IPC should consider whether mitigation measures are needed both for operational and construction noise over and

above any which may form part of the project application. In doing so the IPC may wish to impose requirements. Any such requirements should take account of the guidance set out in Circular 11/95 as revised, on "The Use of Conditions in Planning Permissions" or any successor to it.

5.11.13 Mitigation measures may include one or more of the following:

- **engineering:** reduction of noise at point of generation and containment of noise generated;
- **lay-out:** adequate distance between source and noise-sensitive receptors; incorporating good design to minimise noise transmission through screening by natural barriers, or other buildings;
- **administrative:** restricting activities allowed on the site; specifying acceptable noise limits; and taking into account seasonality of wildlife in nearby designated sites.

5.11.14 In certain situations, and only when all other forms of noise mitigation have been exhausted, it may be appropriate for the IPC to consider requiring noise mitigation through improved sound insulation to dwellings or, in extreme cases, compulsory purchase of affected properties, as a means of consenting otherwise unacceptable development.

5.12 Socio-Economic

Introduction

5.12.1 The construction, operation and decommissioning of hazardous waste infrastructure may have socio-economic impacts at local and regional levels. Developers should look to maximize employment opportunities and consider the likely requirements for training, working with training partners such as Train to Gain Skills brokers and Construction Skills. Developers should also work with local resources and organizations

to ensure employment opportunities during construction and operation of hazardous waste facilities are effectively communicated. In addition, the use of sustainable materials from local suppliers is encouraged.

5.12.2 They should also ensure that goods and services specified in design and procured during construction be effectively communicated.

Applicant's Assessment

5.12.3 Where the project is likely to have socio-economic impacts at local or regional levels, the applicant should undertake and include in their application an assessment of these impacts during the construction, operation and decommissioning phases. This assessment could consider the following impacts, however these suggestions are not exhaustive and other socio-economic impacts should be assessed if appropriate for the proposed development:

- Regional and local socio-economic impacts associated with new hazardous waste infrastructure may include the creation of jobs and training opportunities; the provision of educational and visitor facilities; the impact of the proposed new facility on equalities groups and effects on tourism and the impact on local services. The application should have taken into account the location of public rights of way, including footpaths, bridleways and byways and minimised hindrance to them where possible.
- The changing influx of workers during the different construction, operation and decommissioning phases of the hazardous waste infrastructure may alter the demand for services and facilities in the areas surrounding the proposed development.
- Cumulative effects – if development consent were to be granted to for a number of projects within a region and these were developed in a similar timeframe, there could be some short-term negative effects.

5.12.4 Applicants should describe the existing socio-economic conditions in the areas surrounding the proposed development following appropriate consultation with those most affected and could also refer to how the development's socio-economic impacts correlate with local planning policies.

5.12.5 In considering alternative site locations, the developer should take account of potential impacts of alternative project options in respect of any adverse effects on different groups of the population. Potential impacts on pollution and noise in respect of any adverse effects on equalities groups and vulnerable equalities groups should also be taken into account:

5.12.6 Hazardous waste management facilities should be subject to whole-life costing to ensure that they benefit the local, regional and/or national economy.

5.12.7 Socio-economic impacts may be linked to other impacts, for example the visual impact of a development is considered in Section 5.9 but may also have an impact on tourism and local businesses. Where such impacts are relevant to the development, applicants should include them in their assessments.

IPC Decision Making

5.12.8 The IPC should have regard to the potential socio-economic impacts of new hazardous waste infrastructure identified by the applicant and from any other sources that the IPC considers to be both relevant and important to its decision. It should be reasonable for the IPC to conclude that to speculative assertions of socio-economic impacts not supported by evidence should be given little weight (particularly in view of the need for hazardous infrastructure as set out in this NPS).

Mitigation

5.12.9 The IPC should consider whether mitigation measures are necessary to mitigate any adverse socio-economic impacts of the development. For example, high quality design can improve the visual and environmental experience for visitors and the local community alike.

5.13 Traffic And Transport Impacts

Introduction

5.13.1 The transport of materials, goods and personnel to and from a development during all project phases can have a variety of impacts on the surrounding transport infrastructure and potentially on connecting transport networks, e.g. through increased congestion. Impacts may include economic, social and environmental effects. Environmental impacts may result particularly from increases in noise and emissions from road transport. Disturbance caused by traffic and abnormal loads generated during the construction phase will depend on the scale and type of the proposal. The consideration and mitigation of transport impacts is an essential part of Government's wider policy objectives for sustainable development.

Applicant's Assessment

5.13.2 If a project is likely to have significant transport implications, the applicant's ES (see section 4.2) should include a transport assessment, using the NATA/WebTAG methodology stipulated in Department for Transport guidance,⁷⁸ or any successor to such methodology. Applicants should consult the Highways Agency and/or the relevant highway authority, as appropriate, on the assessment and on mitigation measures. The assessment should distinguish between the construction, operation and decommissioning project stages as appropriate. The assessment

78 Guidance on transport assessments is at <http://www2.dft.gov.uk/pgr/regional/transportassessments/guidanceonta.html>

should illustrate accessibility to the site by all modes and the likely modal split of journeys to and from the site. Where appropriate, the applicant should prepare a travel plan including demand management measures to mitigate transport impacts. The applicant should also provide details of proposed measures to improve access by public transport, walking and cycling, to reduce the need for parking associated with the proposal and to mitigate transport impacts. For hazardous wastes which may present a significant risk during transportation, applicants should demonstrate how these will be managed.

5.13.3 If additional transport infrastructure is proposed, applicants should discuss with network providers the possibility of co-funding by Government for any third party benefits. Guidance has been issued⁷⁹ in England which explains the circumstances where this may be possible, although the Government cannot guarantee in advance that funding will be available for any given uncommitted scheme at any specified time.

IPC Decision Making

5.13.4 A new nationally significant infrastructure project may give rise to substantial impacts on the surrounding transport infrastructure and the IPC should therefore ensure that the applicant has sought to mitigate these impacts, including during the construction phase of the operation. Where the proposed mitigation measures are insufficient to reduce the impact on the transport infrastructure to acceptable levels, the IPC should consider requirements to mitigate adverse impacts on transport networks arising from the development, as set out below. Applicants may also be willing to enter into planning obligations for funding infrastructure and otherwise mitigating adverse impacts.

5.13.5 Provided that the applicant is willing to enter into planning obligations or requirements

can be imposed to mitigate transport impacts identified in the NATA/Web TAG transport assessment with attribution of costs calculated in accordance with the Department for Transport's guidance, then development consent should not be withheld, and appropriately limited weight should be applied to residual effects on the surrounding transport infrastructure.

Mitigation

5.13.6 Where mitigation is needed, possible demand management measures must be considered and if feasible and operationally reasonable, required, before considering requirements for the provision of new inland transport infrastructure to deal with remaining transport impacts.

5.13.7 The IPC should have regard to the cost-effectiveness of demand management measures compared to new transport infrastructure, as well as the aim to secure more sustainable patterns of transport development when considering mitigation measures.

5.13.8 Water-borne or rail transport is preferred over road transport, where cost-effective.

5.13.9 Where there is likely to be substantial HGV traffic, the IPC may attach requirements to a consent to include requirements that:

- control numbers of HGV movements to and from the site in a specified period during its construction and possibly on the routing of such movements;
- make sufficient provision for HGV parking, either on the site or at dedicated facilities elsewhere, to avoid 'overspill' parking on public roads, prolonged queuing on approach roads and uncontrolled on-street HGV parking, in normal operating conditions; and

⁷⁹ <http://www.dft.gov.uk/pgr/regional/fundingtransportinfrastructure>

- ensure satisfactory arrangements for reasonably foreseeable abnormal disruption, in consultation with network providers and the responsible police force.

5.13.10 If an applicant suggests that the costs of meeting any obligations or requirements would make the proposal economically unviable this should not in itself justify the relaxation by the IPC of any obligations or requirements needed to secure the mitigation.

5.14 Waste Management

Introduction

5.14.1 Any facilities developed for the management of hazardous waste will themselves generate some waste during construction, operation and decommissioning. Government policy on hazardous and non-hazardous waste is intended to protect human health and the environment by producing less waste and by using it as a resource wherever possible. Where this is not possible, waste management regulation ensures that waste is disposed of in a way that is least damaging to the environment and to human health.

5.14.2 Sustainable waste management is implemented through the “waste hierarchy”:

- prevention;
- preparing for reuse;
- recycling;
- other recovery, including energy recovery;
- disposal.

5.14.3 Disposal of waste produced by facilities should only be considered where other waste management options are not available or where it is the best overall environmental outcome.

Applicant’s assessment

5.14.4 The applicant should set out the arrangements that are proposed for managing any waste produced that cannot be managed at the facility itself and prepare a Site Waste Management Plan. The arrangements described and Management Plan should include information on the proposed waste recovery and disposal system for all waste generated by the development to include details of the alternatives considered. It should demonstrate that the options chosen are the most sustainable for the waste stream. It should also include an assessment of the impact of the waste arising from the development (and which is not going to be treated at the facility itself) on the capacity of waste management facilities to deal with other waste arising in the area for at least five years of operation. The applicant must demonstrate that all waste produced by the facility will be managed in accordance with the waste hierarchy and that during construction, excavated soils and subsoils will, where possible, be reused on site e.g. for the balancing of cut and fill. The applicant should seek to minimise the volume of waste produced and the volume of waste sent for disposal unless it can be demonstrated that this is the best overall environmental outcome.

5.14.5 Waste Management Plans for Ship Recycling Facilities must show routes for onward recovery or disposal of materials removed. In the case of hazardous waste, these routes should be in accordance with the Strategy for Hazardous Waste Management in England.

IPC decision making

5.14.6 The IPC should consider the extent to which the applicant has proposed an effective system for managing hazardous and non-hazardous waste arising from the construction, operation and decommissioning of the proposed development. It should be satisfied that:

- any such waste will be properly managed, both on-site and off-site;
- the waste from the proposed facility can be dealt with appropriately by the waste infrastructure which is, or is likely to be, available. Such waste arisings should not have an adverse effect on the capacity of existing waste management facilities to deal with other waste arisings in the area; and
- adequate steps have been taken to minimise the volume of waste arisings, and of the volume of waste arisings sent to disposal, except where that is the best overall environmental outcome.

5.14.7 Where necessary, the IPC should use requirements or obligations to ensure that appropriate measures for waste management are applied. The IPC may wish to include a condition on revision of waste management plans at reasonable intervals when giving consent.

5.14.8 Where the project will be subject to the Environmental Permitting regime, waste management arrangements during operations will be covered by the permit and the considerations set out in Section 4.7 will apply.⁸⁰

5.15 Water Quality and Resources

Introduction

5.15.1 Infrastructure development can have adverse effects on the water environment, including groundwater, inland surface water, transitional waters⁸¹ and coastal waters. During the construction, operation and decommissioning phases, it can lead to increased demand for water, involve discharges to water and cause adverse ecological effects resulting from physical modifications to the water environment. There

may also be an increased risk of spills and leaks of pollutants to the water environment. These effects could lead to adverse impacts on health or on protected species and habitats (see Section 5.3 on biodiversity and geological conservation) and could, in particular, result in surface waters, groundwaters or protected areas⁸² failing to meet environmental objectives established under the Water Framework Directive.

Applicant's Assessment

5.15.2 Applicants should make early contact with the relevant regulators including the Environment Agency. Where the project is likely to have adverse effects on the water environment, the applicant should undertake an assessment of the existing status of, and impacts of the proposed project on water quality, water resources and physical characteristics as part of the Environmental Statement (ES) or equivalent. Facilities which handle contaminants which present a high risk to the water environment should be located away from water courses and outside aquifer and source protection zones.

5.15.3 The ES should describe:

- the existing quality of waters affected by the proposed project and the impacts of the proposed project on water quality, noting any relevant existing discharges, proposed new discharges and proposed changes to discharges;
- existing water resources affected by the proposed project and the impacts of the proposed project on water resources, noting any relevant existing abstraction rates, proposed new abstraction rates and proposed changes to abstraction rates (including any impact on or use of mains supplies and reference to Catchment Abstraction Management Strategies);

⁸⁰ Environmental Permitting Guidance – Core Guidance for the Environmental Permitting (England and Wales) Regulations 2010.

⁸¹ As defined in the Water Framework Directive (2000/60/EC), transitional waters are bodies of surface water in the vicinity of river mouths which are partly saline in character as a result of their proximity to coastal waters but which are substantially influenced by freshwater flows.

⁸² Protected areas are areas which have been designated as requiring special protection under specific Community legislation for the protection of their surface water and groundwater or for the conservation of habitats and species directly depending on water.

- existing physical characteristics of the water environment (including quantity and dynamics of flow) affected by the proposed project and any impact of physical modifications to these characteristics;
- any impacts of the proposed project on water bodies or protected areas under the Water Framework Directive and source protection zones (SPZs) around potable groundwater abstractions; and
- any cumulative effects.

5.15.4 Applicants should demonstrate that they have incorporated, where possible, design measures such as independent water storage and collection facilities, opportunities for reuse, the use of a BMS, automated leak detection, building specific metering and rain harvesting. The applicant must state what emergency response procedures should be put into place to deal with any pollution incident quickly and the measures that will be used to avoid any adverse effects from accidental spills.

IPC decision making

5.15.5 Activities that discharge to the water environment are subject to pollution control. The considerations set out in Section 4.7 and 4.13 on the interface between planning and pollution control therefore apply. These considerations will also apply in an analogous way to the abstraction licensing regime regulating activities that take water from the water environment, and to the control regimes relating to works to, and structures in, on, or under a controlled water.

5.15.6 The IPC will generally need to give impacts on the water environment more weight where a project would have adverse effects on the

achievement of the environmental objectives established under the Water Framework Directive.

5.15.7 The IPC should satisfy itself that a proposal has regard to the River Basin Management Plans and the requirements of the Water Framework Directive (including Article 4.7) and its daughter directives, including those on priority substances and groundwater. The specific objectives for particular river basins are set out in River Basin Management Plans. The IPC should also consider the interactions of the proposed project with other plans such as Water Resources Management Plans and Shoreline/Estuary Management Plans.

5.15.8 The IPC should consider whether appropriate requirements should be attached to any development consent and/or planning obligations entered into to mitigate adverse effects on the water environment.

Mitigation

5.15.9 The IPC should consider whether mitigation and enhancement measures are needed for operational, construction and decommissioning phases over and above any which may form part of the project application. A construction management plan may help codify mitigation at that stage.

5.15.10 The risk of impacts on the water environment can be reduced through careful design to facilitate adherence to good pollution control practice. For example, designated areas for storage and unloading, with appropriate drainage facilities, should be clearly marked.

5.15.11 The impact on local water resources can be minimised through planning and design for the efficient use of water, including water recycling.



Published by TSO (The Stationery Office) and available from:

Online

www.tsoshop.co.uk

Mail, Telephone Fax & E-Mail

TSO

PO Box 29, Norwich, NR3 1GN

Telephone orders/General enquiries 0870 600 5522

Order through the Parliamentary Hotline Lo-Call 0845 7 023474

Fax orders: 0870 600 5533

E-mail: customer.services@tso.co.uk

Textphone: 0870 240 3701

The Parliamentary Bookshop

12 Bridge Street, Parliament Square,

London SW1A 2JX

Telephone orders/ General enquiries: 020 7219 3890

Fax orders: 020 7219 3866

Email: bookshop@parliament.uk

Internet: <http://www.bookshop.parliament.uk>

TSO@Blackwell and other Accredited Agents

Customers can also order publications from

TSO Ireland

16 Arthur Street, Belfast BT1 4GD

028 9023 8451 Fax 028 9023 5401

ISBN 978-0-10-851087-8

