



Department for Transport

Revised National Policy Statement for Ports

Appraisal of Sustainability Report



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Non-Technical Summary



Non-Technical Summary

Introduction

This Non-Technical Summary provides an overview of the Appraisal of Sustainability (AoS) Report of the draft revised National Policy Statement for Ports (hereafter referred to as the 'draft revised NPS'). The following sections of this Non-Technical Summary:

- describe the purpose and scope of the draft revised NPS and the approach to identifying alternatives that have been considered and appraised as part of the AoS;
- describe the AoS process and how it has been applied to the draft revised NPS, including the AoS objectives and guide questions used in the appraisal;
- present a summary of the findings of the AoS of the draft revised NPS (and reasonable alternatives); and
- set out the next steps in the AoS process.

The appraisal, the AoS Report and this Non-Technical Summary have been completed by WSP and Mott Macdonald on behalf of the Department for Transport (DfT).

The Revised National Policy Statement for Ports

Purpose and Scope

The NPS for Ports was designated in 2012 and provides planning policy guidance against which applications for any nationally significant new port infrastructure are examined. The government announced¹ a review of the NPS for Ports in March 2023 to ensure that it remains fit for purpose.

The current and subsequently revised NPS for Ports is/ will be part of the planning system established under the Planning Act 2008, and provides the framework for decisions on proposals for new nationally significant port development promoted in England or at a reserved trust port in Wales². It also applies, wherever relevant, to associated development, such as road and rail links, for which consent is sought alongside that for the principal development.

¹ DfT (2023) SoS for Transport's Written Statement to Parliament 'Review of the national policy statement for ports', 14 March 2023. Available online: <https://www.gov.uk/government/speeches/review-of-the-national-policy-statement-for-ports> [Accessed November 2023].

² There is only currently one reserved trust port in Wales at Milford Haven. A reserved trust port is an independent statutory body without shareholders, they have a unique ownership structure which sets them apart from private ports and municipally owned ones.

The NPS for Ports also sets out the Government's conclusions on the need for new port infrastructure, considering the current place of ports in the national economy, the available evidence on future demand, and the options for meeting future needs. It explains to planning decision-makers the approach they should take to proposals, including the main issues which, in the Government's view, will need to be addressed to ensure that future development is fully sustainable, as well as the weight to be given to the need for new port infrastructure and to the positive and negative impacts it may bring.

Consistent with the current NPS, the draft revised NPS is non-site-specific, providing high-level assessment principles against which Development Consent Order (DCO) applications will be considered, rather than identifying specific sites.

The draft revised NPS, which is the subject of this AoS Report and Non-Technical Summary, comprises four chapters, as follows:

- **Chapter 1:** provides an introduction to the draft revised NPS, its role, duration and territorial extent. It also explains that an AoS process has been carried out alongside the development of the draft revised NPS.
- **Chapter 2:** outlines the essential role of ports in the UK economy, Government policy for ports, the Government's assessment of the need for new infrastructure, and guidance to the decision-maker on assessing the need for additional capacity.
- **Chapter 3:** outlines the key principles to which all decision-makers and applicants must give consideration. These are to be considered in addition to the generic impact guidance provided in chapter 4. The chapter is structured as follows:
 - Key considerations
 - Consideration of benefits and impacts;
 - Socio-economic impacts;
 - Commercial and competition impacts
 - General approach to environmental impacts and Environmental Impact Assessment;
 - Alternatives;
 - Criteria for good design for port infrastructure;
 - Biodiversity Net Gain
 - Climate change mitigation;
 - Climate change adaptation;
 - Health and nuisances; and
 - Security considerations.
- **Chapter 4:** gives guidance on generic impact types often relevant to port applications and/or associated development. Guidance is provided across the following topics:
 - Biodiversity and geological conservation;
 - Habitats Regulations Assessment;
 - Dredging;
 - Pollution control and other environmental regulatory regimes;

- Flood risk;
- Coastal change;
- Traffic and transport impacts;
- Waste management;
- Water quality and resources;
- Air quality and emissions;
- Dust, odour, artificial light, smoke, steam and insect infestation;
- Noise and vibration;
- Landscape and visual impacts;
- Historic environment; and
- Land use including open space, green infrastructure and Green Belt.

Reasonable Alternatives to the Draft revised National Policy Statement for Ports

To support the development of the draft revised NPS consistent with the principles of good plan-making, and as part of the AoS process to meet specific requirements, alternatives to the draft revised NPS need to be considered, described, and, where appropriate, appraised.

The identification of alternatives focused specifically on whether a revision to the NPS is necessary, how it should be done and the extent to which it should specify locations for future development. Following this, one alternative to the draft revised NPS (as proposed) has been identified as reasonable and has been taken forward for appraisal as part of the AoS. This is an alternative NPS that is more explicit in terms of the quantum of growth required to meet forecasted demand.

What is an Appraisal of Sustainability (AoS)?

The Planning Act 2008³ requires that Government departments assess the social, economic, and environmental sustainability of policy stated within an NPS through the production of an AoS. The AoS process relies upon the development of an appraisal framework within which decisions on the relative sustainability of the NPS and its reasonable alternatives can be made, with the purpose of providing decision-makers, consultees and others with information and insight on the socio-economic and environmental effects of the NPS and its implementation, and capturing progress towards sustainability. If potential significant adverse effects are identified, the AoS recommends options for avoiding or mitigating such effects. In this way, the AoS helps inform the preparation of an NPS to promote sustainable development.

³ [Planning Act 2008 \(legislation.gov.uk\)](https://legislation.gov.uk)

The AoS incorporates an assessment in accordance with the requirements of the Strategic Environmental Assessment (SEA) Regulations⁴. The SEA Regulations aim for a high level of environmental protection and to promote sustainable development. The SEA Regulations apply to certain plans that are likely to have significant effects on the environment. The draft revised NPS for Ports is being treated as a plan for the purpose of the SEA Regulations.

How has the appraisal been undertaken?

A series of AoS objectives and guide questions have been established against which the draft revised NPS and reasonable alternative have been appraised. The AoS objectives and guide questions used in the appraisal of the draft Revised NPS reflect the topics contained in Schedule 2 of the SEA Regulations and have been informed by:

- a review of plans and programmes and the associated environmental protection objectives identified (see **Chapter 3** and **Appendix A** of the main AoS Report);
- baseline information (see **Chapter 3** and **Appendix A** of the main AoS Report);
- key issues and opportunities (see **Chapter 3** and **Appendix A** of the main AoS Report);
- a broad understanding of the likely generic effects arising from the construction and operation of port infrastructure; and
- responses received to consultation on the AoS Scoping Report (**Appendix B** of the main AoS Report).

Broadly, the AoS objectives present the preferred environmental, social, and economic outcomes, which typically involve minimising detrimental effects and enhancing positive effects. Associated guide questions have been developed for each AoS objective to provide a detailed framework against which the draft revised NPS can be appraised. The appraisal objectives and guide questions are presented in Table NTS1.

⁴ The Environmental Assessment of Plans and Programmes Regulations 2004 S.I. 2004 No. 1633 and The Environmental Assessment of Plans and Programmes (Wales) Regulations 2004 S.I. 2004 No. 1656, as amended by the Environmental Assessments and Miscellaneous Planning (Amendment) (EU Exit) Regulations 2018 and the Environmental Assessment of Plans and Programmes and the Environmental Impact Assessment (Miscellaneous Amendments) (Wales) (EU Exit) Regulations 2019, respectively.

Table NTS1 - AoS Framework

AoS Topic	AoS Objective	Guide Questions
1. Biodiversity and Nature Conservation	To protect, restore and enhance biodiversity (habitats, species and ecosystems) working within environmental capacities and limits to contribute to ecosystem resilience and habitat connectivity and deliver a net biodiversity/ environmental gain.	Will the revised NPS for Ports: ■ protect, restore and/or enhance internationally and nationally designated nature conservation sites? ■ affect habitats or species, including those that are non-designated as well as those that are protected? ■ affect the structure, function and resilience of ecosystems and the services they provide? ■ Prioritise onsite delivery and provide opportunities to deliver biodiversity/ environmental net gain in England or net benefits in Wales? ■ help to deliver the outcomes legislated through the Environment Act 2021 and Environment (Wales) Act 2016? ■ prioritise the consideration of nature-based solutions and green-blue infrastructure in scheme design? ■ maintain the biodiversity mitigation hierarchy? ■ Seek to minimise impacts of physical modifications?
2. Population and Human Health	To minimise disturbance to local communities, maximise positive social impacts and protect and enhance the health, safety and wellbeing of workers and communities.	Will the revised NPS for Ports: ■ affect the social infrastructure and amenities available to local communities? ■ affect local population demographics and/ or levels of deprivation in surrounding areas? ■ protect and/or enhance the health and safety of workers? ■ protect and/or enhance the health, safety and wellbeing of local communities and specific groups within those communities? ■ minimise the risk or consequences of a major accident? ■ help to deliver the outcomes legislated through the Environment Act 2021 and Environment (Wales) Act 2016?

AoS Topic	AoS Objective	Guide Questions
		■ affect access to the coast and the route of the King Charles III England Coastal Path (KCIIIIECP)? ■ help deliver green infrastructure and opportunities for access to nature? ■ ensure that port schemes deliver improved local environment and infrastructure to local communities affect by development?
3. Economy and Skills	To promote a strong, diverse, and stable economy with opportunities to improve education and skills, and employment.	Will the revised NPS for Ports: ■ support the economic growth of the port sector and wider sectors? ■ affect opportunities for investment in education and skills development? ■ affect the number and types of jobs available in local economies? ■ affect how diverse and robust local economies are? ■ help to deliver the outcomes legislated through the Environment Act 2021 and Environment (Wales) Act 2016?
4. Land Use, Geology and Soils	To conserve and enhance soil health and geology and contribute to the sustainable use of land.	Will the revised NPS for Ports: ■ have an effect on soil health/function, variety, extent, and/or compaction levels? ■ increase the risk of, or affect known and existing land contamination? ■ protect and/or enhance sites protected for their geology and features of wider geological interest? ■ affect land stability? ■ change patterns of land use including effects on best and most versatile agricultural land? ■ ensure the efficient use of land through use of previously developed land and/or reclaimed land? ■ help to deliver the outcomes legislated through the Environment Act 2021 and Environment (Wales) Act 2016?

AoS Topic	AoS Objective	Guide Questions
		▪ protect Best and Most Versatile (BMV) land, protect peat and carbon store, manage the long-term value of soil? ▪ impact on coastal processes and the effect this will have on coastal habitats, including consideration of coastal squeeze?
5. Water Resources	To protect, enhance and increase resilience of water quantity and quality.	Will the revised NPS for Ports: ▪ encourage the efficient use of water? ▪ protect and enhance the quality of surface, groundwater, estuarine and coastal water quality? ▪ prevent the deterioration of Water Environment Regulations (WER) waterbody ▪ ensure a new activity or new physical modification does not prevent the future achievement of good status for estuarine (transitional) and coastal waters? ▪ help to deliver the outcomes legislated through the Environment Act 2021 and Environment (Wales) Act 2016? ▪ support the achievement of Water Environment Regulations objectives, including protected area objectives and mitigation measures in heavily modified waterbodies? ▪ protect and enhance the resilience of water resources from the risk of flooding and drought? ▪ seek to minimise or suitably mitigate the impacts of physical modification of estuaries and waterbodies as a result of port development? ▪ avoid impacts on or help to improve protected sites/ catchments designated as sensitive catchments for phosphorus and nitrogen under the Water Industry Act 1991?
6. Air Quality	To minimise emissions of pollutant	Will the revised NPS for Ports: ▪ affect air quality?

AoS Topic	AoS Objective	Guide Questions
	gases and particulates and enhance air quality.	■ create a nuisance for people through, for example, dust or odours? ■ help to deliver the outcomes legislated through the Environment Act 2021 and Environment (Wales) Act 2016? ■ protect habitats from adverse air quality impacts including eutrophication, direct toxicity, acidification and accumulation?
7. Noise	To minimise noise pollution and the effects of vibration.	Will the revised NPS for Ports: ■ help to minimise noise and vibration effects from construction and operational activities on residential amenity and effects on sensitive locations and receptors? ■ help to deliver the outcomes legislated through the Environment Act 2021 and Environment (Wales) Act 2016?
8. Climate Change (Mitigation and Adaptation)	To minimise Greenhouse Gas (GHG) emissions as a contribution to climate change and support the transition to a net zero economy, and ensure ports and associated places and infrastructure are resilient to the consequences of climate change, anticipating a range of future climate	Will the revised NPS for Ports: ■ help to ensure a low carbon design solution to the construction and operation of ports to minimise GHG emissions? ■ embed adaptation to climate change in development projects to increase resilience to rising temperatures, more extreme weather events and sea level rise, wind, storm surges, coastal erosion, wave height/frequency? ■ help reduce flood risk and as a consequence, help to mitigate and adapt to climate change, thereby build resilience into development proposals? ■ help to deliver the outcomes legislated through the Environment Act 2021 and Environment (Wales) Act 2016? ■ contribute to ensuring climate mitigation and adaptation measures support a fair transition to a net zero economy and climate resilient places? ■ help deliver nature-based solutions and green infrastructure to allow adaptation to climate change?

AoS Topic	AoS Objective	Guide Questions
	scenarios and impacts.	consider carbon storage potential of existing sites including woodlands and peat, seagrass and saltmarsh and other coastal margin habitats?
9. Materials and Waste	To minimise waste arisings, promote reuse, recovery and recycling, minimise the impact of wastes on the environment and communities and contribute to the sustainable use of natural and material assets.	Will the revised NPS for Ports: - maximise re-use and recycling of recovered components and materials? - help achieve government targets for minimising, recovering and recycling waste? - increase the burden on limited natural resources? - make best use of existing infrastructure and resources? - help to deliver the outcomes legislated through the Environment Act 2021 and Environment (Wales) Act 2016?
10. Traffic and Transport	To minimise the volume of traffic and promote more sustainable transport choices.	Will the revised NPS for Ports: - help to minimise traffic volumes? - help to improve road infrastructure to support the delivery of new port infrastructure? - encourage alternative means of transporting freight, waste and minerals? - encourage the provision of sufficient parking for HGVs? - help to deliver the outcomes legislated through the Environment Act 2021 and Environment (Wales) Act 2016?
11. Cultural Heritage	To conserve and where appropriate enhance the historic	Will the revised NPS for Ports: avoid damage to, conserve or enhance internationally and nationally designated heritage assets (onshore and offshore) and their settings?

AoS Topic	AoS Objective	Guide Questions
	environment including cultural heritage resources, historic buildings and archaeological features and their settings.	■ avoid damage to, conserve or enhance non-designated heritage (onshore and offshore) assets, archaeological remains and their settings? ■ conserve or enhance heritage assets and the wider historic environment including landscapes, townscape, buildings, structures and archaeological remains? ■ affect the fabric and setting of historic buildings, places or spaces that contribute to local distinctiveness, character and appearances? ■ improve access to, and interpretation, understanding and appreciation of, the significance of heritage assets? ■ affect the heritage of communities? ■ help to deliver the outcomes legislated through the Environment Act 2021 and Environment (Wales) Act 2016?
12. Landscape, Townscape and Seascape	To conserve, protect and enhance landscape, townscape and seascape quality and visual amenity.	Will the revised NPS for Ports: ■ have significant visual impacts (including those at night)? ■ avoid adverse effects to, and enhance where possible, designated landscapes and the settings of designated landscapes (including woodlands) such as National Parks or National Landscapes? ■ protect and enhance the intrinsic character of local landscapes, townscape or seascapes? ■ help to deliver the outcomes legislated through the Environment Act 2021 and Environment (Wales) Act 2016?

Appraisal of the Revised National Policy Statement for Ports and Alternative

The scoring system used in the appraisal and guidance on determining significant effects is presented in **Table NTS2** below. For each effect identified, a score was given using the framework set out in **Table NTS1** earlier.

Table NTS2 - Guide for the assessment of significance

Effect	Description	Score
Major Positive (Significant)	Effects on relevant receptors that fully support the achievement of sustainability targets and objectives relevant to ports. For example, the effect: - Substantially accelerates an improving/ positive trend. - Substantially decelerates a declining/ negative trend. - Substantially supports the delivery of a government objective/ target/ outcome.	++
Minor Positive	Effects on relevant receptors that partly support the achievement of sustainability targets and objectives relevant to ports. For example, the effect: - Accelerates an improving/ positive trend, in a marginal way. - Decelerates a declining/ negative trend, in a marginal way. - Supports the delivery of a government objective/ target/ outcome but in a marginal way.	+
Neutral	No effects or a neutral contribution.	0
Uncertain	The potential for an effect is unclear. This may be due to lack of clarity on how the policy will be applied, and/or data gaps in the baseline. Uncertain effects will be treated as significant effects (in order to present a precautionary approach)	?
Minor Negative	Effects on relevant receptors that could conflict with the achievement of sustainability targets and objectives relevant to ports. For example, the effect: - Decelerates an improving/ positive trend, but in a marginal way. - Accelerates a declining/ negative trend, but in a marginal way. - Detracts from the delivery of government objective/ target/ outcome but in a marginal way.	-

Major Negative (Significant)	Effects on relevant receptors that actively works against the achievement of sustainability targets and objectives relevant to ports. For example, the effect: - Substantially decelerates an improving/ positive trend. - Substantially accelerates a declining/ negative trend. - Substantially detracts from the delivery of a government objective/ target/ outcome.	--
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Table NTS3 below sets out the summary findings for the appraisal of the draft revised NPS and its reasonable alternative (a draft revised NPS that is more explicit in terms of the quantum of growth required to meet forecasted demand).

Table NTS3 - Appraisal summary

AoS Topic and Objective	Likely Residual Significant Effect	
	draft revised NPS	Reasonable Alternative
Biodiversity and Nature Conservation To protect, restore and enhance biodiversity (habitats, species and ecosystems) working within environmental capacities and limits to contribute to ecosystem resilience and habitat connectivity and deliver a net biodiversity gain.	+	+
Population and Human Health To minimise disturbance to local communities, maximise positive social impacts and protect and enhance the health, safety and wellbeing of workers and communities.	0	0
Economy and Skills To promote a strong, diverse, and stable economy with opportunities to improve education and skills, and employment.	+	+
Land Use, Geology and Soils To conserve and enhance soil health and geology and contribute to the sustainable use of land.	0	0
Water Resources	+	+

To protect, enhance and increase resilience of water quantity and quality.		
Air Quality To minimise emissions of pollutant gases and particulates and enhance air quality.	0	0
Noise To minimise noise pollution and the effects of vibration.	+	+
Climate Change (Mitigation and Adaptation) To minimise GHG emissions as a contribution to climate change, support the transition to a net zero economy, and ensure ports and associated places and infrastructure are resilient to the consequences of climate change, anticipating a range of future climate scenarios and impacts.	+	+
Materials and Waste To minimise waste arisings, promote reuse, recovery and recycling, minimise the impact of wastes on the environment and communities and contribute to the sustainable use of natural and material assets.	+	+
Traffic and Transport To minimise the volume of traffic and promote more sustainable transport choices.	+	+
Cultural Heritage To conserve and where appropriate enhance the historic environment including cultural heritage resources, historic buildings and archaeological features and their settings.	+	+
Landscape, Townscape and Seascape To conserve, protect and enhance landscape, townscape and seascape quality and visual amenity.	+	+

The results of the appraisal generally found that both the draft revised NPS and its reasonable alternative contributed positively to the achievement of most of the AoS objectives, but that in both cases, the contribution was only minor, and therefore not significant. In the case of three AoS Topics, for population and human health, air quality and land use, geology and soils, the contribution (for both the draft revised NPS and its reasonable alternative) was considered to be neutral. The appraisal also demonstrated that

there were no differences in terms of the likely significant effects between the draft revised NPS and the reasonable alternative.

A number of recommendations were made through the AoS on how to further improve the positive contribution of the draft revised NPS to sustainability, or move the neutral contributions into positive ones.

In determining the significance of effects of a plan or programme, the SEA Regulations require that consideration is given to the secondary, cumulative and synergistic nature of the effects⁵. This includes cumulative effects as a result of interactions between different elements of the plan (intra-plan) as well as cumulative effects as a result of interactions with other plans and programmes (inter-plan).

Further to the assessment of the draft revised NPS and its alternative above, an appraisal of the interactions between the draft revised NPS and other plans, programmes and projects was also carried out.

The appraisal concluded that as the draft revised NPS does not set a requirement for the scale or location of growth to be delivered, it is not likely to have significant negative cumulative effects as a result of interactions with other plans, programmes and projects. It found that there is the potential for minor positive cumulative effects, as the draft revised NPS and other plans and programmes, guided by wider national policy and legislation, provide a positive framework for future development, that seeks to avoid and minimise/mitigate impacts and deliver enhancements where possible.

Conclusions, Monitoring and Next Steps

Conclusions

The AoS concluded that there is not likely to be any significant effects as a result of the draft revised NPS (either alone or interacting with other plans or projects). The appraisal identified the potential for long-term minor positive effects against the following AoS topics and objectives:

- Biodiversity and Nature Conservation;
- Economy and Skills;
- Water Resources;
- Noise;
- Climate Change;
- Materials and Waste;
- Traffic and Transport;

⁵ A Practical Guide to the SEA Directive states that, “*These terms are not mutually exclusive, often the term cumulative effects is taken to include secondary and synergistic.*”

- Cultural Heritage; and
- Landscape, Townscape and Seascape.

The appraisal identified the potential for neutral effects against the remaining AoS topics and objectives:

- Population and Human Health;
- Land Use, Geology and Soils; and
- Air Quality.

Monitoring

The SEA Regulations require the significant environmental effects of plans and programmes to be monitored, in order to identify unforeseen negative effects. The monitoring should help to:

- Monitor the significant effects of the Revised NPS;
- Track whether the Revised NPS has had any unforeseen effects; and
- Ensure that action can be taken to reduce/ offset the significant effects of the Revised NPS.

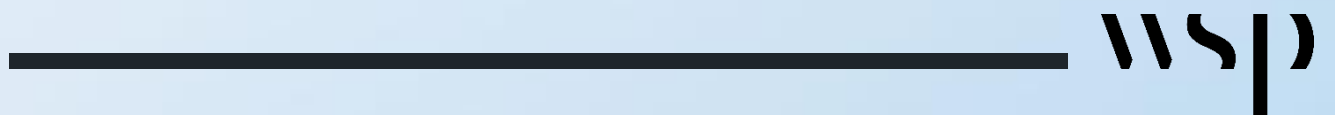
While no significant or uncertain effects have been identified at this stage, it is recognised that there is a requirement to monitor any potential unforeseen effects. As a result, some monitoring measures are proposed in Chapter 7 of the main AoS Report.

Next Steps

This Non-Technical Summary and AoS Report are presented for public consultation alongside the draft revised NPS. The representations received will be documented and considered in reviewing the proposals for the revised NPS. A Post Adoption Statement will summarise how the AoS process and the consultation responses have been taken into account and how social, economic, and environmental consideration have been integrated into the final decisions regarding the revised NPS and will be issued as soon as is reasonably practicable after designation.

1

Introduction



1 Introduction

1.1 Overview

- 1.1.1. The current National Policy Statement (NPS) for Ports was published in 2012. The Secretary of State (SoS) for Transport has concluded that the policy should be reviewed to ensure it continues to support decision making effectively⁶. The review of the NPS for Ports currently being undertaken also provides an opportunity to update other aspects of the document, such as the modelling and forecasts that support the statement of need for development, and the environmental, safety, resilience and local community considerations that planning decisions must take into account, to ensure that it continues to remain fit for purpose.
- 1.1.2. As a result of the review, a draft revised NPS for Ports has been completed which updates and enhances the NPS designated in 2012 in order to strengthen the planning system. The Revised NPS for Ports will:
- Set out the need for (and Government's policies to deliver) development of Nationally Significant Infrastructure Projects (NSIPs) in relation to ports; and
 - Provide planning guidance for promoters of NSIPs, and the basis for their examination by the Examining Authority and decisions by the SoS.
- 1.1.3. Before designating an NPS, Section 5(3) of the Planning Act 2008 requires that the SoS carry out an appraisal of the sustainability (AoS) of the policy set out in the statement. The AoS ensures that the likely environmental and socio-economic effects of the NPS are identified, described, and evaluated. In undertaking the AoS, it also satisfies the requirements of the Environmental Assessment of Plans and Programmes Regulations 2004⁷ (hereafter referred to as the 'Strategic Environmental Assessment (SEA) Regulations').

1.2 Purpose of this Report

- 1.2.1. This report presents the findings of the AoS of the draft revised NPS for Ports. The purposes of the AoS are:
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⁶ DfT (2023) SoS for Transport's Written Statement to Parliament 'Review of the national policy statement for ports', 14 March 2023. Available online: <https://www.gov.uk/government/speeches/review-of-the-national-policy-statement-for-ports> [Accessed November 2023].

⁷ The Environmental Assessment of Plans and Programmes Regulations 2004 S.I. 2004 No. 1633 and The Environmental Assessment of Plans and Programmes (Wales) Regulations 2004 S.I. 2004 No. 1656, as amended by the Environmental Assessments and Miscellaneous Planning (Amendment) (EU Exit) Regulations 2018 and the Environmental Assessment of Plans and Programmes and the Environmental Impact Assessment (Miscellaneous Amendments) (Wales) (EU Exit) Regulations 2019, respectively.

- to support the SoS in meeting their requirements under:
 - Section 5 (3) of the Planning Act 2008 to complete an AoS of the policy within the statement; and
 - Section 10 (2) and (3) of the Planning Act 2008 to ensure that the draft revised NPS contributes to the achievement of sustainable development and for due regard to be given to the desirability of mitigating and adapting to climate change and achieving good design.
 - to ensure that the likely significant social, economic, and environmental effects of the draft revised NPS and any reasonable alternatives are identified, characterised and appraised.
 - to help identify appropriate measures to avoid, reduce or mitigate adverse effects and to enhance beneficial effects associated with the implementation of the draft revised NPS wherever possible.
 - to provide a framework for monitoring the potential significant effects arising from the implementation of the draft revised NPS.
 - to give the statutory consultees, stakeholders and the wider public the opportunity to review and comment upon the environmental and socio-economic effects that the draft revised NPS may have on them, their communities, and their interests and to encourage them to make responses and suggest improvements to the draft revised NPS.
 - to inform the UK Government's decisions on the draft revised NPS.
 - to demonstrate that the draft revised NPS has been developed in a manner consistent with the requirements of the SEA Regulations and relevant implementing regulations.
- 1.2.2. WSP and Mott MacDonald have been commissioned to undertake the AoS process for the Revised NPS on behalf of the Department for Transport (DfT).

1.3 Appraisal of Sustainability (AoS) and Strategic Environmental Assessment (SEA)

Section 5(3) of the Planning Act 2008⁸ (PA08) requires that Government departments assess the social, economic, and environmental sustainability of policy stated within an NPS through the production of an AoS. The AoS process relies upon the development of an appraisal framework within which decisions on the relative sustainability of the NPS and its reasonable alternatives can be made, with the purpose of providing decision-makers, consultees and others with information and insight on the socio-economic and environmental effects of the NPS and its implementation, and capturing progress towards sustainability. If potential significant adverse effects are identified, the AoS recommends

⁸ [Planning Act 2008 \(legislation.gov.uk\)](https://www.legislation.gov.uk)

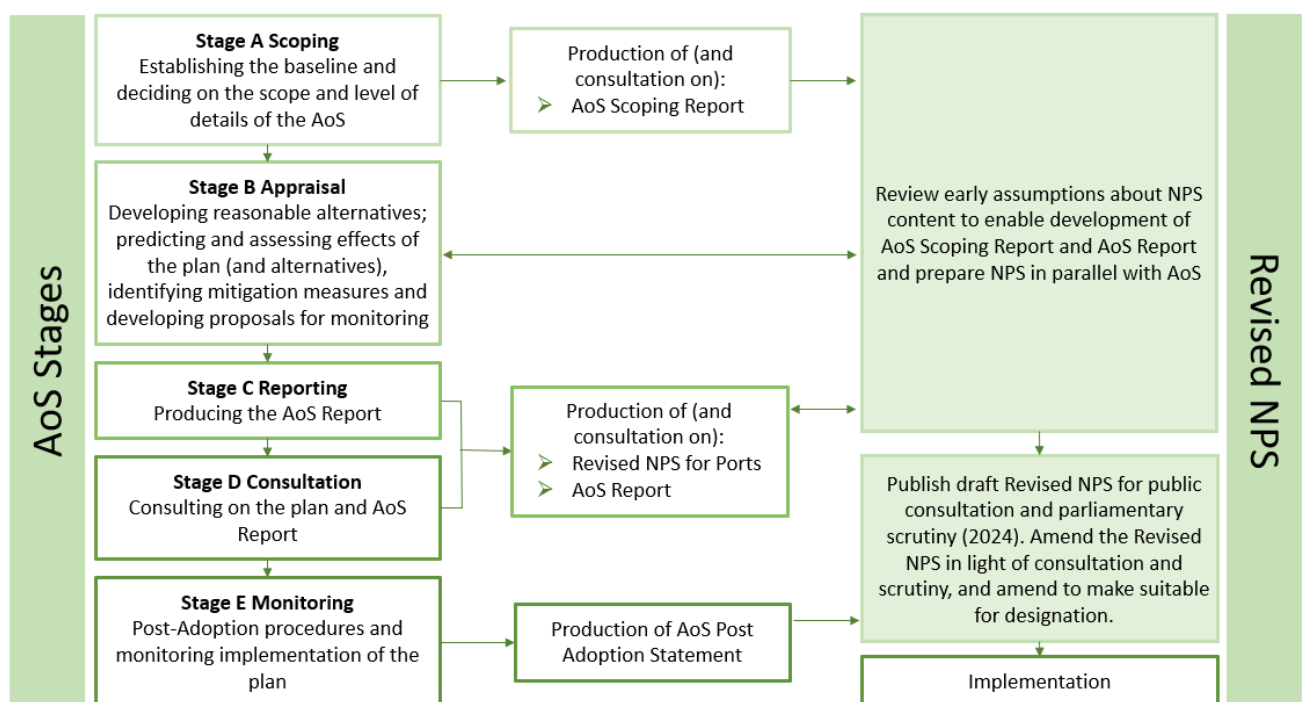
options for avoiding or mitigation such effects. In this way, the AoS helps inform the preparation of an NPS to promote sustainable development.

- 1.3.1. The AoS incorporates an assessment in accordance with the requirements of the SEA Regulations⁹. The SEA Regulations aim for a high level of environmental protection and to promote sustainable development. The SEA Regulations apply to certain plans that are likely to have significant effects on the environment. The draft revised NPS for Ports is being treated as a plan for the purpose of the SEA Regulations.

Stages of the AoS process

- 1.3.2. The main stages of AoS mirror those of SEA and are iterative, building on evidence and consultation responses over time to inform the development of the Revised NPS. **Figure 1-1** outlines the stages of the AoS and the associated reporting requirements.

Figure 1-1 - Stages of the AoS



- 1.3.3. A Scoping Report was completed and a consultation on the report took place between 23rd January and 01st March 2024 with statutory environmental bodies in England (the

⁹ The Environmental Assessment of Plans and Programmes Regulations 2004 S.I. 2004 No. 1633 and The Environmental Assessment of Plans and Programmes (Wales) Regulations 2004 S.I. 2004 No. 1656, as amended by the Environmental Assessments and Miscellaneous Planning (Amendment) (EU Exit) Regulations 2018 and the Environmental Assessment of Plans and Programmes and the Environmental Impact Assessment (Miscellaneous Amendments) (Wales) (EU Exit) Regulations 2019, respectively.

Environment Agency, Historic England and Natural England) and Wales (Cadw and Natural Resources Wales) (**Stage A** above in **Figure 1-1**). The Scoping Report was also sent to the statutory bodies in Scotland (Scottish Environment Protection Agency, Scottish Natural Heritage and Historic Environment Scotland) for review and comment from 29th January and 04th March 2024. **Appendix B** contains a schedule of the consultation responses received and indicates how they have been taken into account and addressed within this AoS Report.

- 1.3.4. The appraisal framework (comprising AoS objectives and guide questions) contained in Chapter 4 of this report, has then been used to appraise the social, economic, and environmental effects of the draft revised NPS as well as the reasonable alternatives (**Stage B**). These appraisals (**Stage C**) are presented in this AoS Report which is available for consultation (**Stage D**). Following consultation on the AoS Report, an AoS Post Adoption Statement will be produced that sets out the results of the consultation and appraisal, and the extent to which the views and AoS findings have been addressed in the designated Revised NPS. Compliance with the SEA Regulations requires that any resultant significant environmental effects of the Revised NPS are monitored (**Stage E**).

1.4 Habitats Regulations Assessment (HRA)

- 1.4.1. In accordance with Regulation 110 of The Conservation of Habitats and Species Regulations 2017 (as amended) ('the Habitats Regulations') which applies Regulation 105¹⁰, there is a need for the DfT to consider whether the Revised NPS is likely to have a significant effect on any specified National Sites Network (NSN) site. In consequence, a Habitats Regulations Assessment (HRA) is being undertaken in parallel to the AoS. Its findings will be incorporated into the AoS as appropriate when available.

1.5 AoS Report Structure

- 1.5.1. This AoS Report is structured as follows:
- **Non-Technical Summary** - Provides a summary of the AoS Report, including information on both the draft revised NPS and the key findings of the appraisal.
 - **Chapter 1: Introduction** - Provides an overview of the draft revised NPS, AoS process and the purpose of this report.
 - **Chapter 2: The Revised NPS for Ports** - Describes the purpose and scope of the draft revised NPS and an overview of its structure and contents. This chapter also sets out

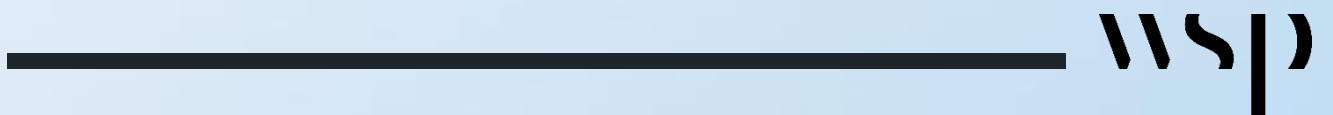
¹⁰ Regulation 105(1) states: "Where a land use plan—
(a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and (b) is not directly connected with or necessary to the management of the site, the plan-making authority for that plan must, before the plan is given effect, make an appropriate assessment of the implications for the site in view of that site's conservation objectives".

the approach to identifying alternatives that have been considered and appraised as part of the AoS.

- **Chapter 3: Context and Baseline** - Provides an overview of the review of plans and programmes, analysis of the baseline information and presents the key issues and opportunities identified for the draft revised NPS and AoS. Further detailed information is contained in **Appendix A**.
- **Chapter 4: Appraisal Methodology** – Outlines the approach to the appraisal of the draft revised NPS and reasonable alternatives including the appraisal framework (which comprises AoS objectives and guide questions) and the technical difficulties encountered in completing the appraisal, including assumptions and uncertainties.
- **Chapter 5: Appraisal of the draft revised NPS and Reasonable Alternatives** - Summarises the likely significant environmental and socio-economic effects of the draft revised NPS and any reasonable alternatives, including cumulative effects, mitigating measures, uncertainties, and risks. The detailed appraisals are contained in **Appendix C**.
- **Chapter 6: Conclusions, Monitoring and Next Steps** - Summarises the main effects of the draft revised NPS and reasonable alternatives and presents views on implementation and monitoring. The reasons for selecting the draft revised NPS as proposed and for the rejection of alternatives are explained. It also sets out the next steps for the draft revised NPS and AoS process.
- **Appendix A: Baseline and Contextual Information** - Sets out the collated contextual and baseline information, on a topic-by-topic basis, for each of the AoS topics.
- **Appendix B: Schedule of Consultation Responses** - Details the consultation responses received on the AoS Scoping Report and indicates how they have been taken into account.
- **Appendix C: Appraisal of the draft revised NPS and Reasonable Alternatives** - presents completed matrices that record the findings of the appraisal of the draft revised NPS and the reasonable alternative against the AoS objectives including proposed mitigation measures (where appropriate) and measures for enhancement, assumptions and uncertainties, and additional information that may be required.
- **Appendix D: Quality Assurance Checklist** - provides a table to indicate where the requirements of the SEA Regulations have been addressed within this AoS Report.

2

The Revised National Policy Statement for Ports



2 The Revised National Policy Statement for Ports

2.1 Introduction

- 2.1.1. This chapter provides further detail on the purpose, scope and structure of the draft revised NPS for Ports. It also sets out the approach to the identification of reasonable alternatives to the draft revised NPS that have been considered during the AoS process.

2.2 Purpose and scope

- 2.2.1. The NPS for Ports was designated in 2012 and provides planning policy guidance against which development consent order (DCO) applications for any nationally significant new port infrastructure are examined. The government announced¹¹ a review of the NPS for Ports in March 2023 to ensure that it remains fit for purpose, *“The review will include a thorough examination of the modelling and forecasts that support the need for development, and the environmental, safety, resilience, and local community considerations that planning decisions must take into account”*.

The current and subsequently revised NPS for Ports is/ will be part of the planning system established under the Planning Act 2008 (PA08), and provides the framework for decisions on proposals for new port development promoted in England or at a reserved trust port in Wales through a DCO application. It also applies, wherever relevant, to associated development, such as road and rail links, for which consent is sought alongside that for the principal development.

- 2.2.2. PA08 sets out the thresholds for nationally significant infrastructure projects (NSIPs) in the ports sector. Under Section 24, applications for harbour facilities will require development consent as NSIPs if the estimated incremental annual capacity exceeds:
- 500,000 twenty-foot equivalent (TEU) for a container terminal;
 - 250,000 movements for roll-on roll off (Ro-Ro);
 - 5 million tonnes for other (bulk and general) traffic; or
 - a weighted sum equivalent to these figures taken together.
- 2.2.3. The Secretary of State may also designate an application with capacity below the relevant threshold, if he/she considers that the project is of national significance (s.35 of the Act), in which case the Revised NPS will (subject to interpretation against the *Wheelabrator* case precedent) set the framework for decision-making.

¹¹ DfT (2023) SoS for Transport’s Written Statement to Parliament ‘Review of the national policy statement for ports’, 14 March 2023. Available online: <https://www.gov.uk/government/speeches/review-of-the-national-policy-statement-for-ports> [Accessed November 2023].

- 2.2.4. The NPS for Ports also sets out the Government's conclusions on the need for new port infrastructure, considering the current place of ports in the national economy, the available evidence on future demand and the options for meeting future needs. It explains to planning decision-makers the approach they should take to proposals, including the main issues which, in the Government's view, will need to be addressed to ensure that future development is fully sustainable, as well as the weight to be given to the need for new port infrastructure and to the positive and negative impacts it may bring.
- 2.2.5. The Secretary of State must decide an application for ports infrastructure in accordance with the NPS for Ports unless 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;
 - be unlawful;
 - result in adverse impacts of the development outweighing its benefits;
 - be contrary to regulations about how the decisions are to be taken.
- 2.2.6. The current and draft revised NPS for Ports covers all ports in England and only reserved trust ports¹² in Wales, of which there is only one at present, at Milford Haven.
- 2.2.7. Consistent with the current NPS, the draft revised NPS is non-site-specific, providing high-level assessment principles against which DCO applications will be considered, rather than identifying specific sites.

2.3 Structure

- 2.3.1. The draft revised NPS, which is the subject of this AoS Report, comprises four chapters, as follows:
- **Chapter 1:** provides an introduction to the draft revised NPS, its role, duration and territorial extent. It also explains that an AoS process has been carried out alongside the development of the draft revised NPS.
 - **Chapter 2:** outlines the essential role of ports in the UK economy, Government policy for ports, the Government's assessment of the need for new infrastructure, and guidance to the decision-maker on assessing the need for additional capacity.
 - **Chapter 3:** outlines the key principles to which all decision-makers and applicants must give consideration. These are to be considered in addition to the generic impact guidance provided in chapter 4. The chapter is structured as follows:

¹² Trust ports, as independent statutory bodies without shareholders, have a unique ownership structure which sets them apart from private ports and municipally owned ones. Reserved trust ports are defined in the Wales Act 2017 by reference to a turnover threshold (exceeding £5 million in at least two of the last three accounting years), which is set out in Section 11 of the Ports Act 1991.

- Key considerations
 - Consideration of benefits and impacts;
 - Socio-economic impacts;
 - Commercial and competition impacts
 - General approach to environmental impacts and Environmental Impact Assessment;
 - Alternatives;
 - Biodiversity Net Gain
 - Criteria for good design for port infrastructure;
 - Climate change mitigation;
 - Climate change adaptation;
 - Health and nuisances; and
 - Security considerations.
- **Chapter 4:** gives guidance on generic impact types often relevant to ports applications and/or associated development. Guidance is provided across the following topics:
- Biodiversity and geological conservation;
 - Habitats Regulations Assessment;
 - Dredging;
 - Pollution control and other environmental regulatory regimes;
 - Flood risk;
 - Coastal change;
 - Traffic and transport impacts;
 - Waste management;
 - Water quality and resources;
 - Air quality and emissions;
 - Dust, odour, artificial light, smoke, steam and insect infestation;
 - Noise and vibration;
 - Landscape and visual impacts;
 - Historic environment; and
 - Land use including open space, green infrastructure and Green Belt.

2.4 Reasonable Alternatives to the Draft revised National Policy Statement for Ports

Overview

- 2.4.1. To support the development of the draft revised NPS consistent with the principles of good plan making, and as part of the AoS process to meet specific regulatory requirements, 'reasonable alternatives' to the revised NPS need to be considered, described, and, where appropriate, appraised.

- 2.4.2. This section outlines the possible alternatives to the draft revised NPS. Each alternative is reviewed and those that are considered reasonable are identified with the reasoning provided, in order to be taken forward for appraisal as part of the AoS process.

The Requirement to Consider Reasonable Alternatives

- 2.4.3. The Planning Act 2008 requires that an AoS must be carried out before an NPS can be designated. The main purpose of an AoS is to examine the likely social, economic, and environmental effects of designating the NPS, including the effects of ports infrastructure consented under the NPS. The AoS also incorporates the SEA Regulations¹³.
- 2.4.4. Regulation 12 (2) of the SEA Regulations requires the identification, description, and evaluation of the *“likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives [our emphasis] taking into account the objectives and the geographical scope of the plan or programme”*. In complying with this requirement, information to be provided in the AoS Report, includes “an outline of the reasons for selecting the alternatives dealt with” (Schedule 2 (8) of the SEA Regulations).
- 2.4.5. Extant guidance on the SEA process¹⁴ discusses possible interpretations of handling ‘reasonable alternatives’ as required by Regulation 12 (2). It states that *“Only reasonable, realistic, and relevant alternatives need to be put forward. It is helpful if they are sufficiently distinct to enable meaningful comparisons to be made of the environmental implications of each”*.
- 2.4.6. Regulation 12 (2) of the SEA Regulations formalises the consideration of reasonable alternatives in the plan or programme development process. It requires that the choices and resulting decisions be made explicit through their inclusion in the resulting environmental report. The treatment of reasonable alternatives within SEA has been the focus of successful legal challenges to the adoption of plans in England, with claims based on the inadequate implementation of the SEA Regulations.
- 2.4.7. The emerging case law supports the following interpretation of what constitutes a reasonable alternative:
- They are only those that can meet the objectives of the original plan or programme, taking into account the geographic scope of the plan or programme;

¹³ The Environmental Assessment of Plans and Programmes Regulations 2004 S.I. 2004 No. 1633 and The Environmental Assessment of Plans and Programmes (Wales) Regulations 2004 S.I. 2004 No. 1656, as amended by the Environmental Assessments and Miscellaneous Planning (Amendment) (EU Exit) Regulations 2018 and the Environmental Assessment of Plans and Programmes and the Environmental Impact Assessment (Miscellaneous Amendments) (Wales) (EU Exit) Regulations 2019, respectively.

¹⁴ ODMP (2005) *A Practical Guide to the Strategic Environmental Assessment Directive*. Available from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7657/practicalguidesea.pdf [Accessed October 2023].

- they do not include all possible alternatives to the plan or programme;
- they can be defined by the plan or programme authors;
- they are described, with the justification for the selection and inclusion in the SEA regulations compliant assessment presented in the equivalent of the environmental report;
- they are subject to a consideration on equal terms with the preferred plan, with any likely significant effects identified, described and evaluated; and
- where they are not selected as the preferred plan, they must be accompanied by reasons for their rejection, which are not restricted to environmental factors.

Alternatives to the draft revised National Policy Statement for Ports

- 2.4.8. The former Department for Communities and Local Government's (DCLG) guidance¹⁵ on the issue of alternatives within an emerging NPS is that:

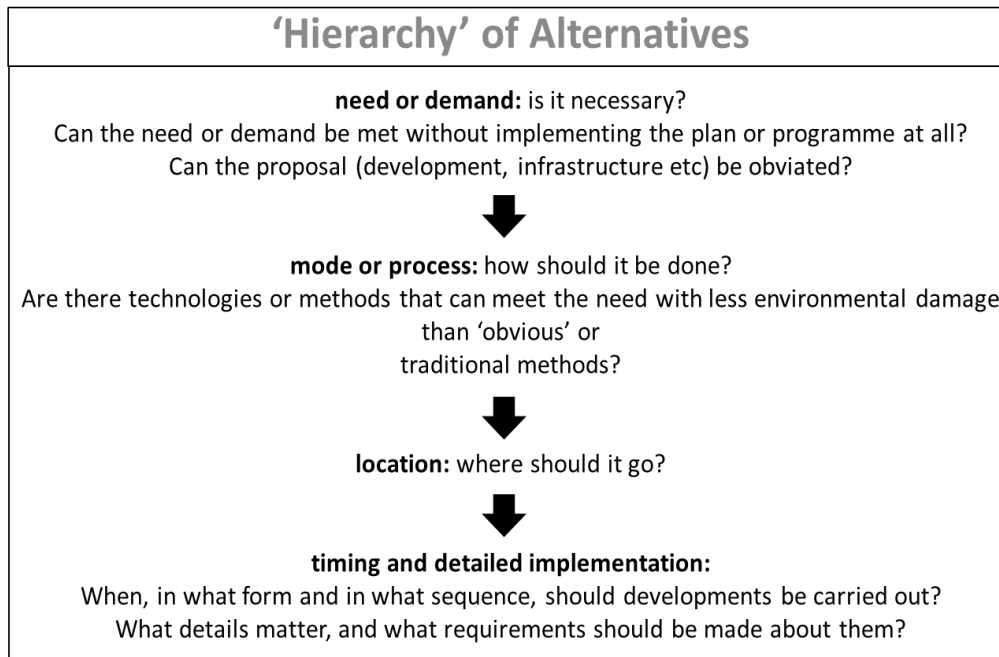
"The accompanying Appraisal of Sustainability should support this by considering the implications of the alternatives to building new infrastructure. If some of the possible alternatives go against established Government policy, then consider the scope for considering policy alternatives within the AoS without reopening settled policy".

- 2.4.9. The Government's SEA guidance¹⁶ includes a 'hierarchy' of alternatives (see **Figure 2-1**).

¹⁵ DCLG (now MHCLG) (2013) *How to prepare a National Policy Statement – A High Level Advice Note for Departments' Department for Communities and Local Government Aug 2013.*

¹⁶ ODMP (now MHCLG) (2005) *A Practical Guide to the Strategic Environmental Assessment Directive.* Available from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7657/practicalguidesea.pdf [Accessed May 2024].

Figure 2-1 – Hierarchy of Alternatives



2.4.10. The questions contained in this hierarchy have been used to guide the identification of options for the draft revised NPS. The options identified focus specifically on whether a revision to the NPS is necessary, how it should be done and the extent to which it should specify locations for future development. In this context, and consistent with the hierarchy, the following alternatives to the draft revised NPS (as proposed) have been identified:

- Is it necessary? To address this, the alternative of no revised NPS is considered.
- How should it be done? To address this, the following alternatives are considered:
 - a revised NPS that is more explicit in terms of the quantum of growth required to meet forecasted demand.
 - A revised NPS that sets more ambitious or relaxed environmental requirements for development.
- Where should it go? To address this, the following alternatives are considered:
 - a criteria-based revised NPS;
 - a site-specific revised NPS.

2.4.11. These proposed alternatives to the draft revised NPS are considered in more detail below along with the rationale on whether to take them forward for appraisal as part of the AoS process.

2.4.12. With regard to the timing and detailed form of implementation (the fourth question in the hierarchy of alternatives in **Figure 2-1**), whilst both are fundamental aspects of implementation of the revised NPS and have been considered in the AoS, they are also issues that would be addressed in detail by a developer in an application for development

consent. In consequence, without knowledge of the specific proposed infrastructure, to examine the reasonable alternatives to the timing of delivery of individual nationally significant infrastructure is considered premature, overly dependent on assumptions, and risks prejudicing future ports planning. Therefore, it is not considered further.

Is it necessary?

- 2.4.13. It is normal practice when undertaking an SEA to include a “business as usual” option or “do nothing option” when assessing the environmental impacts of alternative scenarios to a proposed plan. Under the ‘no revised NPS’ alternative, the current NPS would continue to act as the framework for decisions regarding port development proposals.
- 2.4.14. The Government’s view is that a revised NPS is needed to take account of changes to the policy context and evidence base (including future forecasts) underpinning it. It announced a review of the NPS for Ports in March 2023 to ensure that it remains fit for purpose. *“The review will include a thorough examination of the modelling and forecasts that support the need for development, and the environmental, safety, resilience, and local community considerations that planning decisions must take into account”.*
- 2.4.15. Under a ‘no revised NPS’ alternative, the current NPS would not reflect updated Government policy and would also not take into account changes to the evidence base, in particular, updated modelling and forecasts, that support the need for development. As a result, Ministers have decided that the NPS should be amended and **a ‘no revised NPS’ is not considered a reasonable or realistic alternative and is therefore not taken forward for appraisal through the AoS.**

How should it be done? – The need for development

- 2.4.16. The main role of the draft revised NPS will be to provide a framework for decisions on proposals for new port development promoted through a DCO application. It will set out the Government’s conclusions on the need for new port infrastructure, considering the current place of ports in the national economy, the available evidence on future demand and the options for meeting future needs. It will also constitute an important and relevant consideration for development below the DCO threshold.
- 2.4.17. While the current NPS does not identify a quantum of growth that is required to meet forecasted demand, the draft revised NPS could provide this based on the updated forecasts, as part of the ‘needs’ case. This would provide port authorities and developers with greater clarity on the scale of development required to meet the upper limits of projected demand. Without an understanding of the scale of infrastructure required, there is the potential for the port sector not to deliver sufficient growth to meet demand, including the scale of infrastructure to meet the government’s ambitious targets for the expansion of offshore wind generation.
- 2.4.18. This approach would require the DfT to determine the scale of infrastructure needed to meet future demand based on the updated forecasting data. The challenges associated with this approach are that the forecasts provide a snapshot of predicted demand based on available

evidence at that point in time and the market can be difficult to predict. Providing a quantum of growth based on forecasts might not reflect the reality of market demands in the future. As a result, this approach could reduce the flexibility and resilience of the port sector to respond to demand as it changes.

- 2.4.19. While there are drawbacks associated with flexibility and resilience, **it is considered that this is a reasonable alternative and should be carried forward for assessment through the AoS.**

How should it be done? – Environmental targets

- 2.4.20. Government policy and priorities for the natural environment are set out in the Government's Environmental Improvement Plan. The publication of the Environmental Improvement Plan is a requirement of the Environment Act 2021, which also includes legally binding long-term environmental targets, an enhanced biodiversity duty for public authorities, biodiversity net gain and Local Nature Recovery Strategies.
- 2.4.21. The draft revised NPS might propose alternative environmental requirements for nationally significant port infrastructure. For example, it could contain requirements above the delivery of 10% biodiversity net gain (BNG), to help accelerate the delivery of targets set out in the Government's Environmental Improvement Plan. Conversely, the draft revised NPS could also propose alternative environmental requirements, which might help to encourage a greater scale and speed of infrastructure delivery at ports to meet forecasted and emerging market demands.
- 2.4.22. An approach that seeks to exceed the requirements set out in the Environment Act 2021 is not considered reasonable. More stringent targets for the delivery of BNG could affect the viability of proposals, particularly any marginal applications. This approach would not encourage investment and would therefore not reflect the forecasted long-term growth and essential role of ports in the UK economy. As a result, it would not be in line with the objectives of the draft revised NPS and the Government's missions for growth and green energy.
- 2.4.23. An approach that deviates from the requirements set out in the Environment Act 2021 and subsequent regulations, for example through less stringent BNG requirements, is not considered a reasonable alternative.
- 2.4.24. As a result, **an alternative where the revised NPS sets enhanced or relaxed environmental requirements for development is not considered a reasonable or realistic alternative.** It is therefore not taken forward for appraisal through the AoS.

Where should it go? – A criteria-based NPS

A criteria-based revised NPS would exclude development in, or restrict development to, areas meeting certain criteria (be they 'exclusionary' or 'inclusionary' criteria).

- 2.4.25. For the purposes of considering alternatives for the revised NPS, exclusionary criteria are those criteria which, when applied, would ensure that any nationally significant port

infrastructure development could not take place within an area. Such criteria would be for the purpose of protecting the environment and may include, for example, excluding development at or adjacent to National Site Network (NSN) sites (Special Areas of Conservation, Special Protection Areas and Ramsar sites), Marine Conservation Zones, World Heritage Sites, National Parks, or National Landscapes; they are a measure that seeks to avoid adverse effects from future port infrastructure development at locations possessing certain characteristics.

- 2.4.26. With regard to the adoption of exclusionary criteria, the sensitivity of designated areas varies considerably and many of the potential effects of infrastructure development can be mitigated by good design and planning such that it may be possible to develop infrastructure in areas without an unacceptable environmental impact (as is the case of a large number of existing port schemes). Indeed, the planning process already provides protection for designated areas and these issues will be examined at the project stage in detail when both the potential impacts and the effectiveness of their mitigation can best be judged. In consequence, the adoption of exclusionary criteria could unnecessarily preclude projects from coming forward in areas where there is demand and significant potential for commercial growth with associated benefits.
- 2.4.27. The converse to exclusionary areas for the development of nationally significant port infrastructure would be to apply 'inclusionary criteria' to the revised NPS, whereby certain criteria are prescribed in the draft revised NPS which a location must satisfy for it to be considered suitable for new port infrastructure. Inclusionary criteria may include, for example, the absence of (or a particular distance from) the designations referred to above. It could also include a particular level of growth (this might be growth related to imports/ exports or renewable energy) forecasted in a particular area based on updated evidence.
- 2.4.28. The adoption of inclusionary criteria such as those illustrated would require the need for the draft revised NPS to identify thresholds for distances to designated sites and for levels of commercial growth. Distance in itself is not a definitive guide to the likelihood or significance of effects of infrastructure on a designated site, as impacts can travel along pathways (for example hydrologically along and between water bodies) over great distances. As a result, it would not be appropriate to set what would ultimately be arbitrary and likely precautionary distances for protected sites, as the nature and significance of effects will depend on the precise scale, type, design, and location of infrastructure.
- 2.4.29. The inclusion of thresholds for a particular level of commercial growth could restrict the ability for certain areas/ ports to capitalise on future opportunities for growth. A criteria-based approach would not provide the port industry/ developers the flexibility to respond to a changing market, updated evidence, and potential opportunities where they may arise.

Overall, for the reasons set out above, **a criteria-based revised NPS is not considered a reasonable alternative and is therefore not taken forward for appraisal through the AoS.**

Where should it go? – A site-specific NPS

A site-specific draft revised NPS would identify candidate sites for nationally significant port infrastructure. There are examples of other NPSs taking a site-specific approach; for example, the nuclear generation NPS (EN-6) identifies potentially suitable sites for the deployment of new nuclear power stations, whilst the Airports NPS identifies Heathrow as the preferred location for new runway capacity and infrastructure in south east England.

- 2.4.30. Currently the decision on whether to progress an expansion of port infrastructure is a business/ commercial one made by the ports industry/ developers and which is then subject to the planning system, in the case of NSIPs established under the Planning Act 2008. Otherwise usually through a works harbour revision or empowerment order under the Harbours Act 1964 and deemed/ accompanying marine licence if required. This provides the port authority/ developers with the flexibility to respond to demand where it arises and locate infrastructure where required for economically and environmentally efficient logistics.

The implementation of a site-specific approach through the draft revised NPS would be a departure from the current market-led bottom-up decision-making process. While it would therefore not duplicate an existing top-down statutory planning process/ decision-making, it would require the DfT to determine the location of port infrastructure to meet future demand based on forecasting. Changes in the market are difficult to predict and this approach could result in the draft revised NPS proposing significant port infrastructure in a location that might not be commercially viable in the future as the level of demand has changed, or restrict the potential for development in other areas where there is change or increased demand.

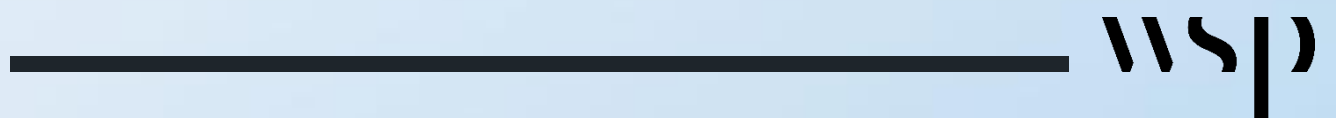
- 2.4.31. Further to this, implementation of a site-specific approach would require significant evidence in terms of the level of need and its location. While it could be argued that the location of existing ports and therefore potential sites are known, there would need to be extensive evidence and analysis to underpin the identification of a specific port/ site to deliver a specific scale and type of infrastructure.
- 2.4.32. On the basis of what is set out above, **a site-specific draft revised NPS is not a reasonable alternative and therefore not taken forward for appraisal through the AoS.**

2.5 Summary of reasonable alternatives

- 2.5.1. Following the application of the reasonableness test in compliance with Regulation 12 (2) of the SEA Regulations, one alternative to the draft revised NPS (as proposed) has been identified as reasonable and has been taken forward for appraisal as part of this AoS. This is an alternative NPS that is more explicit in terms of the quantum of growth required to meet forecasted demand.

3

Context and Baseline



3 Context and Baseline

3.1 Introduction

- 3.1.1. This chapter, alongside **Appendix A**, provides an overview of the context and baseline information that has informed the development of the appraisal framework (see **Chapter 4**). It includes details of the review of other relevant plans and programmes (**Section 3.2**) and baseline information (**Section 3.3**) and culminates in the identification of key issues and opportunities to be considered by the draft revised NPS and AoS (**Section 3.4**).
- 3.1.2. Baseline information and relevant plans and programmes have been considered for England and Wales. The geographical scope for the AoS covers all of England and Wales, to reflect the geographical scope of the draft revised NPS, its non-locationally specific nature and to ensure consistency in terms of the level of detail presented within the AoS.
- 3.1.3. Schedule 2 of the SEA Regulations requires that the subsequent appraisal (to be contained in the AoS Report) should include information on the “*likely significant effects on the environment, including on issues such as: biodiversity; population; human health; fauna; flora; soil; water; air; climatic factors; material assets; cultural heritage, including architectural and archaeological heritage; landscape; and the inter-relationship between the issues referred to*”.
- 3.1.4. These topics have formed the basis for the collection and analysis of contextual and baseline information alongside additional socio-economic topics. **Table 3-1** presents how the topics in this report are consistent with the requirements of the SEA Regulations. Whilst information is presented by topic, the appraisal of the draft revised NPS considers linkages between the topics as appropriate.

Table 3-1 - Topics considered through the AoS

Schedule 2 SEA Regulations effects	Topics considered through the AoS
Biodiversity, flora and fauna	Biodiversity and Nature Conservation
Population and Human Health	Population and Human Health
	Economy and Skills
Soil	Land Use, Geology and Soils
Water	Water Resources
Air	Air Quality
	Noise
Climatic Factors	Climate Change (Mitigation and Adaptation)

Material Assets	Materials and Waste
	Traffic and Transport
Cultural Heritage, including architectural and archaeological heritage	Cultural Heritage
Landscape	Landscape, Townscape and Seascape

3.2 Review of Plans and Programmes

- 3.2.1. One of the first steps in undertaking the AoS (and to meet the requirements of the SEA Regulations) is to identify and review other relevant plans, programmes, policies, and strategies (hereafter referred to as ‘plans and programmes’) that could influence the draft revised NPS and the AoS. The review focused on plans and programmes at a UK or national level, as relevant to the scope of the draft revised NPS and AoS. For the purposes of this AoS, it is assumed that relevant international/ EU plans and programmes have been implemented through UK and national level plans and programmes.
- 3.2.2. The review of plans and programmes is provided in **Appendix A** and has informed the environmental and socio-economic baseline and helped determine the key sustainability issues and opportunities for the draft revised NPS and AoS (**Section 3.4**).

3.3 Analysis of the Baseline

- 3.3.1. An essential part of the SEA compliant AoS process is to identify the current state of the environment and its likely evolution under a ‘business as usual’ scenario. It is important to note that under a ‘business as usual’ scenario that the current NSP for Ports would continue to act as the framework for decisions regarding port development proposals. Only with sufficient knowledge of the existing baseline conditions can the likely significant effects of the draft revised NPS be identified and appraised. Compliance with the SEA Regulations also requires that the actual effects of implementing the revised NPS on baseline conditions are monitored.
- 3.3.2. To inform the baseline analysis contained in **Appendix A**, information has been used from a variety of sources including, amongst others: Defra; the Environment Agency; Natural England; Historic England; the Office for National Statistics (ONS); Welsh Government; Cadw and Natural Resources Wales.
- 3.3.3. Relevant baseline information has been considered for England and Wales and where this is not available, UK level data/ information is used. The number of national statutory or designated sites are identified across England and Wales as well as the number within 30km of the coastline for relevant AoS topics. Figures illustrating the location of key designations have not been provided as this would not reflect the non-locational nature of the draft revised NPS.

3.4 Key Issues and Opportunities

- 3.4.1. From the review of plans and programmes and analysis of current and projected baseline conditions, several key issues and opportunities have been identified as being relevant to the draft revised NPS and AoS. These are summarised in **Table 3-2**. Against each topic, the reference to the AoS objectives indicates how these issues have been reflected within the appraisal framework (see **Chapter 4**).

Table 3-2 – Key issues and opportunities

AoS Topic	Key issues and opportunities	AoS objective link (see Chapter 4)
1. Biodiversity and Nature Conservation	■ There are numerous international and nationally designated sites spread across England and Wales and within 30km of the coast. ■ The construction and operation of port related infrastructure has the potential to give rise to a number of impacts that could have adverse effects on designated and non-designated habitats and species. ■ BNG or net benefit (for habitats and species) must be designed into every scheme at the outset, taking into account how ecosystems are expected to change under climate change scenarios. ■ Effective reporting, maintenance and monitoring should be clearly established as part of each NSIP to ensure that biodiversity commitments will be fulfilled in their entirety as part of the aftercare period (i.e., minimum 30 years of mandatory BNG in England). ■ Delivery of wider environmental net gains relevant to the local area (by connecting to Local Nature Recovery Strategies) and those that support national priorities such as reductions in green-house gas emissions, reduced flood risk, improvements to air or water quality, or increased access to natural green and blue space. ■ Ports should contribute to the use of nature-based solutions and multi-functional green/ blue infrastructure, to deliver climate change adaptation, resilience and other environmental and social outcomes, such as encouraging greater active travel for employees. ■ Where ports intersect with or are adjacent to or otherwise likely to affect designated sites including those with significant geodiversity, protected habitats (including irreplaceable habitats) and species, there is a need to balance infrastructure needs with protection and enhancement of those sites. In addition, there is a need for	Objective 1: Biodiversity and Nature Conservation Objective 2: Population and Human Health Objective 4: Land Use, Geology and Soils Objective 5: Water Resources Objective 6: Air Quality Objective 7: Noise Objective 8: Climate Change (Mitigation and Adaptation) Objective 10: Traffic and Transport

AoS Topic	Key issues and opportunities	AoS objective link (see Chapter 4)
	effective protection measures to be in place for the soils that support these designated and protected sites. - There is also a need for sites that are not in favourable condition to be better managed and ensure the SSSIs management plans are taken forward. - The introduction and/ or increased of invasive and non-native species is a risk for port development. Protect, maintain and where possible enhance natural habitat networks and green infrastructure, to avoid fragmentation and isolation of networks. This includes the movement of fish within estuaries. - Protection and enhancement of endangered or important species and habitats, including those considered irreplaceable such as Ancient Woodland and Ancient and Veteran trees, is required.	
2. Population and Human Health	- Large inequalities exist in terms of accessibility to goods, services and community facilities. - Populations living very near expanding ports may increase as a result of new strategic employment opportunities at the port, and this expansion may outstrip local services including health facilities, leading to negative effects on people. - Where ports do not effectively serve a region of the country, net migration away from that region may occur. - Environmental effects from port development (e.g. emissions to air, noise and visual disturbance and impacts on the water environment) can reduce the quality of living environments of local communities. - Access to high quality green and blue spaces can deliver health benefits. - There must be an improvement of access to nature, including protecting National Trails and the King Charles III England Coastal Path (KCIECP).	Objective 2: Population and Human Health Objective 3: Economy and Skills Objective 5: Water Resources Objective 6: Air Quality Objective 7: Noise Objective 8: Climate Change (Mitigation and Adaptation)

AoS Topic	Key issues and opportunities	AoS objective link (see Chapter 4)
		Objective 10: Traffic and Transport Objective 12: Landscape, Townscape and Seascape
3. Economy and Skills	■ The qualifications of the working age population in 2021 for England and Wales are broadly similar, with England having a slightly higher percentage of the working age population with a NVQ4 or equivalent qualification and above. ■ Slow/ weak economic growth is expected to persist for a number of years. ■ The delivery of strategic port infrastructure will provide a boost to local and regional economies and provide new employment opportunities. ■ The central provisional freight forecasts provided by the DfT suggest increases by 2050 over a 2023 base of: • 21% in terms of total tonnage, from 445 million to 537 million tonnes; • 69% in unitised freight tonnage (Load-on/Load-off (Lo-Lo) and Roll-on/Roll-off (Ro-Ro)), from 156 million to 264 million tonnes; • 90% in unitised freight (Lo-Lo and Ro-Ro) traffic, from 17 million TEU to 33 million TEU (excluding transshipment); and • 34% in motor vehicles (accompanied and unaccompanied) traffic, from 2.6 million to 3.5 million vehicles.	Objective 2: Population and Human Health Objective 3: Economy and Skills

AoS Topic	Key issues and opportunities	AoS objective link (see Chapter 4)
4. Land Use, Geology and Soils	■ The setting of the UK's earth heritage features, including geological SSSIs should be protected and enhanced where possible. ■ Of UK land, 7% is currently classified as 'urban', and this coverage is increasing. Development pressure remains a constant factor in parts of the country, and it is not expected that previously developed land will be able to fully deliver the UK's future needs. ■ Coastal geodiversity and processes, including the management and maintenance of natural shoreline processes are a key issue for port development. ■ There is a need to protect, maintain and enhance geomorphological functions and services. ■ Some 1.6% of land in the UK is contaminated from industrial activity, although this is progressively being remediated as sites are redeveloped; however, this can be expensive. ■ There is currently increasing pressure on rural and agricultural land from developers as urban areas expand. Future infrastructure growth will put more pressure on protected land including important geological sites. ■ Soils in England and Wales continue to be degraded by human actions including intensive agriculture, historic levels of industrial pollution and development, making them vulnerable to erosion (by wind and water), compaction and loss of organic matter. Appropriate management and control of soils and sediments is key to their long-term sustainability. ■ As the climate (including temperature and rainfall patterns) changes in the future, it is likely that soils have the potential to be further degraded, due to increased seasonal aridity and wetness and variations in temperature. The effect of industry, agricultural practices, forestry and climate change upon soils, particularly carbon rich peat soils, is also a key issue. Key pollutants include chemicals, oil or waste. Organic waste,	Objective 1: Biodiversity and Nature Conservation Objective 2: Population and Human Health Objective 4: Land Use, Geology and Soils Objective 5: Water Resources

AoS Topic	Key issues and opportunities	AoS objective link (see Chapter 4)
	including sewage sludge, is one of the main sources of heavy metal contamination of soils from humans. Healthy soils are more resilient, and contribute to natural flood management solutions, SUDS, climate change mitigation and adaptation. Therefore, soils need to be sustainable used and managed.	
5. Water Resources	- There is considerable pressure on water resources in many parts of England and Wales, which can in turn affect water quality leading to impacts on biodiversity and availability for sustainable supplies. - There is a legacy of groundwater pollution from historical mining and other industrial activities. - Climate change is expected to have significant impacts on the water environment. Areas where the underlying geology is generally impermeable are expected to be particularly affected as river flows would be likely to fall to low levels in drier periods and quickly react to rainfall episodes. There is also the potential for sea level rise and an increase of flood risk from all sources. Climate change is also expected to lead to changes in water temperature and cause sedimentation. - Many waterbodies are subject to pressure from multiple sources including rural diffuse pollution, waste water discharges, acidification, and urban diffuse pollution. - A significant portion of rivers and canals, and lakes, are yet to reach good or higher Water Environment Regulations classification. - Approximately a quarter of estuarine and coastal waterbodies are failing to meet good Water Environment Regulations status. - Over 50% of land in England is designated as a Nitrate Vulnerable Zone. - A higher number of designated bathing waters were classified as poor in England and Wales during the 2022 bathing season than previous years.	Objective 1: Biodiversity and Nature Conservation Objective 2: Population and Human Health Objective 4: Land Use, Geology and Soils Objective 5: Water Resources

AoS Topic	Key issues and opportunities	AoS objective link (see Chapter 4)
	- There is a need to encourage the efficient use of water throughout the life of development and this should be considered early in the design-stage. - A number of catchments have been designated as sensitive catchment areas for phosphorus and nitrogen under the Water industry Act 1991.	
6. Air Quality	- Poor air quality is generally associated with urban/ industrial areas and major road infrastructure. A relatively large number of AQMAs are located in urban areas, many of which have been designated due to high NO₂ and PM₁₀ levels. - Emissions from shipping can combine with other pollutants to form secondary PM_{2.5} which travels long distances and can impact health outside the local area. - Domestic policy on transport-related air pollutant emissions to-date has largely focused on roads (particularly in relation to nitrogen dioxide concentrations); however, as long-term emissions from road transport begin to decrease, the relative contribution of other sources of air pollution, including the maritime sector, will increase.	Objective 1: Biodiversity and Nature Conservation Objective 2: Population and Human Health Objective 5: Water Resources Objective 6: Air Quality
7. Noise	- Ambient noise levels are gradually rising as a result of a growing, and increasingly mobile, population. This, in turn, increases the value of tranquil places. The cumulative impacts of noise on sensitive groups in local communities may create or exacerbate existing health issues. - Road traffic is a dominant source of noise. - Noise from the construction and operation of ports infrastructure will need to be assessed and where possible reduced or mitigated. - Noise is difficult to measure on a national scale.	Objective 1: Biodiversity and Nature Conservation Objective 2: Population and Human Health Objective 7: Noise

AoS Topic	Key issues and opportunities	AoS objective link (see Chapter 4)
	■ Dissatisfaction with noise levels is increasing as more people are adversely affected by noise. ■ Noise can have serious detrimental impacts on physical and mental health and wellbeing, as well as causing disruption to everyday life. ■ The number of noise complaints is increasing across both England and Wales. ■ Millions of people across England and Wales live with unacceptable levels of noise from road traffic and railways.	
8. Climate Change (Mitigation and Adaptation)	■ The input of greenhouse gases (GHGs) resulting from fossil fuel usage, agriculture and other land use have been linked with atmospheric warming and undesirable climate change. ■ Fossil fuel dependency remains high and is likely to remain so for some time. ■ Legally binding government targets seek to reduce emissions by 100% on 1990 levels by 2050, with an interim target of 68% by 2030. ■ Changes in temperature and rainfall patterns, along with more frequent extreme weather events will require adaptation actions that can lead to a greater degree of resilience and must be incorporated into plans and proposals. ■ The UK's Climate Projections (UKCP18) show that the UK as a whole is likely to experience hotter, drier summers, warmer, wetter winters and increased flood risk including and rising sea levels, particularly in the south east of England. This is likely to have a significant effect on a range of environmental conditions. ■ Sensitive ecosystems are likely to come under increasing pressure as a result of climate change. ■ Climate change will exacerbate flood risk and coastal change, which can cause major issues for ports infrastructure.	Objective 1: Biodiversity and Nature Conservation Objective 2: Population and Human Health Objective 3: Economy and Skills Objective 4: Land use, geology and soils Objective 5: Water Resources Objective 6: Air Quality

AoS Topic	Key issues and opportunities	AoS objective link (see Chapter 4)
	■ Flooding, changes in wind patterns, higher wind speeds, changes in wave height/frequency, more extreme storms and storm surges, extreme high/low flows, increased fog, proliferation of underwater plant growth can all have impacts on navigability. ■ Resilience of infrastructure that ports depend on, e.g. roads and railways that could flood or overheat. Planning for new port infrastructure should be aware of the interdependencies with wider infrastructure resilience. ■ Climate impacts disproportionately impact those experiencing deprivation and can exacerbate existing inequalities. Climate change mitigation and adaptation measures should be incorporated to enable a fair transition. ■ The carbon storage of existing sites, e.g. peat and woodland (mitigation). ■ Nature-based solutions to help adapt to changes in climate, including sea level rise. ■ There is a need to plan for worst case scenarios for sea level rise including the impacts on the natural environment.	Objective 8: Climate Change (Mitigation and Adaptation) Objective 10: Traffic and Transport Objective 11: Cultural Heritage Objective 12: Landscape, Townscape and Seascape
9. Materials and Waste	■ The consumption of non-renewable sources will deplete overall stocks and result in a scarcity of resources for future generations. ■ Large scale port development may require both short-term (i.e. during construction) and long-term (i.e. during operation) use of materials that are non-renewable or are imported. In doing so, schemes may have an environmental impact that extends beyond the local area/ region. ■ There should be encouragement of a move towards a circular economy in the port industry, which involves maximising resources and resource efficiency, and minimising waste.	Objective 1: Biodiversity and Nature Conservation Objective 2: Population and Human Health Objective 4: Land Use, Geology and Soils

AoS Topic	Key issues and opportunities	AoS objective link (see Chapter 4)
		Objective 5: Water Resources Objective 8: Climate Change (Mitigation and Adaptation) Objective 9: Materials and Waste
10. Traffic and Transport	■ All modes of transport have been affected by the Covid-19 pandemic, and although movement is increasing, levels of transport and travel generally remain below 2019 levels. ■ The development of port infrastructure has the potential to increase levels of terrestrial and marine transport. ■ HGV traffic in England is still suffering from the impacts of the recession, though has been increasing. ■ There are areas of the UK's transport network which are stretched beyond their capacity at peak times. ■ There is a need for investment in transportation infrastructure to meet future demand and support economic growth. ■ There is a need to reduce the need to travel and facilitate a shift towards more sustainable modes of transport. ■ Port development will play an important role in enabling the decarbonisation of freight and shipping.	Objective 1: Biodiversity and Nature Conservation Objective 2: Population and Human Health Objective 6: Air Quality Objective 7: Noise Objective 8: Climate Change (Mitigation and Adaptation) Objective 10: Traffic and Transport

AoS Topic	Key issues and opportunities	AoS objective link (see Chapter 4)
11. Cultural Heritage	■ There are a significant number of designated and non-designated heritage assets (terrestrial and marine) spread across England and Wales and within 30km of the coastline where port related development is likely to occur. ■ The significance and setting of designated and non-designated heritage assets are at risk from the delivery of new infrastructure. ■ Increase awareness of buried archaeology / unknown heritage – and recognition that some historic assets can be offshore. ■ Challenging economic conditions are reducing the funds available to conserve and manage heritage assets. ■ New port related development could provide an opportunity to restore and enhance access to designated and non-designated heritage assets. ■ The effects of climate change (e.g. storm events and extreme weather conditions, rising sea levels, shoreline change/coastal erosion and ocean acidification) will increase in frequency and intensity, posing a threat to underwater and coastal heritage assets (e.g. protected wrecks).	Objective 2: Population and Human Health Objective 4: Land Use, Geology and Soils Objective 10: Traffic and Transport Objective 11: Cultural Heritage Objective 12: Landscape, Townscape and Seascape
12. Landscape, Townscape and Seascape	■ There are a number of nationally designated landscapes across England and Wales and within 30km of the coastline. ■ Port development and the intensification of any coastal developments as a result of development pressures can impact on coastal landscape and seascape. ■ Light pollution appears to have increased considerably in recent decades across much of the UK. The growth of urban areas, road networks and industrial areas are all major contributors to increased light levels. Light pollution can reach coastal waters from nearby urban areas, whilst areas further out to sea are affected by	Objective 1: Biodiversity and Nature Conservation Objective 2: Population and Human Health Objective 4: Land Use, Geology and Soils

AoS Topic	Key issues and opportunities	AoS objective link (see Chapter 4)
	shipping and offshore industry and exploration as well as light from the land, scattered in the atmosphere and reflected back down. ■ The increasing effects of climate change (and effects arising from the increased frequency and intensity of storm and flood events, increasing sea levels (and associated increases in coastal erosion), increased likelihood of droughts and the anticipated increased in wildfires) can all significantly affect landscape, townscape, and seascape. Human responses/prevention measures implemented to address the effects of climate change (e.g. increased flood/coastal defences) can also have impacts on the landscape/ seascape. ■ New energy and associated infrastructure (e.g. offshore wind) can have a negative impact on local landscape/ seascape.	Objective 8: Climate Change (Mitigation and Adaptation) Objective 11: Cultural Heritage Objective 12: Landscape, Townscape and Seascape

3.5 Limitations of the Data

- 3.5.1. Data have generally been sourced from national bodies to enable comparison between baseline information for England and Wales. However, in some cases baseline information collected by national bodies differs meaning that data are not directly comparable.
- 3.5.2. The information used has been sourced, so far as is possible, from the most recent datasets available utilising a wide range of authoritative and official sources. It is important to acknowledge that there are variable time lags between raw data collection and its publication. Consequently, the baseline or predicted future trends may have varied from those described above and in **Appendix A**.

4

Appraisal Methodology



4 Appraisal Methodology

4.1 Introduction

- 4.1.1. This chapter describes the approach to undertaking the AoS of the draft revised NPS (and its reasonable alternative). It draws on the information presented in Chapters 2 and 3 and Appendix B, as well as the responses received to consultation on the initial AoS Scoping Report, to define the scope of the appraisal (in terms of what has been appraised and the environmental and socio-economic issues considered) and sets out the appraisal framework. The appraisal framework includes AoS objectives and guide questions supported by definitions of significance that are intended to help the reader understand how the appraiser has determined the effects of the draft revised NPS against the objectives. The section also highlights the difficulties encountered during the appraisal process.

4.2 Geographical and temporal scope

Geographical scope

- 4.2.1. In terms of the geographical scope of the AoS, the draft revised NPS for Ports will cover all suitable locations for port developments in England (including existing ports) and reserved trust ports in Wales, of which there is only one at present, at Milford Haven. In order to ensure consistency in terms of the level of detail presented and for the assessment, baseline data, plans and programmes and appraisals will be carried out for both England and Wales at a national and non-locationally specific level. Therefore, the geographic scope of the AoS includes all of England and Wales.

Temporal scope

- 4.2.2. With regards to the temporal scope, the AoS will look at evaluate effects over the following timescales:
- short term (0 to <5 years);
 - medium term (5-25 years); and
 - long term (25+ years).
- 4.2.3. Short term is considered to equate to any construction phase, whereas medium and long term to operational phases. Port infrastructure of the scale to qualify as an NSIP, such as a new container or bulk handling dock, are typically built with the intention of lasting for significant periods. Medium term relates to an example operational period (20 years) whilst long term effects would be beyond this (so over 25 years in duration). Beyond this, for example using a 50-year time horizon, effects are difficult to predict due to the level of uncertainty with regards to potential future technology. These have been revised from those used in the previous AoS for the NPS for Ports, which covered periods 0 to 5 years (short term), 5 to 15 years (medium term) and >15 years (long term) to reflect on the longevity of the infrastructure considered within the NPS for Ports.

4.3 Appraisal Framework

- 4.3.1. Establishing appropriate AoS objectives and guide questions is central to appraising the effects of the draft revised NPS. The AoS objectives and guide questions used in the appraisal of the draft revised NPS reflect the topics contained in Schedule 2 of the SEA Regulations and have been informed by:
- the review of plans and programmes and the associated environmental protection objectives identified (see **Chapter 3** and **Appendix A**);
 - the baseline information (see **Chapter 3** and **Appendix A**);
 - the key issues and opportunities (see **Chapter 3** and **Appendix A**);
 - a broad understanding of the likely generic effects arising from the construction and operation of port infrastructure; and
 - responses received to consultation on the AoS Scoping Report (**Appendix B**).
- 4.3.2. Broadly, the AoS objectives present the preferred environmental social and economic outcomes, which typically involve minimising detrimental effects and enhancing positive effects. Associated guide questions have been developed for each AoS objective to provide a detailed framework against which the draft revised NPS can be appraised. The appraisal objectives and guide questions are presented in **Table 4-1**.

Table 4-1 - AoS Framework

AoS Topic	AoS Objective	Guide Questions
13. Biodiversity and Nature Conservation	To protect, restore and enhance biodiversity (habitats, species and ecosystems) working within environmental capacities and limits to contribute to ecosystem resilience and habitat connectivity and deliver a net biodiversity/ environmental gain.	Will the revised NPS for Ports: ■ protect, restore and/or enhance internationally and nationally designated nature conservation sites e.g. SACs, SPAs, Ramsar sites, MCZs, SSSIs, HPMAs and NNRs or those of local importance e.g. LNRs? ■ affect habitats or species, including those that are non-designated as well as those that are protected? ■ affect the structure, function and resilience of ecosystems and the services they provide? ■ prioritise onsite delivery and provide opportunities to deliver biodiversity/ environmental net gain in England or net benefits in Wales? ■ help to deliver the outcomes legislated through the Environment Act 2021 and Environment (Wales) Act 2016? ■ prioritise the consideration of nature-based solutions and green-blue infrastructure in scheme design? ■ maintain the biodiversity mitigation hierarchy? ■ seek to minimise impacts of physical modifications?
14. Population and Human Health	To minimise disturbance to local communities, maximise positive social impacts and protect and enhance the health, safety and	Will the revised NPS for Ports: ■ affect the social infrastructure and amenities available to local communities? ■ affect local population demographics and/ or levels of deprivation in surrounding areas? ■ protect and/or enhance the health and safety of workers? ■ protect and/or enhance the health, safety and wellbeing of local communities and specific groups within those communities? ■ minimise the risk or consequences of a major accident?

AoS Topic	AoS Objective	Guide Questions
	wellbeing of workers and communities.	■ help to deliver the outcomes legislated through the Environment Act 2021 and Environment (Wales) Act 2016? ■ affect access to the coast and the route of the King Charles III England Coastal Path (KCIIIIECP)? ■ help deliver green infrastructure and opportunities for access to nature? ■ ensure that port schemes deliver improved local environment and infrastructure to local communities affect by development?
15. Economy and Skills	To promote a strong, diverse, and stable economy with opportunities to improve education and skills, and employment.	Will the revised NPS for Ports: ■ support the economic growth of the port sector and wider sectors? ■ affect opportunities for investment in education and skills development? ■ affect the number and types of jobs available in local economies? ■ affect how diverse and robust local economies are? ■ help to deliver the outcomes legislated through the Environment Act 2021 and Environment (Wales) Act 2016?
16. Land Use, Geology and Soils	To conserve and enhance soil health and geology and contribute to the sustainable use of land.	Will the revised NPS for Ports: ■ have an effect on soil health/function, variety, extent, and/or compaction levels? ■ increase the risk of, or affect known and existing land contamination? ■ protect and/or enhance sites protected for their geology and features of wider geological interest? ■ affect land stability? ■ change patterns of land use including effects on best and most versatile agricultural land? ■ ensure the efficient use of land through use of previously developed land and/or reclaimed land?

AoS Topic	AoS Objective	Guide Questions
		■ help to deliver the outcomes legislated through the Environment Act 2021 and Environment (Wales) Act 2016? ■ protect Best and Most Versatile (BMV) land, protect peat and carbon store, manage the long-term value of soil? ■ impact on coastal processes and the effect this will have on coastal habitats, including consideration of coastal squeeze?
17. Water Resources	To protect, enhance and increase resilience of water quantity and quality.	Will the revised NPS for Ports: ■ encourage the efficient use of water? ■ protect and enhance the quality of surface, groundwater, estuarine and coastal water quality? ■ prevent the deterioration of Water Environment Regulations (WER) waterbodies? ■ ensure a new activity or new physical modification does not prevent the future achievement of good status for estuarine (transitional) and coastal waters? ■ help to deliver the outcomes legislated through the Environment Act 2021 and Environment (Wales) Act 2016? ■ support the achievement of WER objectives, including protected area objectives and mitigation measures in heavily modified waterbodies? ■ protect and enhance the resilience of water resources from the risk of flooding and drought? ■ seek to minimise or suitably mitigate the impacts of physical modification of estuaries and waterbodies as a result of port development? ■ avoid impacts on or help to improve protected sites/ catchments designated as sensitive catchments for phosphorus and nitrogen under the Water Industry Act 1991?

AoS Topic	AoS Objective	Guide Questions
18. Air Quality	To minimise emissions of pollutant gases and particulates and enhance air quality.	Will the revised NPS for Ports: ■ affect air quality? ■ create a nuisance for people through, for example, dust or odours? ■ help to deliver the outcomes legislated through the Environment Act 2021 and Environment (Wales) Act 2016? ■ protect habitats from adverse air quality impacts including eutrophication, direct toxicity, acidification, and accumulation?
19. Noise	To minimise noise pollution and the effects of vibration.	Will the revised NPS for Ports: ■ help to minimise noise and vibration effects from construction and operational activities on residential amenity and effects on sensitive locations and receptors? ■ help to deliver the outcomes legislated through the Environment Act 2021 and Environment (Wales) Act 2016?
20. Climate Change (Mitigation and Adaptation)	To minimise GHG emissions as a contribution to climate change and support the transition to a net zero economy, and ensure ports and associated places and infrastructure are resilient to the consequences of climate change,	Will the revised NPS for Ports: ■ help to ensure a low carbon design solution to the construction and operation of ports to minimise GHG emissions? ■ embed adaptation to climate change in development projects to increase resilience to rising temperatures, more extreme weather events and sea level rise, wind, storm surges, coastal erosion, wave height/frequency? ■ help reduce flood risk and as a consequence, help to mitigate and adapt to climate change, thereby build resilience into development proposals? ■ help to deliver the outcomes legislated through the Environment Act 2021 and Environment (Wales) Act 2016? ■ contribute to ensuring climate mitigation and adaptation measures support a fair transition to a net zero economy and climate resilient places?

AoS Topic	AoS Objective	Guide Questions
	anticipating a range of future climate scenarios and impacts.	■ help deliver nature-based solutions and green infrastructure to allow adaptation to climate change? ■ consider carbon storage potential of existing sites including woodlands and peat, seagrass and saltmarsh and other coastal margin habitats?
21. Materials and Waste	To minimise waste arisings, promote reuse, recovery and recycling, minimise the impact of wastes on the environment and communities and contribute to the sustainable use of natural and material assets.	Will the revised NPS for Ports: ■ maximise re-use and recycling of recovered components and materials? ■ help achieve government targets for minimising, recovering and recycling waste? ■ increase the burden on limited natural resources? ■ make best use of existing infrastructure and resources? ■ help to deliver the outcomes legislated through the Environment Act 2021 and Environment (Wales) Act 2016?
22. Traffic and Transport	To minimise the volume of traffic and promote more sustainable transport choices.	Will the revised NPS for Ports: ■ help to minimise traffic volumes? ■ help to improve road infrastructure to support the delivery of new port infrastructure? ■ encourage alternative means of transporting freight, waste and minerals? ■ encourage the provision of sufficient parking for HGVs? ■ help to deliver the outcomes legislated through the Environment Act 2021 and Environment (Wales) Act 2016?

AoS Topic	AoS Objective	Guide Questions
23. Cultural Heritage	To conserve and where appropriate enhance the historic environment including cultural heritage resources, historic buildings and archaeological features and their settings.	Will the revised NPS for Ports: ■ avoid damage to, conserve or enhance internationally and nationally designated heritage assets (onshore and offshore) and their settings? ■ avoid damage to, conserve or enhance non-designated heritage (onshore and offshore) assets, archaeological remains and their settings? ■ conserve or enhance heritage assets and the wider historic environment including landscapes, townscapes, buildings, structures and archaeological remains? ■ affect the fabric and setting of historic buildings, places or spaces that contribute to local distinctiveness, character and appearances? ■ improve access to, and interpretation, understanding and appreciation of, the significance of heritage assets? ■ affect the heritage of communities? ■ help to deliver the outcomes legislated through the Environment Act 2021 and Environment (Wales) Act 2016?
24. Landscape, Townscape and Seascape	To conserve, protect and enhance landscape, townscape and seascape quality and visual amenity.	Will the revised NPS for Ports: ■ have significant visual impacts (including those at night)? ■ avoid adverse effects to, and enhance where possible, designated landscapes and the settings of designated landscapes (including woodlands) such as National Parks or National Landscapes? ■ protect and enhance the intrinsic character of local landscapes, townscapes or seascapes? ■ help to deliver the outcomes legislated through the Environment Act 2021 and Environment (Wales) Act 2016?

4.4 Completing and Recording the Appraisal

Appraising the effects of the draft revised NPS and reasonable alternative

- 4.4.1. In accordance with the ODPM (now MHCLG) Practical Guide to the SEA Directive¹⁷, the appraisal process has sought to identify, describe and evaluate the significant effects of the draft revised NPS. This has been done by identifying the likely changes to the baseline conditions as a result of implementing the draft revised NPS and the reasonable alternative to it. These changes are described (where possible) in terms of their geographic scale, the timescale over which they could occur, whether the effects would be temporary or permanent, positive or negative, likely or unlikely, frequent or rare. Where numerical information was not available, the appraisal has been based on professional judgement and with reference to relevant legislation, regulations and policy. More specifically, in undertaking the appraisal, consideration has been given to:
- baseline information including existing social economic and environmental problems and their evolution;
 - the likely activities and potential sources of effects associated with the construction and operation of port infrastructure;
 - the regulatory framework;
 - the AoS objectives and guide questions see **Table 4-1**); and
 - definitions of significance (see **Table 4-3**).
- 4.4.2. The proposed draft revised NPS, as well as its reasonable alternative, has been assessed against the AoS objectives on a topic-by-topic basis to identify likely significant environmental, social and economic effects using an appraisal matrix (see **Table 4-2**). The resulting appraisal and identification of effects has been used to determine the extent to which any principles and generic impacts identified in the draft revised NPS are sufficient and appropriate to cover the likely effects of port infrastructure, along with any proposed mitigation and enhancement measures.

¹⁷ ODPM (now MHCLG) (2005) A Practical Guide to the Strategic Environmental Assessment Directive. Available online at: <https://assets.publishing.service.gov.uk/media/5a78ec0740f0b62b22cbddd2/practicalguidesea.pdf>

Table 4-2 – Appraisal matrix

AoS Objective.....		
draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
+	+	draft revised NPS <i>A description of the effects of the draft revised NPS on the topic/ objective under consideration provided here, with reasoning and justification included.</i>
		Reasonable Alternative <i>A description of the effects of the reasonable alternative to the draft revised NPS has been provided here, with reasoning and justification included.</i>
Recommendations for mitigation and/ or enhancement:		

- 4.4.3. In line with the SEA Regulations, the AoS must detail which of the identified effects are likely to be significant (whether this is significantly positive or negative). To ensure the significant effects are presented clearly and consistently, a set of significance criteria has been defined for the assessment. The scoring system used in the appraisal and guidance on determining significant effects is presented in **Table 4-3**. For each effect identified, a score will be given using the framework set out in **Table 4-1**. This will be undertaken using expert judgement after a review of the evidence available. All evidence / assumptions that have been used to make these judgements will be documented.

Table 4-3 - Guide for the assessment of significance

Effect	Description	Score
Major Positive (Significant)	Effects on relevant receptors that fully support the achievement of sustainability targets and objectives relevant to ports. For example, the effect: - Substantially accelerates an improving/ positive trend. - Substantially decelerates a declining/ negative trend.	++

	Substantially supports the delivery of a government objective/ target/ outcome.	
Minor Positive	Effects on relevant receptors that partly support the achievement of sustainability targets and objectives relevant to ports. For example, the effect: - Accelerates an improving/ positive trend, in a marginal way. - Decelerates a declining/ negative trend, in a marginal way. - Supports the delivery of a government objective/ target/ outcome but in a marginal way.	+
Neutral	No effects or a neutral contribution.	0
Uncertain	The potential for an effect is unclear. This may be due to lack of clarity on how the policy will be applied, and/or data gaps in the baseline. Uncertain effects will be treated as significant effects (in order to present a precautionary approach).	?
Minor Negative	Effects on relevant receptors that could conflict with the achievement of sustainability targets and objectives relevant to ports. For example, the effect: - Decelerates an improving/ positive trend, but in a marginal way. - Accelerates a declining/ negative trend, but in a marginal way. - Detracts from the delivery of government objective/ target/ outcome but in a marginal way.	-
Major Negative (Significant)	Effects on relevant receptors that actively works against the achievement of sustainability targets and objectives relevant to ports. For example, the effect: - Substantially decelerates an improving/ positive trend. - Substantially accelerates a declining/ negative trend. - Substantially detracts from the delivery of a government objective/ target/ outcome.	--

Mitigation and monitoring of significant effects

- 4.4.4. Where a significant negative effect has been identified, measures should be implemented to prevent, reduce or offset the effect. In addition, any uncertain effects should have mitigation suggested in order to reduce uncertainty and the potential for this to give rise to a significant negative effect. Where relevant, enhancement measures will be suggested to enhance the positive effects of policies. Monitoring of potential significant and uncertain negative effects is also an important part of the AoS process and helps to identify unforeseen adverse

effects at an early stage, thus ensuring that appropriate remedial action is taken. Monitoring measures will be suggested for significant and uncertain effects.

4.5 Appraisal of Secondary, Cumulative and Synergistic Effects

4.5.1. The SEA Regulations require that secondary, cumulative and synergistic effects are considered as part of the AoS. These are defined as follows¹⁸:

- **Secondary (or indirect):** Effects that do not occur as a direct result of the draft NPS's implementation but occur at distance from the direct impacts or as a result of a complex pathway. Examples of a secondary effect of the draft NPS could include the materials (and embodied carbon) used in the construction of the port infrastructure.
- **Cumulative:** Effects that occur where several individual activities which each may have an insignificant effect, combine to have a significant effect. Examples of a cumulative effect resulting from the implementation of the draft revised NPS could include potential effects on a NSN designated site where a habitat or species is vulnerable and the cumulative effects of disturbance and pollutant emissions arising from development and operation causes a significant impact. Cumulative effects will also include the potential effects (if any) of a proposed plan or activity under the plan and any other proposed plan and/or consented developments.
- **Synergistic:** Effects that interact to produce a total effect that is greater than the sum of the individual effects. For example, this can occur where the toxicity of two chemicals is greatly increased when they are combined.

4.5.2. Through the appraisal of the draft revised NPS, the methodology outlined earlier in this chapter, the cumulative effects of the draft revised NPS in-combination with other plans and programmes has been considered. This has been considered on a topic-by-topic basis to identify likely significant cumulative effects using an appraisal matrix (see **Table 4-4**) and using the scoring system as outlined in **Table 4-3**.

Table 4-4 - Cumulative effects appraisal matrix

AoS Topic and Objective	Residual cumulative effect
<i>Relevant AoS Topic and objective</i>	+
<i>Relevant AoS Topic and objective</i>	0

¹⁸ A Practical Guide to the SEA Directive states that, "These terms are not mutually exclusive, often the term cumulative effects is taken to include secondary and synergistic."

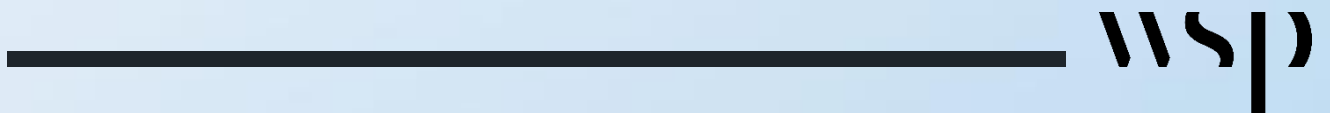
4.6 Technical Difficulties

Uncertainties

- 4.6.1. The following uncertainties have been noted when completing this AoS Report and could then become material to the subsequent appraisal:
- the potential location of new port infrastructure is unknown;
 - the timing and delivery of new port infrastructure is unknown;
 - the detailed design of any new port infrastructure and associated development is unknown;
 - future changes to the social, economic and environmental baseline beyond those outlined are difficult to predict in light of the long operational lifespan of port infrastructure; and
 - the Revised NPS will be applied on a scheme specific basis and while it provides consistency in terms of guidance to the applicant, Examining Authority and decision maker, there remains some residual uncertainty over the exact provisions that will be applied at the project consenting stage.

5

Appraisal of the Revised National Policy Statement for Ports and Reasonable Alternatives



5 Appraisal of the Revised National Policy Statement for Ports and Reasonable Alternatives

5.1 Introduction

- 5.1.1. This chapter of the AoS Report presents the findings of the appraisal of the draft revised NPS, which has been undertaken in accordance with the methodology described in Chapter 4. Drawing on the detailed topic-based assessments contained in **Appendix C**, it provides an overview of the likely significant effects of the draft revised NPS and its reasonable alternative (Section 5.2). Following this, a number of recommendations are made to help strengthen the draft revised NPS in relation to AoS Topics (Section 5.3). Consideration is given to secondary, cumulative and synergistic effects (Section 5.4) as well as the potential for any transboundary effects (Section 5.5).

5.2 Appraisal summary of the draft revised NPS and reasonable alternative

- 5.2.1. **Table 5-1** below sets out the summary findings for the appraisal of the draft revised NPS and its reasonable alternative. The twelve more detailed topic-based assessments are presented in **Appendix C**.

Table 5-1 - Appraisal summary

AoS Topic and Objective	Likely Residual Significant Effect	
	draft revised NPS	Reasonable Alternative
Biodiversity and Nature Conservation To protect, restore and enhance biodiversity (habitats, species and ecosystems) working within environmental capacities and limits to contribute to ecosystem resilience and habitat connectivity and deliver a net biodiversity gain.	+	+
Population and Human Health To minimise disturbance to local communities, maximise positive social impacts and protect and enhance the health, safety and wellbeing of workers and communities.	0	0
Economy and Skills	+	+

To promote a strong, diverse, and stable economy with opportunities to improve education and skills, and employment.		
Land Use, Geology and Soils To conserve and enhance soil health and geology and contribute to the sustainable use of land.	0	0
Water Resources To protect, enhance and increase resilience of water quantity and quality.	+	+
Air Quality To minimise emissions of pollutant gases and particulates and enhance air quality.	0	0
Noise To minimise noise pollution and the effects of vibration.	+	+
Climate Change (Mitigation and Adaptation) To minimise GHG emissions as a contribution to climate change, support the transition to a net zero economy, and ensure ports and associated places and infrastructure are resilient to the consequences of climate change, anticipating a range of future climate scenarios and impacts.	+	+
Materials and Waste To minimise waste arisings, promote reuse, recovery and recycling, minimise the impact of wastes on the environment and communities and contribute to the sustainable use of natural and material assets.	+	+
Traffic and Transport To minimise the volume of traffic and promote more sustainable transport choices.	+	+
Cultural Heritage To conserve and where appropriate enhance the historic environment including cultural heritage resources, historic buildings and archaeological features and their settings.	+	+
Landscape, Townscape and Seascape To conserve, protect and enhance landscape, townscape and seascape quality and visual amenity.	+	+

- 5.2.2. The results of the appraisal generally found that both the draft revised NPS and its reasonable alternative contributed positively to the achievement of most of the objectives, but that in both cases, the contribution was only minor, and therefore not significant. In the case of three AoS Topics, for population and human health, air quality and land use, geology and soils, the contribution (for both the draft revised NPS and its reasonable alternative) was considered to be neutral. The appraisal also demonstrated that there were no differences in terms of the likely significant effects between the draft revised NPS and the reasonable alternative.

Recommendations on how to further improve the positive contribution of the draft revised NPS to sustainability, or move the neutral contributions into positive ones have been provided below.

5.3 Appraisal recommendations

The assessment of the draft revised NPS against the AoS objectives identified areas where the policy could be strengthened or improved in order to improve the overall sustainability of the policy. Those recommendations are presented below, by AoS topic.

Biodiversity and Nature Conservation

- In Chapter 3 (Assessment principles) there is potential to strengthen the text in paragraphs 3.2.3 to 3.2.6 to highlight potential benefits to biodiversity and nature conservation through the delivery of net gain. A proposal for national significant port infrastructure might have the potential to deliver a significant level of biodiversity net gain and this should be highlighted in this section for the planning decision-maker to consider.
- In Chapter 3 (Assessment principles) under Section 3.6 (Alternatives) and guidance for the decision maker, it could include an additional principle that relates to the ability of/ potential for alternatives to deliver greater enhancements (either through an increased quantity or the delivery of a unique opportunity).
- In Chapter 3 (Assessment principles) under Section 3.8 (Criteria for good design for port infrastructure) there is an opportunity to expand the definition of 'good design' to include biodiversity net gain (in England)/ net benefit (in Wales) and nature-based solutions. There is also an opportunity to state that they should be considered early in the design stage and that early and effective engagement with statutory environmental bodies can help to facilitate this.
- While the draft revised NPS refers to the protection and improvement of the green infrastructure network, there is the opportunity to make it clearer that the green infrastructure network also includes the connectivity of habitats.
- In Chapter 4 (Biodiversity and geological conservation) a reference should be included to the introduction and increased spread of invasive non-native species (INNS), the importance of considering robust biosecurity measures at the outset of the design-stage.

Population and Human Health

- In Section 3.11 Health and nuisances, in the overview of this section, the risk of major accidents should be discussed, as ports have the potential to adversely affect the population, should any risks of major accidents or disasters be realised. The Applicant's assessment section should require that the applicant identify any key risks from accidents or disasters and state how these have been minimised.
- The current drafting of paragraphs 3.11.1 to 3.11.4 does not emphasise the need to enhance health and wellbeing e.g. through providing a community legacy and it would be beneficial to change the emphasis from minimising harm to enhancement. There is the potential to include, within the Applicant's assessment section, that the applicant should identify measures to enhance the local health and well-being of the community, through access to well-designed sea fronts and seascapes, opportunities for recreation, opportunities to enhance existing local health services and facilities.

Economy and Skills

- In Chapter 3.3 Socio-economic impacts, there is an opportunity to provide more emphasis on education and training provision, such as apprenticeships, to benefit the local community. In the Applicant's assessment (paragraphs 3.3.2 to 3.3.5), there is reference to the creation of jobs and training opportunities, which could be amended to include reference to training and apprenticeships that have a lasting benefit to the local community.

Land Use, Geology and Soils

- In Chapter 2 (Government policy and the need for new infrastructure) under Section 2.2 (Government policy for ports) when discussing Government policy to ensure sustainable development and providing high standards of protection for the natural environment, there is an opportunity to reference the Natural Environment Planning Practice Guidance. This could help to provide clarity that the natural environment also includes agricultural land, soil and brownfield land of environmental value as per the Planning Practice Guidance.

Water Resources

- In Chapter 2 (Government policy and the need for new infrastructure) under Section 2.2 (Government policy for ports) when discussing Government policy to ensure sustainable development and providing high standards of protection for the natural environment, there is an opportunity to specifically reference the water environment and/ or make it clear that the natural environment includes the water environment. While the Natural Environment Planning Practice Guidance does not refer to the water environment, the Government's Environmental Improvement Plan includes a goal relating to clean and plentiful water.

Air Quality

- In Chapter 3 (Assessment principles) under Section 3.5.6 air quality could be added to the list of benefits provided by planting trees. Although carbon sequestration is mentioned, there is currently no mention of local air quality benefits.
- Section 4.11.8 references lay-out, administrative and engineering measures as potential mitigation in respect of odour (and other statutory nuisances) but it may be helpful to specify these measures within the air quality section at 4.10, as these can also positively influence local air quality.

Noise

- Although noise impacts are mentioned in relation to biodiversity and the marine environment, there is no mention of impacts from noise in the dredging section specifically (Section 4.3), and this is likely to be one of the main sources of underwater noise. Indeed section 4.3 only includes limited reference to the effects of the activity (unlike other topic sections) and therefore it is recommended that this text describes the possible activities more completely to provide the reader, applicant and decision-maker with a more rounded appreciation of the issues, such as indirect effects relating to noise, the transport of dredged material, water quality effects, etc. At present the text is focused on direct loss only.
- In Chapter 3 (Assessment principles) under Section 3.5 (General approach to environmental impacts and Environmental Impact Assessment) there is an opportunity to suggest that where noise mitigation may be required, nature-based solutions should be considered alongside traditional engineering-based mitigation approaches, for example landscape bunds also acting as noise attenuation. It currently states that a Green Infrastructure approach can be used to plan multifunctional networks of natural features to integrate the various benefits and solutions. The text at 4.12.3 should be revised to include reference to ambient noise levels when determining likely effects, as this is an important factor that determines the likely noise impact. Also there is reference to designated sites but no acknowledgement that protected species may be impacted outside of designated sites, and therefore the proximity of the proposed development to protected species which could be impacted by noise should be included in the factors listed in 4.12.3.

Climate Change (Mitigation and Adaptation)

- In Chapter 3 (Assessment principles) under Section 3.9 'Climate change mitigation', there should be a reference to material design and the selection where appropriate of materials with low embodied carbon, as much of the current text relates to mitigating operational effects, as opposed to the design and construction stage. It is noted that paragraph 4.8.6 within Waste Management, it encourages applicants to use low carbon materials, sustainable sources, and local suppliers; however, it could be stronger and clearly articulated in the climate change mitigation section.

Material and Waste

- In Chapter 2 (Government policy and the need for new infrastructure) under Section 2.2 (Government policy for ports) when discussing Government policy to ensure sustainable development and providing high standards of protection for the natural environment, there is an opportunity to specifically reference waste management and resource efficiency and/ or make it clear that this is a key element in providing high standards of protection for the natural environment. This would then align with Goal 5 of the Government's Environmental Improvement Plan (2023): "Maximise our resources, minimise our waste".

Traffic and transport

- Marine traffic (including recreational vessels) and navigation should be given consideration within the Applicant's assessment at 4.7.5 and the potential requirement for a Navigation Risk Assessment should be mentioned.

Cultural Heritage

- In Chapter 4 (Generic impacts) under Section 4.14 (Historic environment) there is an opportunity make a reference to cumulative effects on heritage assets.
- In Chapter 4 (Generic impacts) under Section 4.14 (Historic environment) there is an opportunity to reference the need to consider impacts on both onshore and offshore heritage assets and the wider historic environment.

Landscape, Townscape and Seascape:

- In Chapter 2 (Government policy and the need for new infrastructure) under Section 2.2 (Government policy for ports) when discussing Government policy to ensure sustainable development and providing high standards of protection for the natural environment, there is an opportunity to reference the Natural Environment Planning Practice Guidance. This could help to provide clarity that the natural environment also includes the landscape as per the Planning Practice Guidance.
- In Chapter 4 (Generic impacts) under Section 4.13 (Landscape and visual impacts) there is an opportunity to require applicant's assessments to consider cumulative effects on landscape as well as cumulative effects on nationally designated areas. The potential cumulative effects of development on the landscape should also be taken into account by the decision-maker.

5.4 Cumulative effects

- 5.4.1. In determining the significance of effects of a plan or programme, the SEA Regulations require that consideration is given to the secondary, cumulative and synergistic nature of

the effects¹⁹. This includes cumulative effects as a result of interactions between different elements of the plan (intra-plan) as well as cumulative effects as a result of interactions with other plans and programmes (inter-plan).

- 5.4.2. The intra-plan cumulative effects of the draft revised NPS on the AoS objectives have been evaluated and identified in **Section 5.2** above and in **Appendix C**. Potential interactions between the draft revised NPS and other plans, programmes and projects are considered below.
- 5.4.3. **Table 5-2** broadly identifies the types of plans and programmes that could result in interactions with the draft revised NPS and therefore cumulative effects.

Table 5-2 - Sources of potential inter-plan cumulative effects

Plans or Projects	Summary of Plans
Other National Policy Statements	National Policy Statements (NPS) set out government policy on different types of national infrastructure development for energy, transport and water, waste water and waste. There are currently 12 designated NPS, which includes the current NPS for Ports.
Nationally Significant Infrastructure Projects	Nationally significant infrastructure projects (NSIPs) are large scale projects falling into five general categories (energy; transport; water; waste water and waste). The thresholds for infrastructure development to be considered nationally significant are set out in the Planning Act 2008.
National Planning Policy Framework	This sets out the Government's economic, environmental and social planning policies for England. Although this framework applies to the preparation of neighbourhood plans and to decisions on planning applications, rather than to NSIP specifically, the NPPF is also likely to be an important and relevant consideration in decisions on NSIPs, but only to the extent relevant to that project.
Maritime 2050: navigating the future	This strategy sets out the government's vision and ambitions for the future of the British maritime sector. Short, medium and long-term recommendations are identified for seven themes, which include environment and infrastructure.

¹⁹ A Practical Guide to the SEA Directive states that, "*These terms are not mutually exclusive, often the term cumulative effects is taken to include secondary and synergistic.*"

Future Wales: The National Plan 2040	Future Wales is the national development framework for Wales, setting the direction for development to 2040. It is a development plan with a strategy for addressing key national priorities through the planning system, including sustaining and developing a vibrant economy, achieving decarbonisation and climate-resilience, developing strong ecosystems and improving the health and well-being of our communities.
Strategic Development Plans (Wales)	The national plan will be built on by Strategic Development Plans (SDPs), which will be prepared by Corporate Joint Committees (CJCs) at a regional level. These plans will focus on issues that cross Local Planning Authority boundaries and will look at how people in each of the four regions in Wales go about their day-to-day lives, from working and commuting patterns to shopping and leisure activities.
Local and Neighbourhood Plans in England and Local Development Plans in Wales	Each local planning authority in England and Wales are required to prepare a local plan in England or a development plan in Wales, to guide decisions on future development proposals and address the needs and opportunities of the area. The production of neighbourhood plans in England is not a requirement, and they should support the delivery of strategic policies contained in local plans and shape and direct development that is outside of these strategic policies. These plans identify the scale and location of growth (residential, employment and associated infrastructure) to be delivered across their administrative areas to meet identified needs.
Local Transport Plans	Local transport authorities are required to produce Local Transport Plans every five years that set out the transport policies/ strategy and programme of measures/ infrastructure to be delivered across its area.
Water Resource Management Plans	Water companies have a statutory obligation to produce Water Resource Management Plans (WRMPs) that set out how they intend to achieve a secure supply of water in the future, which can include the delivery of new infrastructure, for their customers while protecting and enhancing the environment. This could include the delivery of infrastructure along the coast, such as desalination plants.
Shoreline Management Plans	Shoreline Management Plans (SMPs) set out a planned approach to managing flood and coastal erosion risk around the coast of England and Wales.
Marine Plans (England)	Marine Plans in England guide those who use and regulate the marine area to encourage sustainable development while considering the environment, economy and society. This includes setting out priorities and directions for future development within the plan area and helping marine users understand the best locations for their activities, including where new developments may be appropriate.

Welsh National Marine Plan	The Welsh National Marine Plan (WNMP) contains plans and policies to support the Welsh Government's vision for clean, healthy, safe and diverse seas, to guide future sustainable development and to support the growth of marine space and natural resources ('blue growth').
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- 5.4.4. The potential interactions of the draft revised NPS between the plans, programmes and projects outlined above (in **Table 5-2**), are considered in **Table 5-3** below.

Table 5-3 – Cumulative effects with other plans, programmes and projects

AoS Topic and Objective	Residual cumulative effect
Biodiversity and Nature Conservation To protect, restore and enhance biodiversity (habitats, species and ecosystems) working within environmental capacities and limits to contribute to ecosystem resilience and habitat connectivity and deliver a net biodiversity gain.	+
Population and Human Health To minimise disturbance to local communities, maximise positive social impacts and protect and enhance the health, safety and wellbeing of workers and communities.	0
Economy and Skills To promote a strong, diverse, and stable economy with opportunities to improve education and skills, and employment.	+
Land Use, Geology and Soils To conserve and enhance soil health and geology and contribute to the sustainable use of land	0
Water Resources To protect, enhance and increase resilience of water quantity and quality.	+
Air Quality To minimise emissions of pollutant gases and particulates and enhance air quality.	0
Noise To minimise noise pollution and the effects of vibration.	+
Climate Change (Mitigation and Adaptation)	+

To minimise GHG emissions as a contribution to climate change and support the transition to a net zero economy, and ensure ports and associated places and infrastructure are resilient to the consequences of climate change, anticipating a range of future climate scenarios and impacts.	
Materials and Waste To minimise waste arisings, promote reuse, recovery and recycling, minimise the impact of wastes on the environment and communities and contribute to the sustainable use of natural and material assets.	+
Traffic and Transport To minimise the volume of traffic and promote more sustainable transport choices.	+
Cultural Heritage To conserve and where appropriate enhance the historic environment including cultural heritage resources, historic buildings and archaeological features and their settings.	+
Landscape, Townscape and Seascape To conserve, protect and enhance landscape, townscape and seascape quality and visual amenity.	+

- 5.4.5. As the draft revised NPS does not set a requirement for the quantum or location of growth to be delivered, it is not likely to have significant negative cumulative effects as result of interactions with other plans, programmes and projects. There is the potential for minor positive cumulative effects, as the draft revised NPS and other plans and programmes, guided by wider national policy and legislation, provide a positive framework for future development, that seeks to avoid and minimise/ mitigate impacts and deliver enhancements where possible. It will be important that any proposals for nationally significant port infrastructure are accompanied by a project-level EIA and HRA, which will evaluate the potential for cumulative effects.
- 5.4.6. For three AoS Topics, the cumulative effects of the draft revised NPS and its interaction with other plans, programmes and projects, a neutral effect is concluded. There is no evidence to suggest that the draft revised NPS when interacting with other plans, programmes and projects would combine to have a positive effect compared to the draft revised NPS alone.

5.5 Transboundary effects

- 5.5.1. The appraisal presented above has found that the implementation of the draft revised NPS will have positive effects across the majority of the AoS objectives. This reflects the

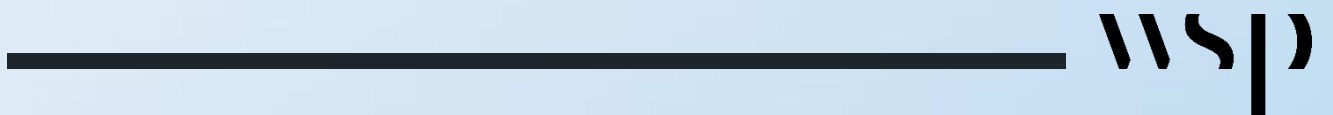
expectation that the policy and guidance for the project applicant, the Examining Authority and the Secretary of State contained in the draft revised NPS will, alongside prevailing national planning policy, legislation and regulatory regimes, provide a positive framework that helps to ensure the potential adverse impacts of port infrastructure are identified, appropriately assessed and, where necessary, avoided, minimised or mitigated.

- 5.5.2. The draft revised NPS for Ports covers all ports in England and only reserved trust ports²⁰ in Wales, of which there is only one at present, at Milford Haven. The geographical scope for the AoS covers all of England and Wales, to reflect the geographical scope of the draft revised NPS, its non-locationally specific nature and to ensure consistency in terms of the level of detail presented within the AoS.
- 5.5.3. The appraisal of the draft revised NPS and reasonable alternative, including cumulative effects, did not identify the potential for transboundary effects beyond the geographical scope of the AoS referred to above. However, it is noted that the HRA Report for the draft revised NPS found that the potential for transboundary effects on Habitat Sites cannot be discounted. While they cannot be ruled out, it is not possible at this stage to undertake any kind of meaningful assessment of transboundary effects given the strategic and non-locationally specific nature of the draft revised NPS. As a result, there is a residual uncertainty and the transboundary effects (if any) of individual proposals for port infrastructure will need to be considered at project-level as part of the development consent process.

²⁰ Trust ports, as independent statutory bodies without shareholders, have a unique ownership structure which sets them apart from private ports and municipally owned ones. Reserved trust ports are defined in the Wales Act 2017 by reference to a turnover threshold (exceeding £5 million in at least two of the last three accounting years), which is set out in Section 11 of the Ports Act 1991.

6

Conclusions, Monitoring and Next Steps



6 Conclusions, Monitoring and Next Steps

6.1 The likely significant effects of the draft revised NPS

- 6.1.1. The Appraisal of Sustainability has concluded that there is not likely to be any significant effects as a result of the draft revised NPS (either alone or cumulatively). The assessment identified the potential for long-term minor positive effects against the following AoS topics and objectives:
- Biodiversity and Nature Conservation;
 - Economy and Skills;
 - Water Resources;
 - Noise;
 - Climate Change;
 - Materials and Waste;
 - Traffic and Transport;
 - Cultural Heritage; and
 - Landscape, Townscape and Seascape.
- 6.1.2. The assessment identified the potential for neutral effects against the remaining AoS topics and objectives:
- Population and Human Health;
 - Land Use, Geology and Soils; and
 - Air Quality.

6.2 Comparison of the draft revised NPS and its Reasonable Alternative

- 6.2.1. The inclusion of a specific quantum of growth to meet forecasted demands is not likely to result in any differences to the predicted nature and significance of the effect identified for the draft revised NPS. While identifying a specific quantum of growth could help the port industry to understand the scale of infrastructure needed to meet forecasted demands, it is unlikely to result in the delivery of more/ less infrastructure or influence the location of development than the draft revised NPS. The decision on the scale, location and timing of nationally significant port infrastructure will be made by the port industry on a case-by-case basis. It is assumed that as for the draft revised NPS, the alternative would still take account of the potential direct and indirect effects, including cumulative effects, of port infrastructure and associated development on the AoS Topics. The alternative would also set out the same Government policy, assessment principles and generic impact guidance as for the draft revised NPS. As a result, there are no significant differences between the draft revised NPS and its alternative in terms of the potential for likely significant effects (alone or cumulatively).

6.3 Outline reasons for selecting the draft revised NPS and Rejecting Reasonable Alternatives

- 6.3.1. The preferred approach is for the draft revised NPS not to identify a quantum of growth that is required to meet forecast demand, which provides greater flexibility and resilience. The alternative approach would require the DfT to determine the scale of infrastructure needed to meet future demand based on the updated forecasting data. The challenges associated with this approach are that the forecasts provide a snapshot of predicted demand based on available evidence at that point in time, subject to substantial uncertainty, and the markets in cargo sub-sectors are difficult to predict. Providing for a fixed quantum of growth based on forecasts might not reflect the reality of market demands in the future. As a result, this approach would reduce the flexibility and resilience of the ports sector to respond to demand as it changes.

6.4 Proposals for Monitoring

- 6.4.1. The SEA Regulations require the significant environmental effects of plans and programmes to be monitored, in order to identify unforeseen negative effects. The monitoring should help to:
- Monitor the significant effects of the revised NPS;
 - Track whether the revised NPS has had any unforeseen effects; and
 - Ensure that action can be taken to reduce/ offset the significant effects of the revised NPS.
- 6.4.2. While no significant or uncertain effects have been identified at this stage through the AoS process, it is recognised that there is a requirement to monitor any potential unforeseen effects. It is also recognised that the HRA Report concluded that the potential for adverse effects on Habitats Sites cannot be ruled out at this stage, which also results in residual uncertainty. As a result, **Table 6-1** below sets out some proposed existing monitoring measures set out in the Environmental Improvement Plan that align with the AoS Topics.

Table 6-1 - Potential monitoring measures

AoS Topic	Potential indicator(s)	Possible source(s) of information
Biodiversity and Nature Conservation	Relevant Outcome Indicators from the Environmental Improvement Plan: <i>Theme A – Air:</i> ■ A6: Exceedance of damaging levels of nutrient nitrogen deposition on ecosystems <i>Theme C – Seas and Estuaries:</i>	Environmental Improvement Plan

	■ C3: Diverse seas: status of marine mammals and marine birds <i>Theme D - Wildlife:</i> ■ D1: Quantity, quality and connectivity of habitats; ■ D2: Extent and condition of protected sites - land, water and sea; ■ D3: Area of woodland in England; ■ D4: Relative abundance and/or distribution of widespread species; ■ D5: Conservation status of our native species; ■ D6: Relative abundance and distribution of priority species in England; and ■ D7: Species supporting ecosystem functions.	
Population and Human Health	Relevant Outcome Indicators from the Environmental Improvement Plan: <i>Theme G – Natural Beauty and Engagement:</i> ■ G7: Health and wellbeing benefits	Environmental Improvement Plan
Economy and Skills	While there are no directly relevant indicators in the 25 Year Environment Plan, it is assumed that port statistics, including the sectors contribution to the UK economy, will continue to be monitored.	Office for National Statistics
Land Use, Geology and Soils	Relevant Outcome Indicators from the Environmental Improvement Plan: <i>Theme E – Natural Resources:</i> ■ E1: Area of productive agricultural land ■ E7: Healthy soils	Environmental Improvement Plan
Water Resources	Relevant Outcome Indicators from the Environmental Improvement Plan: <i>Theme B - Water:</i> ■ B1: Pollution loads entering waters ■ B2: Serious pollution incidents to water ■ B3: State of the water environment ■ B4: Condition of bathing waters ■ B5: Water bodies achieving sustainable abstraction criteria	Environmental Improvement Plan

	■ B6: Natural functions of water and wetland ecosystems ■ B7: Health of freshwaters assessed through fish populations <i>Theme C – Seas and Estuaries:</i> ■ C7: Healthy seas: fish and shellfish populations ■ C11: Productive seas: status of sensitive fish and shellfish stocks <i>Theme E – Natural Resources:</i> ■ E8: Efficient use of water	
Air Quality	Relevant Outcome Indicators from the Environmental Improvement Plan: <i>Theme A - Air:</i> ■ A1: Emissions for five key air pollutants ■ A2: Emissions of greenhouse gases from natural resources ■ A3: Concentrations of fine particulate matter (PM_{2.5}) in the air ■ A4: Rural background concentrations of ozone (O₃) ■ A5: Roadside nitrogen dioxide (NO₂) concentrations ■ A6: Exceedance of damaging levels of nutrient nitrogen deposition on ecosystem ■ A7: Area of land exposed to damaging levels of ammonia (NH₃) in the atmosphere	Environmental Improvement Plan
Noise	Relevant Outcome Indicators from the Environmental Improvement Plan: <i>Theme H – Biosecurity, Chemical and Noise:</i> ■ H5: Exposure to transport noise	Environmental Improvement Plan
Climate Change (Mitigation and Adaptation)	Relevant Outcome Indicators from the Environmental Improvement Plan: <i>Theme A - Air:</i> ■ A2: Emissions of greenhouse gases from natural resources <i>Theme F - Resilience:</i>	Environmental Improvement Plan

	■ F1: Disruption or unwanted impacts from flooding or coastal erosion ■ F2: Communities resilient to flooding and coastal erosion ■ F3: Disruption or unwanted impacts caused by drought	
Materials and Waste	Relevant Outcome Indicators from the Environmental Improvement Plan: <i>Theme C – Seas and Estuaries</i> ■ C1: Clean seas: marine litter <i>Theme J – Resource Use and Waste:</i> ■ J1: Carbon footprint and consumer buying choices ■ J2: Raw material consumption ■ J3: Municipal waste recycling rates ■ J4: Residual waste arising by type and sector ■ J5: Prevent harmful chemicals from being recycled ■ J6: Waste Crime	Environmental Improvement Plan
Traffic and Transport	Relevant Outcome Indicators from the Environmental Improvement Plan: <i>Theme A - Air:</i> ■ A1: Emissions for five key air pollutants ■ A3: Concentrations of fine particulate matter (PM_{2.5}) in the air ■ A5: Roadside nitrogen dioxide (NO₂) concentrations <i>Theme H – Biosecurity, Chemical and Noise:</i> ■ H5: Exposure to transport noise	Environmental Improvement Plan
Cultural Heritage	Relevant Outcome Indicators from the Environmental Improvement Plan: <i>Theme G – Natural Beauty and Engagement:</i> ■ G2: Condition of heritage features including designated geological sites and scheduled monuments	Environmental Improvement Plan

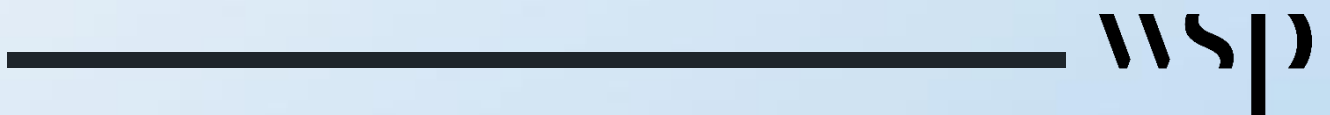
Landscape, Townscape and Seascape	Relevant Outcome Indicators from the Environmental Improvement Plan: <i>Theme G – Natural Beauty and Engagement:</i> ■ G1: Changes in landscape and waterscape character ■ G3: Enhancement of green and blue infrastructure	Environmental Improvement Plan
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6.5 Next Steps

This AoS Report is presented for public consultation alongside the draft revised NPS. The representations received will be documented and considered in reviewing the proposals for the revised NPS. A Post Adoption Statement will summarise how the AoS and the consultation responses have been taken into account and how social, economic and environmental considerations have been integrated into the final decisions regarding the revised NPS and will be issued as soon as is reasonably practicable after designation.

Appendix A

Baseline and Contextual Information



Biodiversity and Nature Conservation

Introduction

The policy context, baseline information and key issues for the biodiversity and nature conservation topic are presented below. There are links between the biodiversity and nature conservation topic and the majority of other topics in the AoS, including air quality, noise, water resources, climate change (mitigation and adaption), traffic and transport and land use, geology and soils.

Policy context

United Kingdom

- The **Environment Act (2021)** sets out a number of provisions for the creation of binding environmental targets. This includes a legally binding target on species abundance for 2030, to help reverse declines of certain British species. The Act also makes provisions for the preparation, review/update and reporting of an Environmental Improvement Plan by the Secretary of State. The Act also makes provisions for biodiversity gain to be a condition of planning permissions and development consent for Nationally Significant Infrastructure Projects (NSIPs).
- ***A Green Future: Our 25 Year Plan to Improve the Environment (25YEP) (2018)*** includes a range of policies and associated actions to protect and recover biodiversity including (inter alia) commitments to publishing a strategy for nature, develop a Nature Recovery Network, provide opportunities for the reintroduction of native species and improve biosecurity to protect and conserve nature. The Plan also seeks, through a range of actions, to embed an 'environmental net gain' principle for development including new infrastructure. The Plan includes specific sections relating to the marine environment and specifically Chapter 5 of the Plan includes commitments and actions to secure clean, healthy, productive and biologically diverse seas and oceans.
- The **Environmental Improvement Plan (EIP) 2023** (which represents the first revision of the 25YEP) and the first EIP brought forward under a commitment set into law in the Environment Act 2021), reinforces the original vision for the 25YEP of action to help the natural world regain and retain good health. The ten environmental goals set out in the 25YEP form the basis for the EIP which sets out specific targets and commitments made in relation to each goal and plans to continue to deliver the targets and the overarching goals. Under the overall goal of the plan to improve nature, the EIP makes a commitment to the protection of 30% of land and sea for nature through the Nature Recovery Network and enhanced protections for Marine Protected Areas (MPAs), which are parts of the sea identified for the protection of marine habitats, species and processes essential for

healthy, functioning marine ecosystems.^{21 22} The EIP also states the intention to designate the first Highly Protected Marine Areas (HMPAs) in 2023, which have since been designated. HPMAs are areas of the sea designated for the protection and recovery of marine ecosystems²³.

- **The Wildlife and Countryside Act (1981)** is the main UK legislation relating to the protection of named animal and plant species, and includes the powers to designate Sites of Special Scientific Interest (SSSIs)²⁴. Under this Act, Natural England has responsibility for identifying and protecting the SSSIs in England, whilst in Wales the responsibility lies with the Natural Resources Wales. **The Countryside and Rights of Way Act 2000 (CROW Act)** strengthens the powers for protecting and managing SSSIs.
- The **UK Post-2010 Biodiversity Framework**, published in July 2012 by the Joint Nature Conservation Committee (JNCC) and Defra, succeeded the UK Biodiversity Action Plan and 'Conserving Biodiversity – the UK Approach'. The purpose of this UK Post-2010 Biodiversity Framework²⁵ is to set a broad enabling structure for action across the UK to 2020²⁶.
- The **Great Britain Invasive Non-native Species Strategy 2023-2030 (2023)** sets aims and objectives to 2030 to address invasive species, including the prevention of invasive species arriving in Britain, early detection and monitoring, eradication and control.
- The **Conservation of Habitats and Species Regulations 2017 (as amended)** (SI 2017/1012) (in England and Wales), require that sites of importance to habitats or species are to be designated and any impact on such sites or species must be considered in regard to planning permission applications or other plans and projects²⁷.

²¹ Natural Resources Wales (2023) Marine protected areas. Available online at: <https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/protected-areas-of-land-and-seas/marine-protected-areas/?lang=en> [Accessed October 2023]

²² Marine Management Organisation (2023) Marine Protected Areas (MPAs). Available online at: <https://www.gov.uk/guidance/marine-protected-areas-mpas> [Accessed October 2023]

²³ JNCC (2023) English Highly Protected Marine Areas. Available online at: [https://jncc.gov.uk/our-work/english-highly-protected-marine-areas/#:~:text=Highly%20Protected%20Marine%20Areas%20\(HPMAs\)%20are%20areas%20of%20the%20sea,extent%20permitted%20by%20international%20law.](https://jncc.gov.uk/our-work/english-highly-protected-marine-areas/#:~:text=Highly%20Protected%20Marine%20Areas%20(HPMAs)%20are%20areas%20of%20the%20sea,extent%20permitted%20by%20international%20law.) [Accessed October 2023]

²⁴ As amended by the Countryside and Rights of Way Act 2000 and the Natural Environment and Rural Communities Act 2006.

²⁵ Joint Nature Conservancy Committee and Defra (2012) *UK Post-2010 Biodiversity Framework*. Available online at: <https://data.jncc.gov.uk/data/587024ff-864f-4d1d-a669-f38cb448abdc/UK-Post2010-Biodiversity-Framework-2012.pdf>

²⁶ JNCC and Defra (2018) UK Post-2010 Biodiversity Framework: Revised Implementation Plan (2018–2020). Available online at: <https://data.jncc.gov.uk/data/587024ff-864f-4d1d-a669-f38cb448abdc/UKBioFwk-RevisedImpPlan-Jun2018.pdf> [Accessed December 2023]

²⁷ Defra (2021) Changes to the Habitats Regulations 2017. Available online at: <https://www.gov.uk/government/publications/changes-to-the-habitats-regulations-2017/changes-to-the-habitats-regulations-2017> [Accessed November 2023]

- The **Conservation of Offshore Marine Habitats and Species Regulations 2017** (SI 2017/1013) relate to offshore designated sites.
- The **Environmental Protection Act (1990)** sets out key statutory requirements for the UK regarding environmental protection (including nature conservation).
- The **Marine and Coastal Access Act (2009)** provides the legal mechanism to help ensure clean, healthy, safe, productive and biologically diverse oceans and seas by putting in place a new system for improved management and protection of the marine and coastal environment. The Act sets out a number of measures including the establishment of Highly Protected Marine Areas (HPMA), as well as Marine Conservation Zones (MCZs) which are a type of MPA which are designated to protect a range of nationally important habitats and species. The Act also made provisions for the creation of a Marine Management Organisation (MMO) to deliver marine functions in the waters around England and in the UK offshore area (for matters that are not devolved), including the management of the marine licensing regime and the preparation of Marine Spatial Plans. The Act creates a new UK-wide strategic marine planning system to enable more strategic and effective management of seas.
- The **Marine Strategy Regulations 2010** (SI 2010/1627) set out a variety of requirements for the UK and this includes the production of a “Marine Strategy” for all UK waters. The strategy has three components and is in the process of being updated as part of the second implementation cycle (2018 to 2024).
- The **UK Marine Policy Statement (2011)** sets out the framework for preparing Marine Plans and taking decisions affecting the marine environment.
- The **Natural Environment and Rural Communities Act (2006)** makes provision about bodies concerned with the natural environment and rural communities; makes provision in connection with wildlife, sites of special scientific interest, National Parks and the Broads; and amends the law relating to rights of way.
- The **National Parks and Access to the Countryside Act (1949)** aims to conserve and protect countryside and National Parks through legislation. The **British Standards Institution (BSI) document BS 42020:2013** - Biodiversity Code of practice for planning.

England

- The **National Planning Policy Framework (NPPF) (2024)** includes key policies to ensure the planning system contributes to and enhances the natural and local environment by protecting and enhancing sites of biodiversity or geological value and soils; recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services; and minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.
- **National Planning Practice Guidance for the Natural Environment (2019)** explains key issues in implementing policy to protect biodiversity, including local requirements and includes guidance on the assessment of planning policies.

- **The Environmental Targets (Biodiversity) (England) Regulations 2023**, establish statutory environmental targets to halt and reverse species decline and restore wildlife-rich habitats.
- **The Green Infrastructure Framework (2023)**, provides principles, standards, design guidance, case studies and mapping tools to support the planning and delivery of good green-blue infrastructure.
- **Chalk Stream Restoration Strategy (2021)** and its **Implementation Plan (2022)**, include a comprehensive, up-to-date analysis of the issues threatening chalk streams in England, of the ways in which ecological pressures are assessed and regulated. They include multiple pragmatic recommendations to bring about the ecological recovery and good health of England's chalk streams.

Wales

- **Planning Policy Wales (Edition 12) (2024)** sets out the land use planning policies of the Welsh Government, including objectives for the conservation and improvement of landscape and biodiversity.
- **Technical Advice Note 5 (TAN5): Nature Conservation and Planning (2009)** sets out how the planning system should contribute to protecting and enhancing biodiversity and geological conservation.
- **The Environment Strategy for Wales (2006)** set out proposed outcomes for what the Welsh Government sought to achieve by 2026, and the actions required. The One Wales: One Planet (2009) sustainable development scheme also supports the strategy's outcomes and includes biodiversity indicators.
- **The Well-being of Future Generations (Wales) Act 2015** sets out a framework to improve the social, economic, environmental and cultural well-being of Wales. It requires public bodies in Wales to contribute to sustainable development and in particular to implement actions that contribute to well-being goals established under the Act. One goal, "*a resilient Wales*", refers explicitly to biodiversity: "*A nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change (for example climate change)*".
- **The Environment (Wales) Act 2016** sets a more joined up legislative framework for regulating Wales' environment and provides for the sustainable management of natural resources. It required Welsh Ministers to adopt a Natural Resources Policy (NRP) and this was done in August 2017. The focus of the NRP is the sustainable management of Wales' natural resources to maximise their contribution to achieving goals within the Well-being of Future Generations Act 2015. The policy sets out three National Priorities. These are: delivering nature-based solutions; increasing renewable energy and resource efficiency; and taking a place-based approach. The NRP links to the Wales National Marine Plan as the means of sustainably managing marine resources, reflecting the context of the ecosystem approach for Wales' marine area. The Act also establishes a

duty on public authorities to “*maintain and enhance biodiversity in the exercise of functions in relation to Wales, and in so doing promote the resilience of ecosystems*”.

Baseline information

General State of Biodiversity in England and Wales

The 2023 State of Nature Report²⁸ highlights the following headline findings with regard to biodiversity in England and Wales:

- In England, the abundance of 682 terrestrial and freshwater species has on average fallen by 32% since 1970. Within this general trend, 316 species have declined in abundance (46%) and 161 species have increased (24%). Within Wales, the abundance of 380 terrestrial and freshwater species has, on average, fallen by 20% since 1994. Within this general trend, 140 species have declined in abundance (37%) and 107 species have increased (28%). Moth species on average showed the strongest decline: 43%.
- Since 1970, in England the distributions of 64% of flowering plant species and 68% of bryophytes (mosses and liverworts) have decreased, compared to increases in distribution of 18% and 22% species' respectively. In contrast, many lichen species have shown a strong recovery since 1980, with 63% of species' distributions increasing, compared to 31% declining. In Wales, the distributions of 42% of flowering plant species and 44% of bryophytes have decreased, compared to increases in the distribution of 40% and 46% of species, respectively.
- The distributions of 3,036 invertebrate species in Wales showed contrasting trends: the distributions of 993 species declined (33%) and the distributions of 953 species increased (31%). Whilst in England, the distributions of 4,815 invertebrate species on average decreased by 18% since 1970.
- In Wales, 18% (663) of the 3,897 species that have been assessed using Red List criteria are threatened from extinction in Wales.
- In England, 13% of the 8,840 species that have been assessed using IUCN Regional Red List criteria have been classified as threatened with extinction from Great Britain.
- With regard to seabirds, in England, the abundance of 11 regularly monitored species of seabirds, and in Wales the abundance of seven regularly monitored seabirds, showed little change on average since 1986. In England, there were strong increases in Gannet numbers, but declines in several surface feeding species such as Kittiwake. However, these results pre-date the current outbreak of Highly Pathogenic Avian Influenza.

²⁸ State of Nature Partnership (2023) State of Nature. Available online at: https://stateofnature.org.uk/wp-content/uploads/2023/09/TP25999-State-of-Nature-main-report_2023_FULL-DOC-v12.pdf [Accessed October 2023]

Internationally designated sites in England and Wales

Special Areas of Conservation

As of April 2023, in England there were 242 SACs, covering an area of 1,068,558 ha with an additional three classified as England/Offshore (3,795,179 ha), whilst in Wales there were 85 sites (590,915 ha), with an additional two sites classified as Wales/Offshore (1,062,562 ha). Additionally, there were seven sites crossing the England/Wales border (95,182 ha), three crossing the England/Scotland border (112,770 ha), and one site classified as England/Wales/Offshore (584,989 ha)²⁹.

In terms of Welsh SAC feature condition, 14.75% of features were in favourable condition, 63.13% were in unfavourable condition, 21.24% were in unknown condition and 0.88% were destroyed in 2020.

As of November 2023 there were 165 designated SACs within 30km of the English coastline, whilst there were 85 within 30km of the Welsh coastline.

Special Protection Areas

As of September 2022, in England there were 82 classified SPAs, covering an area of 972,335 ha, with an additional two classified as England/Offshore (747,933 ha), whilst in Wales there were 17 sites (342,141 ha), with one additional site classified as Wales/Offshore (166,747 ha). Additionally, there were two sites crossing the England/Wales border (38,811 ha), one crossing the England/Scotland border (135,750 ha) and one site classified as England/Wales/Offshore (251,709 ha)³⁰.

In terms of Welsh SPA feature condition 36.36% of features were in favourable condition, 9.09% were in unfavourable condition and 54.55% were in unknown condition.

As of November 2023 there were 74 designated SPAs within 30km of the English coastline, whilst there were 24 within 30km of the Welsh coastline. There was also one potential SPA (pSPA) within 30km of the English coastline (Solway Firth).

Ramsar Sites

As of January 2022, there were 69 Ramsar sites within England, covering an area of 327,026 ha, whilst in Wales there were a total of seven sites covering an area of 11,366.

²⁹ JNCC (2023) Special Areas of Conservation (SACs). Available online at: <https://jncc.gov.uk/our-work/special-areas-of-conservation/> [Accessed October 2023]

³⁰ JNCC (2023) Special Protection Areas (SPAs). Available online at: <https://jncc.gov.uk/our-work/special-protection-areas/> [Accessed October 2023]

Additionally, there were three sites which crossed the England/Wales border (40,553 ha) and one site which crossed the England/Scotland border (43,637 ha)³¹.

As of November 2023 there were 57 designated Ramsar sites within 30km of the English coastline, whilst there were 10 within 30km of the Welsh coastline.

Habitat and Species Conservation Status and Trends in the UK³²

The Habitats Directive Report provided information on the conservation status of EU member states' habitats in species provides information on the conservation status of habitats and species listed in Annexes I, II, IV and V of the EU Habitats Directive. The most recent (fourth) UK report was submitted to the EU in 2019 (covering the period 2013–2018), when the UK was an EU Member State. For the metropolitan UK, there are 170 UK assessments of Conservation Status, including 77 habitats and 93 regularly occurring species³³. This includes:

- 69 terrestrial habitats and 77 terrestrial species within the UK Atlantic biogeographic region; and
- Eight marine habitats and 16 marine species within the UK Marine Atlantic region.

Table A1 sets out the overall conservation status and trends in 2019 for those habitats and species mentioned above. It shows, the majority (62) of habitats were in bad condition in 2019, however, almost half of this number (26) were stable. Only six habitats were in favourable condition, whilst eight were in inadequate condition. In terms of species, just over a third (33) were in favourable condition, whilst 24 were in inadequate condition and 16 were in bad condition, whilst 20 were in unknown condition.

³¹ JNCC (2022) Ramsar Sites in the UK and the UK's Overseas Territories & Crown Dependencies. Available online at: <https://jncc.gov.uk/our-work/ramsar-sites/> [Accessed October 2023]

³² JNCC (2019) Article 17 Habitats Directive Report 2019. Available online at: <https://jncc.gov.uk/our-work/article-17-habitats-directive-report-2019/> [Accessed November 2023]

³³ There are also short reports on 33 vagrant species, mainly bats and cetaceans.

Table A2 - Conservation Status and Trend in 2019 (UK): Habitats and Species

OVERALL CONSERVATION STATUS AND TREND	SPECIES	SPECIES TOTALS	HABITATS	HABITAT TOTALS
Favourable-improving	11	33	2	6
Favourable-stable	19		4	
Favourable-deteriorating	0		0	
Favourable-unknown	3		0	
Inadequate-improving	1	24	2	8
Inadequate-stable	7		5	
Inadequate-deteriorating	9		0	
Inadequate-unknown	7		1	
Bad-improving	3	16	13	62
Bad-stable	3		26	
Bad-deteriorating	7		18	
Bad-unknown	3		5	
Unknown	20	20	1	1
Total	93	93	77	77

Marine Protected Areas and Marine Conservation Zones

There are a total of 181 MPAs covering 40% of English inshore and offshore waters combined (92,817 km²). This includes 158 MPAs in English inshore waters (waters between the coast and out to 12 nautical miles), covering 51% of this region (26,126 km²), and 42 MPAs in English offshore waters (waters between the UK Territorial Sea limit and the UK Exclusive Economic Zone or UK continental shelf), covering 37% of this region (66,690 km²)³⁴.

In Wales there are 139 MPAs covering 69% of Welsh inshore waters, out to 12 nautical miles, and 50% of all Welsh waters, out to the median line³⁵. The MPAs in Wales include sites of European or international importance such as Special Protection Areas (SPAs) (13 total), Special Areas of Conservation (SACs) (15 total) and Ramsar sites (3 total), SSSIs (107 total) and one MCZ. There are 89 MCZs in England³⁶ and one in Wales (Skomer MCZ).

³⁴ JNCC (2023) UK Marine Protected Area Network Statistics. Available online at: <https://jncc.gov.uk/our-work/uk-marine-protected-area-network-statistics/> [Accessed November 2023]

³⁵ Business Wales (undated) Welsh Marine Conservation Zones. Available online at: <https://businesswales.gov.wales/marineandfisheries/information-and-statistics/welsh-marine-conservation-zones> [Accessed October 2023]

³⁶ JNCC (2019) Marine Conservation Zones. Available online at: <https://jncc.gov.uk/our-work/marine-conservation-zones/> [Accessed October 2023]

There are currently three HPMAs in England, which were designated in June 2023. These are Dolphin Head HPMA, North East of Farnes Deep HPMA (in offshore waters) and Allonby Bay HPMA (in inshore waters)³⁷. There are currently no HMPAs in Wales.

Nationally designated sites and protected areas in England and Wales

Sites of Special Scientific Interest

As of October 2023, there are 4,127 SSSIs in England overing a total area of over 1.1 million ha³⁸. In Wales, there are 1,071 SSSIs³⁹, covering about 12% of the country's surface area⁴⁰.

As of October 2023, in England, 39.22% of SSSI features were in favourable condition, 22.46% were in unfavourable – recovering condition, 6.72% were in unfavourable – no change condition, 8.70% were in unfavourable – declining condition, 0.46% were partially destroyed, and the condition of 22.44% of features were not recorded. In Wales, 20.13% of features were in favourable condition, 27.5% were in unfavourable condition, 51.6% were in unknown condition, and 0.77% were destroyed.

As of November 2023 there were 1,784 designated SSSIs within 30km of the English coastline, whilst there were 782 within 30km of the Welsh coastline.

National Nature Reserves

There are currently 219 National Nature Reserves (NNRs) in England, covering an area of over 109,000 ha (approximately 0.8% of the countries land surface)⁴¹, whilst in Wales there are 76 NNRs⁴². As of November 2023 there were 127 designated NNRs within 30km of the English coastline, whilst there were 64 within 30km of the Welsh coastline.

³⁷ JNCC (2023) English Highly Protected Marine Areas. Available online at: [https://jncc.gov.uk/our-work/english-highly-protected-marine-areas/#:~:text=Highly%20Protected%20Marine%20Areas%20\(HPMAs\)%20are%20areas%20of%20the%20sea,extent%20permitted%20by%20international%20law](https://jncc.gov.uk/our-work/english-highly-protected-marine-areas/#:~:text=Highly%20Protected%20Marine%20Areas%20(HPMAs)%20are%20areas%20of%20the%20sea,extent%20permitted%20by%20international%20law.). [Accessed October 2023]

³⁸ Natural England (2023) SSSI Feature Condition Summary. Available online at: <https://designatedsites.naturalengland.org.uk/ReportFeatureConditionSummary.aspx?SiteType=ALL>

³⁹ Natural Resources Wales (2023) Protected sites baseline assessment 2020. Available online at: <https://naturalresources.wales/evidence-and-data/research-and-reports/protected-sites-baseline-assessment-2020/?lang=en> [Accessed October 2023]

⁴⁰ Natural Resources Wales (2023) Types of protected areas of land and sea. Available online at: [https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/protected-areas-of-land-and-seas/types-of-protected-areas-of-land-and-sea/?lang=en#:~:text=They%20are%20the%20cornerstones%20of,of%20SSSI%20owners%20and%20occupiers](https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/protected-areas-of-land-and-seas/types-of-protected-areas-of-land-and-sea/?lang=en#:~:text=They%20are%20the%20cornerstones%20of,of%20SSSI%20owners%20and%20occupiers.). [Accessed October 2023]

⁴¹ Natural England (2023) National Nature Reserves in England. Available online at: <https://www.gov.uk/government/collections/national-nature-reserves-in-england> [Accessed October 2023]

⁴² National Resources Wales (2023) National Nature Reserves. Available online at: <https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/protected-areas-of-land-and-seas/national-nature-reserves/?lang=en> [Accessed February 2023]

Priority Habitats and Ancient Woodland

In total there are 225,185.16 hectares of Ancient Woodland within 30km of the coast of England and Wales, whilst there are 1,093,279.847 hectares of priority habitats.

Likely Evolution of the Baseline

Biodiversity has been in decline for a number of decades. The Environment Act 2021, with the mandating of Biodiversity Net Gain, should help to reverse this trend; however, it is currently uncertain the speed at which this will occur. Without the revised NPS for Ports the currently designated NPS for Ports would continue to set the framework for decisions on proposals for new port development promoted through a development consent order (DCO) application. Given that the current NPS came into force in 2012 this would mean that it would not align with current government policy on the environment, including biodiversity net gain.

Key issues and opportunities

The policy context and baseline information have informed the identification of the following key issues and opportunities for biodiversity and nature conservation:

- There are numerous international and nationally designated sites spread across England and Wales and within 30km of the coast.
- The construction and operation of port related infrastructure has the potential to give rise to a number of impacts that could have adverse effects on designated and non-designated habitats and species.
- Ensure BNG or net benefit (for habitats and species) is designed into every scheme at the outset, taking into account how ecosystems are expected to change under climate change scenarios.
- Effective reporting, maintenance and monitoring should be clearly established as part of each NSIP to ensure that biodiversity commitments will be fulfilled in their entirety as part of the aftercare period (i.e., minimum 30 years of mandatory BNG in England).
- Delivery of wider environmental net gains relevant to the local area (by connecting to Local Nature Recovery Strategies) and those that support national priorities such as reductions in green-house gas emissions, reduced flood risk, improvements to air or water quality, or increased access to natural green and blue space.
- Ports should contribute to the use of nature-based solutions and multi-functional green/blue infrastructure, to deliver climate change adaptation, resilience and other environmental and social outcomes, such as encouraging greater active travel for employees.
- Where ports intersect with or are adjacent to or otherwise likely to affect designated sites including those with significant geodiversity, protected habitats (including irreplaceable habitats) and species, there is a need to balance infrastructure needs with protection and enhancement of those sites. In addition, there is a need for effective protection measures to be in place for the soils that support these designated and protected sites.
- There is also a need for sites that are not in favourable condition to be better managed and ensure the SSSIs management plans are taken forward.
- The introduction and/ or increased of invasive and non-native species is a risk for port development. Protect, maintain and where possible enhance natural habitat networks

and green infrastructure, to avoid fragmentation and isolation of networks. This includes the movement of fish within estuaries.

- Protect and enhance endangered or important species and habitats, including those considered irreplaceable such as Ancient Woodland and Ancient and Veteran trees.

Population and Human Health

Introduction

The policy context, baseline information and key issues for the population and human health topic are presented below. There are links between the population and human health topic and the majority of other AoS topics.

Policy context

United Kingdom

- **Securing the Future - the UK Sustainable Development Strategy (2005)** aims to enable all people throughout the world to satisfy their basic needs and enjoy a better quality of life without compromising the quality of life of future generations. The Strategy has five guiding principles:
 - living within environmental limits;
 - ensuring a strong, healthy and just society;
 - achieving a sustainable economy;
 - promoting good governance; and
 - using sound science responsibly.
- The Health Protection Agency (now part of Public Health England) published **A Children's Environment and Health Strategy for the United Kingdom (2009)** to meet the UK commitments to the World Health Organisation's (WHO) Children's Environment and Health Action Plan for Europe (CEHAPE), and provides recommendations to the UK Government as to how it best can meet its commitment to the CEHAPE.

England

- The **Public Health England Strategy 2020 to 2025** sets out Public Health England's priorities for the five year period, aiming to:
 - Keep people safe,
 - Prevent poor health,
 - Narrow the health gap; and
 - Support a strong economy.
- **Transforming the public health system** is a policy paper published by the Department of Health and Social Care in 2021 that sets out reforms to the public health system in England to transform health protection capabilities, put health promotion at the heart of government, and embed prevention and health improvement expertise across all levels of government and the NHS.
- **Build Back Better: Our Plan for Health and Social Care** outlines the government's plan to invest £12 billion per year for three years from 2021, into health and social care.

The aim of this is to tackle the electives backlog, put the NHS on sustainable footing, and focus on prevention.

- The Government's **White Paper Healthy Lives, Healthy People: Our strategy for public health in England (2010)** recognises that the quality of the environment, including the availability of green space and the influence of poor air quality and noise, affects people's health and wellbeing. It details plans for a shift of power to local communities, including new duties and powers for local authorities to improve the health of local people.
- Public Health England's **From Evidence into Action: Opportunities to Protect and Improve the Nation's Health (2014)** sets out seven health priorities for England for the next five years, namely tackling obesity; reducing smoking; reducing harmful drinking; ensuring every child has the best start in life; reducing dementia risk; tackling antimicrobial resistance; and reducing tuberculosis.
- The **NHS Five Year Forward View (2014)** sets out the vision for an improved NHS to address changing health needs and demographics. This includes action on the prevention of avoidable illnesses, empowering patients and engaging communities. This was followed up by Next Steps on the NHS Five Year Forward View (2017) which outlines progress since 2014 and provides next steps for the following two years.
- The **National Planning Policy Framework (2023)** sets out the core land use planning principles that should underpin both plan-making and decision taking. It includes a focus on developing healthy communities and states that the planning system can "*play a role in creating healthy, inclusive communities and facilitating social interaction*".
- **The Planning Practice Guidance (2022)** relating to healthy and safe communities requires local planning authorities to consider planning and health together in two ways; in terms of creating environments that support and encourage healthy lifestyles, and in terms of identifying and securing the facilities needed for primary, secondary and tertiary care, and the wider health and care system.
- **A Green Future: Our 25 Year Plan to Improve the Environment (2018)** includes actions to help people 'connect with the environment to improve health and wellbeing'. Measures identified include helping people to improve their health and wellbeing by using green spaces, encouraging children to be close to nature, with particular focus on disadvantaged areas, and creating green infrastructure within towns and cities.
- **The Environmental Improvement Plan 2023** presents goals including thriving plants and wildlife, clean air, clean and plentiful water, managing exposure to chemicals and pesticides, reducing risk of harm from environmental hazards, and more, that will benefit the population in numerous ways and help to benefit health outcomes once achieved.
- The UK Government's **Public Health Outcomes Framework for England (2016 – 2019)** concentrates on increasing healthy life expectancy, reducing differences in life expectancy, and healthy life expectancy between communities.

Wales

- The White Paper **Sustainable Social Services for Wales: A Framework for Action (2011)** highlighted a number of challenges faced by public services in Wales including demographic changes, increased expectations from those who access care and support, as well as continuing hard economic realities.
- The **Social Services and Well-being (Wales) Act 2014** provides the legal framework for improving the well-being of people who need care and support, and carers who need support, and to transform social services in Wales. It is based on the principles of well-being, people, partnership and prevention.
- The **Well-being of Future Generations (Wales) Act 2015** includes ‘a healthier Wales’ as one of the seven well-being goals. This is supported by the National Indicators for Wales **How to Measure a Nation’s Progress? (2016)** which specifies indicators relating to birth weight, healthy life expectancy, and healthy lifestyle behaviours for adults and children.
- **Public Health (Wales) Act 2017** aims to address a number of specific public health concerns, and to create social conditions that are conducive to good health and where avoidable harms can be prevented.
- **Together for Health (2011)** is a five-year vision for NHS Wales, based around community services and placing prevention, quality and transparency at the heart of healthcare.
- **Working Differently - Working Together (2012)** sets out key objectives, including to develop a workforce aligned and committed to the Together for Health vision and to create a sustainable and skilled workforce that focuses on helping the people of Wales.
- **Planning Policy Wales Edition 11 (2021)** states that the planning system should create sustainable places which are healthy, amongst a number of other traits. As part of the aim to promote healthier places, Planning Policy Wales Edition 11 identifies that the planning system plays an important role in shaping the social, economic, environmental and cultural factors which determine health and promote or impact well-being, in line with the Healthier Wales goal.
- **A Healthier Wales: our Plan for Health and Social Care (2021)** sets out the Welsh Government’s vision for a whole system approach to health and social care, that focuses on health, well-being and preventing illness.
- **Working Together for a Healthier Wales (2023)** is a long-term strategy, out to 2035, from Public Health Wales that aims to help the people of Wales live longer, healthier lives and have fair and equal access to things aiding the achievement of good health and well-being. The actions for implementing this strategy are set out in Public Health Wales’ Our Strategic Plan for 2023-2026.
- The **NHS Wales Planning Framework 2022-2025** sets out a three-year plan by the NHS to deliver sustainable services for patients across Wales following the Covid.

Baseline information

Population

In mid-2021, the population of the UK was 67,026,300, representing a decrease of 54,700 (0.08%) over the previous year, showing a departure from the steadily increasing trend seen over the past decade⁴³. This trend is seen both England and Wales. In England, the population in mid-2021 was 56,536,400, a decrease of 13,600 (0.02%) from the previous year⁴⁴, whereas Wales saw a more significant decrease, with a population of 3,105,400 in mid-2021, a decrease of 64,600 2% on the previous year⁴⁵.

The working age (aged 16-64) population for England and Wales in 2021 accounted for 63.2% of the population⁴⁶, in England the percentage was 63% and in Wales this was 61.1%⁴⁷. The populations of England and Wales have risen by 8,140,200⁴⁸ and 198,500⁴⁹ since 2000, respectively.

Deprivation

In England, deprivation is dispersed throughout the country with 61% of local authority districts home to at least one of the most deprived areas in England. The districts with the highest proportion of most deprived areas in 2019 were Middlesbrough, Liverpool, Knowsley, Kingston upon Hull, and Manchester, the same as those identified in 2015⁵⁰. The English Indices of Deprivation 2019 summary report indicates that there are concentrations of deprivation in urban, industrialised and coastal towns. Communities next to some of England's largest ports, such as in Liverpool, Southampton and London are amongst the most income deprived in the country.

⁴³ ONS (2022) United Kingdom population mid-year estimate. Available at: [United Kingdom population mid-year estimate - Office for National Statistics \(ons.gov.uk\)](https://ons.gov.uk/population/datasets/united-kingdom-population-mid-year-estimate) [Accessed November 2023]

⁴⁴ ONS (2022) England population mid-year estimate. Available at: [England population mid-year estimate - Office for National Statistics \(ons.gov.uk\)](https://ons.gov.uk/population/datasets/england-population-mid-year-estimate) [Accessed November 2023]

⁴⁵ ONS (2022) Wales population mid-year estimate. Available at: [Wales population mid-year estimate - Office for National Statistics \(ons.gov.uk\)](https://ons.gov.uk/population/datasets/wales-population-mid-year-estimate) [Accessed November 2023]

⁴⁶ ONS (2021) Population and household estimates, England and Wales: Census 2021, unrounded data. Available at: [Population and household estimates, England and Wales - Office for National Statistics \(ons.gov.uk\)](https://ons.gov.uk/population/datasets/population-and-household-estimates-england-and-wales-census-2021) [Accessed November 2023]

⁴⁷ GOV.UK (2023) Age Groups. Available at: [Age groups - GOV.UK Ethnicity facts and figures \(ethnicity-facts-figures.service.gov.uk\)](https://ethnicity-facts-figures.service.gov.uk/) [Accessed November 2023]

⁴⁸ ONS (2022) England population mid-year estimate. Available at: [England population mid-year estimate - Office for National Statistics \(ons.gov.uk\)](https://ons.gov.uk/population/datasets/england-population-mid-year-estimate) [Accessed November 2023]

⁴⁹ ONS (2022) Wales population mid-year estimate. Available at: [Wales population mid-year estimate - Office for National Statistics \(ons.gov.uk\)](https://ons.gov.uk/population/datasets/wales-population-mid-year-estimate) [Accessed November 2023]

⁵⁰ Ministry of Housing, Communities & Local Government (2019) The English Indices of Deprivation 2019 (IoD2019). Available at: [The English Indices of Deprivation 2019 \(publishing.service.gov.uk\)](https://publishing.service.gov.uk/) [Accessed November 2023]

In the 10% most deprived neighbourhoods in England for the income deprivation domain, 33% of the population are income deprived. But in the 10% least deprived of this deprivation domain, only 3% of people are income deprived. In the 10% most deprived neighbourhoods for the employment deprivation domain, on average, 25% of the working-age adults are employment deprived, compared with 2% of those in the least deprived decile for this domain⁵¹.

The 2019 Welsh Index of Multiple Deprivation (WIMD) shows pockets of high deprivation in the cities and valleys of South Wales, and in some coastal and border towns in North Wales. Of the 10 most deprived Lower layer Super Output Areas (LSOA's), Denbighshire, Caerphilly, and Rhondda Cynon Taf each contain two, and Bridgend, Merthyr Tydfil, Wrexham, and Newport contain one each. Percentage wise, Newport was the local authority with the highest proportion of areas in the most deprived 10%, with 24.2% of its LSOAs⁵².

Wales saw 26 areas in deep-rooted deprivation, referring to areas that have been in the top 50 most deprived for all WIMD iterations for 15 years, accounting for around 1.4% of small areas in the country. These are mostly found in the south of Wales, and two in the north, one each in Denbighshire and Wrexham⁵³.

The Welsh local authorities with the most areas in the 10% most deprived were Newport, Merthyr Tydfil, and Cardiff, at around 20% each. For the employment domain, the local authority with the most areas in the 10% most deprived in Wales was Blaenau Gwent with 23.4%, followed by Merthyr Tydfil at 22.2%⁵⁴.

In terms of the health deprivation domain, the local authorities in Wales with the highest concentration of areas in the most deprived 10% were Merthyr Tydfil, followed by Blaenau Gwent. The Isle of Anglesey, Ceredigion, and Monmouthshire had no areas in the 10% most deprived in Wales⁵⁵.

⁵¹ Ibid.

⁵² Welsh Government (2019) Welsh Index of Multiple Deprivation (WIMD) 2019 Results Report. Available at: [Welsh Index of Multiple Deprivation \(WIMD\) 2019: results report \(gov.wales\)](#) [Accessed November 2023]

⁵³ Ibid.

⁵⁴ Ibid.

⁵⁵ Ibid.

Human Health

Life expectancy is slightly higher in England than in Wales, with life expectancy at birth estimated to be 79.3 years for males and 83.1 years for females in England during the period 2018-2022, compared to 78.3 years for males and 82.1 years for females in Wales⁵⁶.

Life expectancy in the UK has been rising over the last 40 years, though this has slowed in the last 10. The coronavirus pandemic has caused a halt in improvement in life expectancy for females since 2015-2017, and for males this has fallen back to 2012-2014 levels⁵⁷.

There was a 3.6% decrease in deaths in England and Wales from 2020 to 2021, from 607,922 deaths to 586,334. This decrease was 3.8% for females and 3.3% for males⁵⁸. A 1.6% decrease in deaths, however, was seen from 2021 to 2022, down to 577,160 deaths. In England this reduction was 1.6%, whereas in Wales the reduction was 1.2%⁵⁹.

The difference in number of deaths between females and males had been decreasing up until 2019; however, since then this pattern has been reversing, with more males dying than females⁶⁰.

The leading cause of death in England and Wales for 2020 and 2021 was coronavirus, accounting for 11.5% of all deaths. In 2021, this was followed by dementia and Alzheimer's disease, accounting for 10.4% of all registered deaths. The leading cause of death for males was ischaemic heart diseases, accounting for 12.4% of male deaths, and the leading cause for females was dementia and Alzheimer's disease, accounting for 14%⁶¹.

In 2022, the leading cause of death in England and Wales was dementia and Alzheimer's disease, accounting for 11.4% of all deaths, a 1% increase from 2021. Coronavirus had fallen to the sixth leading cause of death by 2022, accounting for 3.9% of registered deaths. There was no change in the leading cause of death by gender, though male deaths from ischaemic heart disease had increased to 13.3% of deaths, and female deaths from dementia and Alzheimer's disease had increased to 15%. The other leading causes making up the top five causes of death were chronic lower respiratory diseases (5.2%),

⁵⁶ ONS (2021) National life tables – life expectancy in the UK: 2018 to 2020. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/lifeexpectancies/bulletins/nationallifetablesunitedkingdom/2018to2020> [Accessed November 2023]

⁵⁷ Ibid.

⁵⁸ ONS (2022) Death registration summary statistics, England and Wales: 2021. Available at: [Death registration summary statistics, England and Wales](#) [Accessed November 2023]

⁵⁹ ONS (2023) Death registration summary statistics, England and Wales: 2022. Available at: [Death registration summary statistics, England and Wales - Office for National Statistics](#) [Accessed November 2023]

⁶⁰ ONS (2022) Death registration summary statistics, England and Wales: 2021. Available at: [Death registration summary statistics, England and Wales](#) [Accessed November 2023]

⁶¹ Ibid.

cerebrovascular diseases (5.1%), and malignant neoplasms of trachea, bronchus and lung (5.0%). Coronavirus was not in the top five for the first time since the pandemic⁶².

75.3% of men and 75.7% of women in the UK reported being in good or very good health during the period 2019-2020. Just under half of the population, 45.7% of men and 50.1% of women, reported having a long-standing health problem, with 18.5% of men and 22.3% of women reporting being limited in activities due to health in the previous six months⁶³.

In 2021, 47.5% of the population in England rated their health as very good; 34.2% as good, 13.0% as fair, 4.1% as bad and 1.2% as very bad. 46.6% of the population in Wales rated their health as very good in 2021; 32.5% as good, 14.1% as fair, 5.1% as bad, and 1.6% as very bad⁶⁴.

The most common reported health condition in both men and women in the UK was allergy, with the remainder of the top four most common conditions comprised of high blood pressure, low back disorder, and depression⁶⁵.

39.7% of men and 43.9% of women in the UK had a healthy body mass index (BMI) score, and a greater proportion of men were overweight than women, 37.9% and 29.3% respectively⁶⁶.

25.1% of women and 18.4% of men reported a delay in getting healthcare during the 12 months preceding the study due to the time taken to obtain an appointment⁶⁷.

In both England and Wales, a smaller proportion of people were disabled in 2021 than 2011, with reductions from 19.3% to 17.7%, and 23.4% to 21.1%, respectively⁶⁸.

Key findings from the Health Survey for England 2021 include^{69 70}:

- 26% of adults were obese, with obesity prevalence highest in the most deprived areas.

⁶² ONS (2023) Death registration summary statistics, England and Wales: 2022. Available at: [Death registration summary statistics, England and Wales - Office for National Statistics](#) [Accessed November 2023]

⁶³ ONS (2022) UK health indicators: 2019 to 2020. Available at: [UK health indicators - Office for National Statistics \(ons.gov.uk\)](#) [Accessed November 2023]

⁶⁴ ONS (2023) General health, England and Wales: Census 2021. Available at: [General health, England and Wales - Office for National Statistics \(ons.gov.uk\)](#) [Accessed November 2023]

⁶⁵ ONS (2022) UK health indicators: 2019 to 2020. Available at: [UK health indicators - Office for National Statistics \(ons.gov.uk\)](#) [Accessed November 2023]

⁶⁶ Ibid.

⁶⁷ Ibid.

⁶⁸ ONS (2023) Disability, England and Wales: Census 2021. Available at: [Disability, England and Wales - Office for National Statistics \(ons.gov.uk\)](#) [Accessed November 2023]

⁶⁹ ONS (2022) Health Survey for England, 2021 part 1. Available at: [Health Survey for England, 2021 part 1 - NHS Digital](#) [Accessed November 2023]

⁷⁰ ONS (2023) Health Survey for England, 2021 part 2. Available at: [Health Survey for England, 2021 part 2 - NHS Digital](#) [Accessed November 2023]

- A higher proportion of men than women drank alcohol. 79% of participants reported drinking alcohol in the preceding 12 months, and 49% reported that they drank alcohol at least once per week.
- 40% of adults had at least one longstanding illness or condition.
- 27% of adults reported that they never felt lonely, with 22% feeling lonely at least some of the time, and 6% reported feeling lonely often or always. Loneliness was more prevalent in those with bad health, with 62% of those reporting bad or very bad health feeling lonely at least some of the time, compared to 35% of those with fair health, and only 18% of those with good or very good health.
- A higher proportion of men (70%) than women (59%) aged 16 or over met the 2011 aerobic guidelines of at least 150 minutes of moderate, or 75 minutes of vigorous, activity per week or equivalent.

Key findings from the Welsh Health Survey 2015 include⁷¹:

- Physical and mental health scores were lower for women than men overall.
- 20% of adults reported being treated for high blood pressure, 14% for respiratory illness, 13% for mental illness, 12% for arthritis, 8% for a heart condition, and 7% for diabetes, at the time of surveying.
- The percentage reporting being treated for specified illnesses, other than mental illness, generally increased with age.
- 33% of adults reported daily activities being limited due to a health problem or disability.
- Ill-health increases with deprivation.

Likely Evolution of the Baseline

Inequalities in terms of deprivation, health and accessibility are likely to continue into the future without concerted, targeted measures to reduce these. Without the revised NPS for Ports the currently designated NPS for Ports would continue to set the framework for decisions on proposals for new port development promoted through a development consent order (DCO) application. It is therefore unlikely that there would be a significant change in the future baseline as a result.

Key issues and opportunities

The policy context and baseline information have informed the identification of the following key issues and opportunities for population and human health:

- Large inequalities exist in terms of accessibility to goods, services and community facilities.

⁷¹ ONS (2016) Welsh Health Survey 2015: Health status, illnesses and other conditions. Available at: [Welsh Health Survey 2015: Health status, illnesses, and other conditions \(gov.wales\)](https://gov.wales/welsh-health-survey-2015) [Accessed November 2023]

- Populations living very near expanding ports may increase as a result of new strategic employment opportunities at the port, and this expansion may outstrip local services including health facilities, leading to negative effects on people.
- Where ports do not effectively serve a region of the country, net migration away from that region may occur.
- Environmental effects from port development (e.g. emissions to air, noise and visual disturbance and impacts on the water environment) can reduce the quality of living environments of local communities.
- Access to high quality green and blue spaces can deliver health benefits.
Improve access to nature, including protecting National Trails and the King Charles III England Coastal Path (KCIIECP).

Economy and Skills

Introduction

The policy context, baseline information and key issues for the economy and skills topic are presented below. There are links between economy and skills and a number of other AoS topics, in particular population and human health.

Policy context

United Kingdom

- **Securing the Future – the UK Sustainable Development Strategy (2005)** aims to enable all people throughout the world to satisfy their basic needs and enjoy a better quality of life without compromising the quality of life of future generations. The Strategy has a guiding principle relating to the achievement of a sustainable economy.
- The UK Government's **Plan for Growth (2011)** announced a programme of structural reforms to remove barriers to growth for businesses and equip the UK to compete in the global race. These reforms span a range of policies including improving UK infrastructure, cutting red tape, root and branch reform of the planning system and boosting trade and inward investment, to achieve the Government's four ambitions for growth. This includes encouraging investment and exports as a route to a more balanced economy.
- The **Growth Plan (2022)** highlights growth as the Government's central economic mission. The plan sets a target of 2.5% trend rate for growth, with hopes that sustainable growth will lead to higher wages, greater opportunities, and sustainable public service funding, in order to help the UK to better compete with other countries. The plan not only aims to incite growth, but also to tackle inflation and rising energy prices. The plan also contains a list of interested areas for Investment Zones, as well as a list of infrastructure projects in which the Government aim to action as quickly as possible.
- In 2015, the UK Government launched **Fixing the Foundations: Creating a More Prosperous Nation** which aims to increase growth through higher productivity. This approach includes long-term investment in skills and businesses as well as flexible and competitive markets.
- In 2016, the UK Government published an updated **National Infrastructure Delivery Plan**. This sets out the Government's plan to 2021 and beyond and takes a targeted approach to infrastructure investment and delivery across different sectors. It contains major commitments to improve the UK's transport, energy, communications, waste, water, housing and science and research infrastructure as well as steps to attract new private sector investment.
- The **National Infrastructure Strategy (2020)** sets out the government's plans to transform the UK's infrastructure networks. It is based around three central objectives: economic recovery; levelling up and strengthening the Union; and meeting the UK's net

zero emissions target by 2050. This will be enabled by clear support for private investment and through a comprehensive set of reforms to the way infrastructure is delivered.

- The **National Infrastructure Commission's Second National Infrastructure Assessment (2023)** sets out a 30 year plan for a low carbon and resilient economy to support economic growth and protect the natural environment. It outlines the work since the first National Infrastructure Assessment and sets out recommendations from the Commission to government.
- The **HM Treasury Report: Build Back Better, Our Plan for Growth (2021)** sets out the Government's plan for growth and recovery following the difficulties of the Covid-19 pandemic. The plan also highlights the growth seen in London and the South East of England over the past few decades, and sets 'levelling up the whole of the UK' as a primary objective of the plan, along with 'supporting the transition to Net Zero' and 'supporting the Government's vision for a global Britain'. The core pillar of growth stated within the plan are 'infrastructure', 'skills', and 'innovation'.
- The **Circular Economy Package Policy Statement (2020)** states that the UK is committed to moving towards a more circular economy which involves maximising resources and resource efficiency, and minimising waste.

England

- The **Local Growth White Paper (2010)** sets out the Government's overarching goal to promote strong, sustainable and balanced growth. It restates the Government's role in providing the framework for conditions for sustainable growth by:
 - creating macroeconomic stability, so that interest rates stay low and businesses have the certainty they need to plan ahead;
 - helping markets work more effectively, to encourage innovation and the efficient allocation of resources;
 - ensuring that it is efficient and focused on its own activities, prioritising high-value spending and reducing tax and regulatory burdens; and
 - ensuring that everyone in the UK has access to opportunities that enable them to fulfil their potential.
- The **Green Paper Building our Industrial Strategy (2017)** acts as a starting point in an ongoing consultation on the governments developing industrial strategy. It is based around 10 pillars: science, research and innovation; skills; infrastructure; business growth and investment; procurement; trade and investment; affordable energy; sectoral policies; driving growth across the whole country; and creating the right institutions to bring together sectors and places. Water supplies for businesses and people are identified as vital for economic growth under the infrastructure pillar.
- The **National Planning Policy Framework (2023)** sets out the core land-use principles to deliver sustainable development. It notes the three dimensions to sustainable development: economic, social, and environmental, and highlights the importance under

the economic role of planning policy in ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation; and by identifying and coordinating development requirements, including the provision of infrastructure.

Wales

- The **Well-being of Future Generations (Wales) Act 2015** is focused on improving the social, economic, environmental and cultural well-being of Wales. The Act requires the public bodies listed in the Act to ensure that any action or process they carry out is done in a sustainable way, must maximise its contribution to wellbeing goals, and that when making decisions they take into account the impact those decisions could have on people living their lives in Wales in the future.
- **Economic renewal: a new direction (2010)** sets out the role that devolved government, in this case Wales, can play in providing the best conditions and framework to enable the private sector to grow and flourish. It is intended that government resources will be targeted at tackling wide systematic issues within the Welsh economy - investing in infrastructure, skills and improving the conditions within which businesses operate. Economic renewal will see a fundamental shift away from direct and generic support for companies to a focus on creating the right environment for businesses to succeed.
- The **Wales Infrastructure Investment Strategy 2021** sets out the importance of the role of infrastructure in economic growth, and states that its role should be maximised in order to bring numerous benefits to Wales. This strategy puts in place a framework to ensure that this happens. The strategy also aims to ensure that infrastructure investments are targeted at those interventions that most effectively deliver our Wales' ambitions, which include: recovering from the Covid-19 pandemic, and achieving Net Zero by 2050.
- **Taking Wales Forward 2016-2021 (2016)** sets out the Welsh Government's programme to drive improvement in the Welsh economy and public services, delivering a Wales which is prosperous and secure, learning and connected. It includes support for businesses, the creation of apprenticeships and employability support.
- The **Welsh Government's Policy statement on skills (2014)** sets out future policy actions which will enable Wales to evolve into a highly skilled nation. It is focused on employment and skills and covers four priority areas: skills for jobs and growth; skills that respond to local needs; skills that employer's value; and skills for employment. The objective of the statement is to create the right conditions for employers across Wales to thrive and prosper.
- **Planning Policy Wales (11th Edition, 2021)** sets out that the planning system should support economic and employment growth alongside social and environmental considerations within the context of sustainable development. To this end, the planning system, including planning policies, aims to ensure that the growth of output and employment in Wales as a whole is not constrained by a shortage of land for economic uses. Local planning authorities should aim to facilitate the provision of sufficient land

required by the market, except where there are good reasons to the contrary, and with due regard to sustainable development.

- The **Vibrant and Viable Places: New Regeneration Framework (2013)** sets out the vision that everybody in Wales should live in well-connected vibrant, viable and sustainable communities with a strong local economy and good quality of life. The framework sets key priorities for regeneration investment in Wales.
- **Technical Advice Note 6 - Planning for Sustainable Rural Economies (2010) (TAN6)** provides practical guidance on how the planning system can support sustainable rural communities. This guidance provides advice on: sustainable rural communities and economies; rural affordable housing; rural enterprise dwellings; one planet developments; sustainable rural services; and sustainable agriculture.
- **Technical Advice Note 12 - Design (2016) (TAN12)** sets out the Welsh Government's policies and objectives in respect of the design of new development, including; ensuring attractive, safe public spaces and ensuring ease of access for all.
- **Technical Advice Note 13 - Tourism (1997) (TAN13)** offers advice on hotel development, holiday and touring caravans and seasonal and holiday occupancy conditions. Tourism makes a major contribution to the Welsh economy and provides employment in a wide variety of occupations and can bring benefits to local communities in urban and rural areas.
- **Technical Advice Note 23 - Economic Development (2014) (TAN23)** is intended to help local planning authorities and developers implement national planning policy on economic development. It provides guidance on: developing high level economic planning objectives; assessing the economic benefits of new development; economic development and the rural economy; preparing an evidence base for a Local Development Plan; creating an economic development vision for a Local Development Plan; and determining employment land supply.

Baseline information

UK

The Department for Transport (DfT) previously published UK ports freight forecasts in 2019⁷². The primary purpose of these port traffic forecasts is to inform long term strategic thinking for the future direction of the UK ports sector. DfT forecasts are national-level and can provide a point of reference for possible future demand of freight movements through UK ports. However, if and when port owners make applications for new port infrastructure they must take their own commercial view both on market-size forecasts and on their prospects for growing market-share if relevant.

⁷² <https://assets.publishing.service.gov.uk/media/5c40be66ed915d388683c114/port-freight-forecasts.pdf>

Forecasts of demand for port capacity in the period up to 2050 were provided by the Department for Transport for total UK port freight tonnage (Figure A-1) and unitised freight traffic (Figure A-2). The forecasts cover freight moved through all major ports in the UK.

All DfT forecasts provided below are provisional and could be subject to change. The Department expects to publish a more comprehensive document on updated port freight forecasts for public consultation in 2025.

Figure A-1 - Total UK port traffic tonnage, 2000-2050 (2025 updated forecasts)

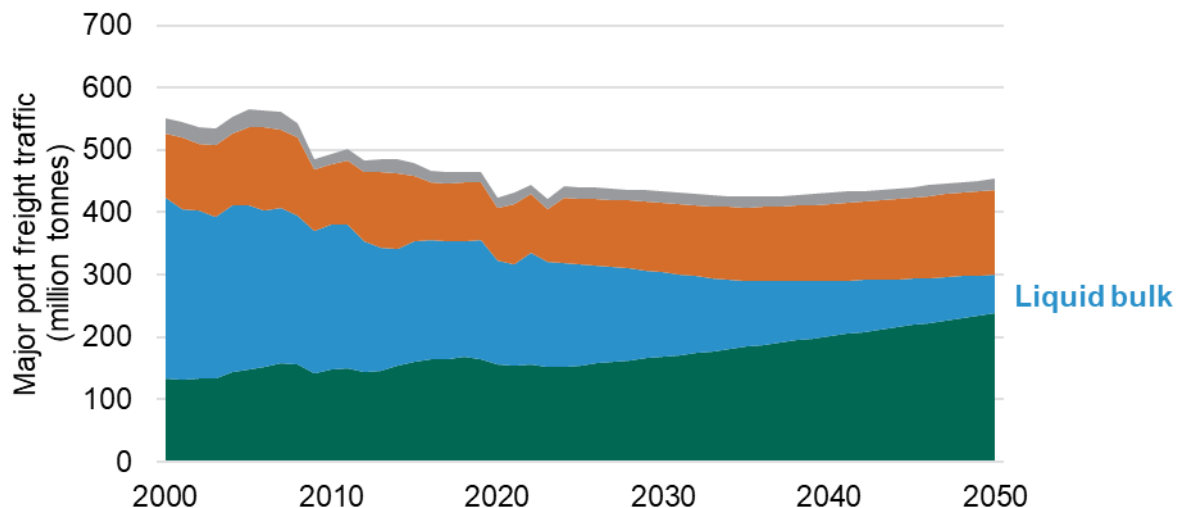
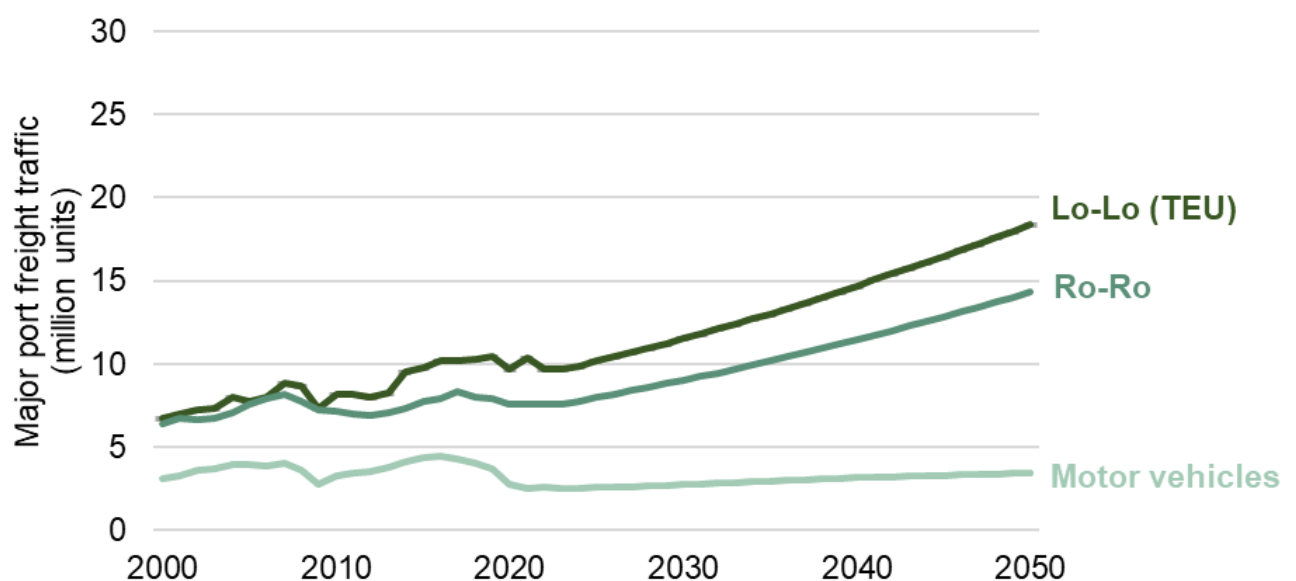


Figure A-2 – Unitised UK freight port traffic, 2000-2050 (provisional 2023 updated forecasts)



The central provisional forecasts suggest increases by 2050 over a 2023 base of:

- 21% in terms of total tonnage, from 445 million to 537 million tonnes;
- 69% in unitised freight tonnage (Load-on/Load-off (Lo-Lo) and Roll-on/Roll-off (Ro-Ro)), from 156 million to 264 million tonnes;
- 90% in unitised freight (LoLo and RoRo) traffic, from 17 million TEU to 33 million TEU (excluding transshipment); and
- 34% in motor vehicles (accompanied and unaccompanied) traffic, from 2.6 million to 3.5 million vehicles.

Port freight traffic is derived from the demand for imports and exports of consumption and intermediate goods, and the domestic transportation of goods. As such, key drivers of changes port traffic include changes in GDP, population and prices. In many of the freight categories, GDP per capita has been found to be the strongest driver of freight traffic. Specifically, GDP per capita is used as the only driver of demand in all unitised (Lo-Lo, Ro-Ro, and motor vehicles) forecasts. The other freight categories use this or/and alternative drivers (such as forecasts of imported liquified natural gas for liquefied gases). In some freight categories (e.g. other liquid bulks), forecasts are produced through extrapolating the historical time trend using various model specifications.

Demand forecasts over this sort of time horizon are always subject to considerable uncertainty. In order to represent and model some of this uncertainty alternative 'low' and 'high' scenarios are produced. Figures A-3 and A-4 below, depict the provisional updated central forecast alongside these low and high scenarios. These have been modelled using alternative low and high forecasts of GDP per capita, as provided in the DfT Transport Analysis Guidance.

Figure A-3 – Lo-Lo Port Freight (thousand TEUs)

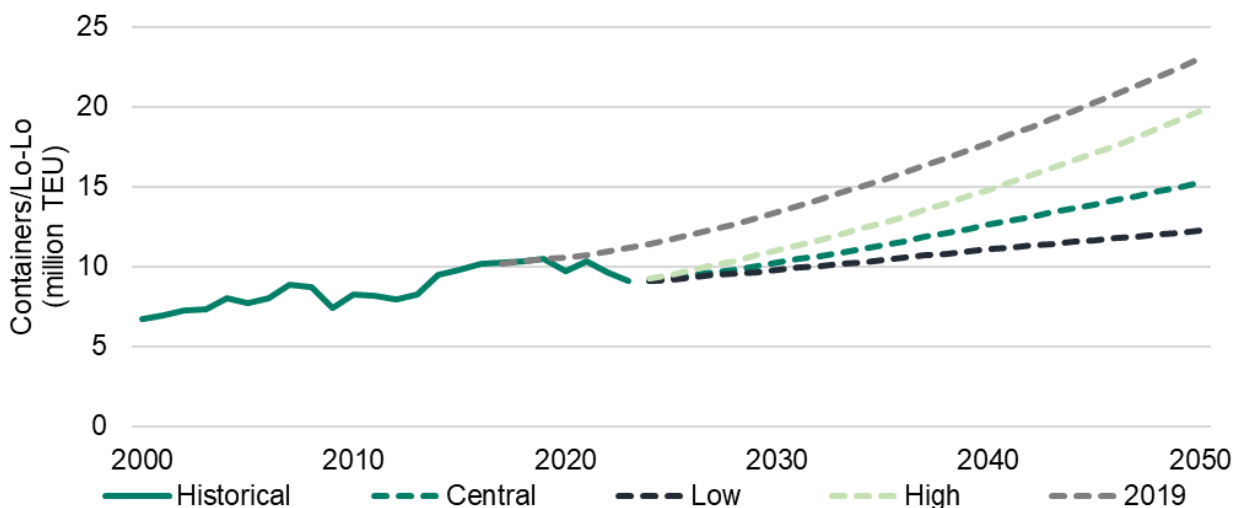
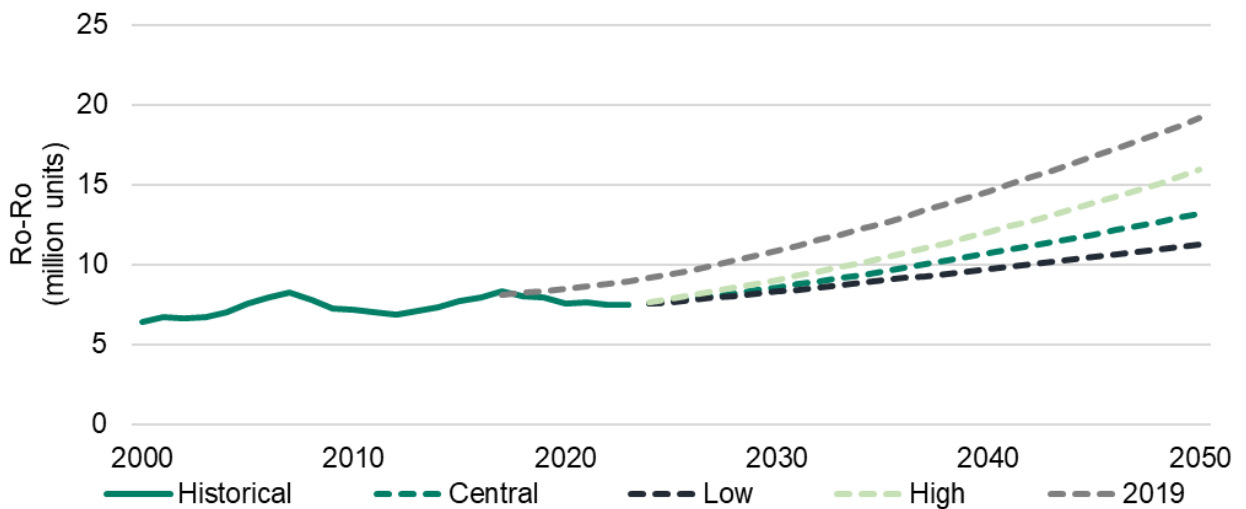


Figure A-4 – Ro-Ro Port Freight (thousand tonnes)



England

Education and skills

The breakdown of qualifications of the working age population in 2021 was as follows⁷³:

- 43.2% had NVQ4;
- 16.8% had NVQ3;
- 2.7% had trade apprenticeships;
- 15.4% had NVQ2;
- 9.6% had NVQ1;
- 5.9% had other qualifications; and
- 6.4% have no qualifications.

In 2021/2022, England had a total of 24,413 schools, comprising⁷⁴:

- 3.88 nursery;
- 16,791 primary;
- 3,458 secondary;
- 2,366 independent;

⁷³ NOMIS (2022) Labour Market Profile – Qualifications. Available online at: https://www.nomisweb.co.uk/reports/lmp/gor/2092957699/subreports/gor_qual_time_series/report.aspx?

⁷⁴ BESA (2023) Key UK Education Statistics. Available online at: <https://www.besa.org.uk/key-uk-education-statistics/>

- 1,005 special;
- 57 non-maintained special; and
- 348 pupil referral units.

Economy

In mid-2021, England had a resident population of 56,536,000 (49.0% males and 51.0% females) and 63% of the population was of working age (aged 16 to 64)⁷⁵. The total resident population accounts for 84.3% of the UK's population.

In the period, May to July 2023, the working age population breakdown was as follows⁷⁶:

- 79.3% were economically active, comprising:
- 75.8% of working age population in employment; and
- 4.3% of working age population unemployed.
- 20.7% were economically inactive.

In June 2023, 1,700,000 people were employed in the Transportation and Storage industry, which is 5.4% of England's workforce⁷⁷. A 2022 report from the Centre for Economics and Business Research (CEBR) stated that in 2019, there were roughly 100,200 jobs in England were directly contributed by the Ports Industry⁷⁸.

In 2017, England's per capita GVA was £28,096, which represents a 3% increase on 2016. England accounts for approximately 86% of the UK's total GVA.

In 2022, the median full-time gross hourly pay in England was £16.42 (male median being £17.04 and the female median being £15.44)⁷⁹.

In May to July 2023, England had an unemployment rate of 4.3% (people aged 16 and over). This compares to same period in the previous year when the unemployment rate stood at 3.7%⁸⁰.

⁷⁵ ONS (2022) Population estimates for the UK, England, Wales, Scotland and Northern Ireland: mid-2021. Available online at:

<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/annualmidyearpopulationestimates/mid2021>

⁷⁶ NOMIS (2023) Labour Market Profile – England. Available online at:

<https://www.nomisweb.co.uk/reports/lmp/gor/2092957699/report.aspx>

⁷⁷ NOMIS (2023) Labour Market Profile – England. Available online at:

<https://www.nomisweb.co.uk/reports/lmp/gor/2092957699/report.aspx>

⁷⁸ CEBR (2022) The economic contribution of the UK Ports industry. Available online at:

https://www.maritimeuk.org/documents/1138/2022_CEBR_Report_Ports_industry.pdf

⁷⁹ NOMIS (2023) Labour Market Profile – England. Available online at:

<https://www.nomisweb.co.uk/reports/lmp/gor/2092957699/report.aspx>

⁸⁰ Ibid

Wales

Education and Skills

The breakdown of qualifications of the working age population in 2021 for Wales was as follows⁸¹:

- 38.6% had NVQ4;
- 18.2% had NVQ3;
- 2.6% had trade apprenticeships;
- 16.0% had NVQ2;
- 10.4% had NVQ1;
- 5.9% had other qualifications; and
- 8.3% have no qualifications.

In 2021/2022, Wales had a total of 1,553 schools, comprising⁸²:

- 9 nursery;
- 1,1219 primary;
- 23 middle;
- 182 secondary;
- 80 independent;
- 111 special;

Economy

In mid-2022, the resident population of Wales was 3,105,400 (48.9% males and 51.1% females) and 60.9% of the population were of working age. The population accounts for 4.6% of the UK's population⁸³.

In the period, May to July 2023, the working age population was broken down as follows⁸⁴:

- 76.8% economically active, comprising:
 - 74.0% in employment; and
 - 3.8% unemployed.
- 23.2% were economically inactive.

⁸¹ NOMIS (2022) Labour Market Profile – Qualifications. Available online at: https://www.nomisweb.co.uk/reports/lmp/gor/2013265930/subreports/gor_qual_time_series/report.aspx?

⁸² BESA (2023) Key UK Education Statistics. Available online at: <https://www.besa.org.uk/key-uk-education-statistics/>

⁸³ NOMIS (2023). Labour Market Profile – Wales. Available online at: <https://www.nomisweb.co.uk/reports/lmp/gor/2013265930/report.aspx>

⁸⁴ Ibid

In 2017, Wales' per capita GVA was £19,899, an increase of 2.7% compared to 2016. Wales accounts for 3.4% of the UK's total GVA⁸⁵.

In 2022, the median full-time gross hourly pay in Wales was £15.33 (the male median being £15.76 and the female median being £14.70). This compares to £12.30 in 2015⁸⁶.

In the period, May to July 2023, Wales had an unemployment rate of 3.8% (people aged 16 and over). This shows a decrease from the previous year when it had an unemployment rate of 4.8%⁸⁷.

In 2022, the Centre for Economics and Business Research report that the Ports Industry directly contributed to roughly 2,000 jobs in Wales⁸⁸.

Likely Evolution of the Baseline

Economic growth is expected to remain weak across England and Wales for the next few years and unemployment is expected to increase throughout 2023. Without the revised NPS for Ports the currently designated NPS for Ports would continue to set the framework for decisions on proposals for new port development promoted through a development consent order (DCO) application. While there is therefore unlikely to be a significant change in the future baseline as a result, an up-to-date NPS in line with current government ambitions and targets is considered more likely to contribute to the growth of the economy and skills.

Key issues and opportunities

The policy context and baseline information have informed the identification of the following key issues and opportunities for economy and skills:

- The qualifications of the working age population in 2021 for England and Wales are broadly similar. With England having a slightly higher percentage of the working age population with a NVQ4 or equivalent qualification and above.
- Slow/ weak economic growth is expected to persist for a number of years.
- The delivery of strategic port infrastructure will provide a boost to local and regional economies and provide new employment opportunities.

⁸⁵ ONS (2018) Regional economic activity by gross value added (balanced), UK: 1998 to 2017. Available online at:
<https://www.ons.gov.uk/economy/grossvalueaddedgva/bulletins/regionalgrossvalueaddedbalanceduk/1998to2017>

⁸⁶ NOMIS (2023). Labour Market Profile – Wales. Available online at:
<https://www.nomisweb.co.uk/reports/lmp/gor/2013265930/report.aspx>

⁸⁷ Ibid

⁸⁸ CEBR (2022) The economic contribution of the UK Ports industry. Available online at:
https://www.maritimeuk.org/documents/1138/2022_CEBR_Report_Ports_industry.pdf

- The central provisional freight forecasts provided by the DfT suggest increases by 2050 over a 2023 base of:
 - 21% in terms of total tonnage, from 445 million to 537 million tonnes;
 - 69% in unitised freight tonnage (Load-on/Load-off (Lo-Lo) and Roll-on/Roll-off (Ro-Ro)), from 156 million to 264 million tonnes;
 - 90% in unitised freight (Lo-Lo and Ro-Ro) traffic, from 17 million TEU to 33 million TEU (excluding transshipment); and
 - 34% in motor vehicles (accompanied and unaccompanied) traffic, from 2.6 million to 3.5 million vehicles.

Land Use, Geology and Soils

Introduction

The policy context, baseline information and key issues for the land use, geology and soils topic are presented below. There are links between economy and skills and a number of other AoS topics, including biodiversity and nature conservation, population and human health, climate change, materials and waste, and landscape, townscape and seascape.

Policy context

United Kingdom

- The **Environmental Protection Act 1990** defines within England, Scotland and Wales, the legal framework for duty of care for waste, contaminated land, and statutory nuisance.
- The **Environment Act 1995** seeks to protect and preserve the environment and guard against pollution to air, land or water. The Act adopts an integrated approach to environmental protection and outlines where authorisation is required from relevant authorities to carry out certain procedures as well as outlining the responsibilities of the relevant authorities. The Act also amends the Environmental Protection Act 1990 with regard to the compulsory remediation of contaminated land.
- The **Wildlife and Countryside Act 1981** allows the designation of Sites of Special Scientific Interest (SSSI) for sites with geological importance.

England and Wales

- The **Agricultural Land Classification of England and Wales: Revised Guidelines for the Grading of Agricultural Land, MAFF (1988)** is a report that gives revised criteria for grading of the quality of agricultural land using the Agricultural Land Classification (ALC) of England and Wales. The ALC provides a framework for classifying land according to its physical or chemical characteristics and their impacts on agricultural use.
- The **Environmental Permitting (England and Wales) Regulations 2016** (SI 2016/1154) consolidates a range of previous permits required for processes which might cause pollution. It covers water discharges, groundwater activities, radioactive substances, waste, mining, flood risk activities and installations. It requires operators to obtain permits for some facilities, to register others as exempt and provides for ongoing supervision by regulators.
- The Forestry Commission's **National Forest Inventory** takes place every 10-15 years, with the most recent beginning in 2022. It provides a record of key information about Great Britain's forests and woodlands. This information is useful to many people and organisations involved in forestry and land management, as well as in the wider world of planning, policy development and business.

- The **Ancient Woodland Inventory** identifies woodlands that have had a continuous woodland cover for centuries. Studies show that these woodlands are typically more ecologically diverse, and of higher nature conservation value, than those that have developed recently or those where woodland cover on the site has been intermittent.
- The Town and Country Planning and Infrastructure Planning (Environmental Impact Assessment) (Amendment) Regulations 2018 set out the procedures to be followed in relation to environmental impact assessment linked to nationally significant infrastructure projects in England and Wales. Its objective is to provide a high level of protection of the environment and to help integrate environmental considerations into the preparation of proposals for development to reduce their impact on the environment.

England

- In 2009, Defra published **Safeguarding our Soils, A Strategy for England**. The vision in this Strategy is that by 2030, all of England's soils will be managed sustainably and degradation threats will be tackled successfully. The overall aspiration is that this will improve the quality of England's soils and safeguard their ability to provide essential services for future generations. In June 2011, the Government reiterated its vision and 2030 target for England's soils in the Natural Environment White Paper (Defra, 2011). As part of this vision, the Government committed to undertaking further research to explore how soil degradation can affect the soil's ability to support vital ecosystem services; and how best to manage lowland peatlands, including the responsible management of peat soils, in a way that supports efforts to tackle climate change. This will inform future policies and the direction of future action towards 2030.
- **Summary of the state of the environment: soil** is a report by the Environment Agency highlighting the importance of England's soils, assessing available evidence and establishing the need for further monitoring and research.
- The **Contaminated Land (England) Regulations 2006** (SI 2006/1380) sets out provisions relating to the identification and remediation of contaminated land. The Environmental Damage (Prevention and Remediation) (England) Regulations 2015 (SI 2015/810) require action in response to the most significant cases of environmental damage including in respect of risks to human health from contamination of land.
- The **National Planning Policy Framework (2024)** sets out the Government's planning policy for the use of land in England. With specific regard to geology and soils, it states that "*planning policies and decisions should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils*" (paragraph 187). Paragraph 187 also states that "*planning policies and decisions should contribute to and enhance the natural and local environment by recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland*". Regarding development on agricultural land, the NPPF states "*where*

significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality.”

- The **Environmental Improvement Plan 2023** sets out how the UK aims to improve the environment both at home and globally. The Plan sets out land use considerations for net zero, and commits to publishing a Land Use Framework, that will set out an approach for making the most of land and ensure objectives for agriculture, the environment and net zero are realised. The plan also aims to enhance soil health and deliver a high quality, resilient food system through new farming schemes, and create a baseline of soil health in the UK, bringing at least 40% of UK soils into sustainable management by 2028, increasing to 60% by 2030.
- **Planning Practice Guidance for the Natural Environment (2019)** explains key issues in implementing policy to protect and enhance land and soils, including local requirements covering agricultural land, soil and brownfield land of environmental value.
- **Planning Practice Guide for Minerals (2014)** provides guidance on the planning for mineral extraction in plan-making and the application process. It also sets out guidance on minerals safeguarding, including the appropriate restoration to agriculture.

Land contamination: Technical Guidance (2022) provides guidance on the management of contaminated land including how to investigate, assess and manage the risks.

Wales

- The **Well-being of Future Generations (Wales) Act 2015** strengthens existing governance arrangements for improving the well-being of Wales to ensure that present needs are met without compromising the ability of future generations to meet their own needs. The act identifies goals to improve the well-being of Wales, introduces national indicators that will measure the difference being made to the well-being of Wales, and simplifies requirements for integrated community planning. The 2016 national indicators include the ‘concentration of carbon and organic matter in soil’.
- The **Environment (Wales) Act 2016** puts legislation in place to plan and manage Wales’ natural resources in a more proactive, sustainable and joined-up way, and includes provisions relating to land management.
- **One Wales: One Planet (2009)** sets out proposals to promote sustainable development. This includes land-based resources, for which the strategy aims to “*meet the needs of current and future generations without depleting the resources provided by land upon which we all depend*”.
- The Welsh Government’s Natural Resources **Policy Statement (2015)** illustrates key priorities including soil, green infrastructure, woodlands, and peat management.
- The **Planning (Wales) Act 2015** sets out a series of legislative changes to deliver reform of the planning system in Wales. This includes the requirement for a National Development Framework which will set out the Welsh Government’s land use priorities

and Strategic Development Plans for areas with matters of greater than local significance.

- The **Future Wales: The National Plan 2040** was published in 2021 and sets the national development framework for Wales up to 2040. It sets out 11 Future Wales' Outcomes, one of which is 'A Wales where people live in places that sustainably manage their natural resources and reduce pollution'. It identifies Wales' natural resources, including its minerals, soils and geodiversity are assets of great value.
- **Planning Policy Wales (Edition 12) (2024)** contains current land use planning policy for Wales. It promotes a preference for the reuse of brownfield land and conservation of the best and most versatile agricultural land and geological assets. Chapter 13 deals with minimising and managing environmental risks and pollution including contaminated and unstable land and seeks to maximise environmental protection for people, natural and cultural resources, property and infrastructure and prevent or manage pollution and promote good environmental practice. Chapter 14 addresses mineral extraction and related development in Wales, which includes all minerals and substances in, on or under land extracted either by underground or surface working.
- **Technical Advice Note 5: Nature Conservation and Planning (2009)** includes guidance relating to the conservation of geological features such as rocks and soils.
- **Technical Advice Note 6: Planning for Sustainable Rural Communities (2010)** provides guidance on how the planning system can contribute to: sustainable and rural communities; sustainable rural housing; sustainable rural services; and sustainable agriculture.
- The **Contaminated Land (Wales) Regulations 2006** (WSI 2006/2989) sets out provisions relating to the identification and remediation of contaminated land.
- The **Environmental Damage (Prevention and Remediation) (Wales) Regulations 2009** (WSI 2009/995) require action in response to the most significant cases of environmental damage including in respect of risks to human health from contamination of land.

Baseline information

England

Geology

England's landscape is closely associated with its underlying geology. The topography of England is varied, with the southern part of the country predominantly lowland, with mountainous terrain north-west of the Tees-Exe line (the Lowland-Upland divide across

England), which includes the Cumbrian Mountains of the Lake District, the Pennines and limestone hills of the Peak District, Exmoor and Dartmoor⁸⁹.

In 2022 Natural England reported that there were 1,150 SSSIs designated for their geodiversity features⁹⁰. As of 2008 there were 1,704 Geological Conservation Review (GCR) sites (which identified nationally important features of geological interest) covered by SSSI's in England⁹¹. Many SSSIs have more than one GCR feature and some GCR features extend over more than one SSSI, this gives a combination of SSSI's and GCR's, known as geo-features. The proportion of GCRs in favourable/recovering status varied between 76-94% depending on its category of GCR (each category is reported separately)⁹².

There are no formal international designations for geodiversity sites equivalent to the SPA and SAC designations for biological features, although the geodiversity of the Dorset and East Devon Coast is recognised through designation as a World Heritage Site.

England contains three Global Geoparks: the Black Country in the West Midlands, English Riviera in Devon, and the North Pennines National Landscape⁹³. These are areas considered by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) to be of international importance for geological heritage that should be safeguarded and sustainably managed and include strong local involvement.

Land Use and Soils

As of mid-2021, the population density of England was 434 people per square km⁹⁴.

England has a land area of just over 13,046,000 hectares, the largest within the UK, 8.7% of which is developed and 91.1% is of non-developed use and the remaining 0.2% is vacant⁹⁵. Table A2 below shows the breakdown of land use in England by group in 2022.

Table A3 – Land use by Land Group, England 2022

⁸⁹ Natural England (2008) State of the Natural Environment 2008 (NE85) Available at: [State of the Natural Environment 2008 - NE85 \(naturalengland.org.uk\)](https://www.naturalengland.org.uk/State-of-the-Natural-Environment-2008-NE85) [Accessed November 2023]

⁹⁰ Natural England (2022) International Geodiversity Day – a world first. Available at: [International Geodiversity Day – a world first - Natural England \(blog.gov.uk\)](https://www.naturalengland.org.uk/blog/2022/04/22/international-geodiversity-day-a-world-first) [Accessed November 2023]

⁹¹ Natural England (2008) State of the Natural Environment 2008 (NE85) Chapter 2: Landscapes. Available at: [State of the Natural Environment 2008 - NE85 \(naturalengland.org.uk\)](https://www.naturalengland.org.uk/State-of-the-Natural-Environment-2008-NE85) [Accessed November 2023]

⁹² Ibid.

⁹³ UNESCO (2023) List of UNESCO Global Geoparks and Regional Networks. Available at: [List of UNESCO Global Geoparks and Regional Networks | UNESCO](https://www.unesco.org/en/geoparks) [Accessed November 2023]

⁹⁴ ONS (2022) Population estimates for the UK, England, Wales, Scotland and Northern Ireland: mid-2021. Available at: [Population estimates for the UK, England, Wales, Scotland and Northern Ireland - Office for National Statistics \(ons.gov.uk\)](https://www.ons.gov.uk/populationandmigration/populationandmigration/populationestimatesfortheuk) [Accessed November 2023]

⁹⁵ Department for Levelling Up, Housing and Communities (2022) Land Use Statistics: England 2022. Available at: [Land use statistics: England 2022 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/statistics/land-use-statistics-england-2022) [Accessed November 2023]

Land Use Type	Area Coverage (%)
Agriculture	63.1
Forestry, open land and water	20.1
Residential gardens	4.9
Transport and utilities	4.4
Outdoor recreation	2.1
Other developed use	1.9
Residential	1.3
Undeveloped land	0.9
Community services	0.7
Industry and commerce	0.4
Vacant land	0.2
Minerals and landfill	0.1
Defence	0

The urban landscape accounts for 10.6% of England's land area⁹⁶, and Forest Research statistics for the UK highlight that the area of woodland in England at 31 March 2023 accounts for around 10% of England⁹⁷.

The quality of land across the UK varies, with the best and most versatile agricultural land generally situated in the lowland and valley areas of England. An estimated 21% of all farmland in England is classified as Grade 1 ('Excellent') and 2 ('Very Good') land, with a similar percentage graded as Subgrade 3a ('Good') land. These grades are the best and

⁹⁶ UNEP (2011) UK National Ecosystem Assessment Synthesis of the Key Findings. Available at: [UK NEA \(unep-wcmc.org\)](https://www.unep-wcmc.org) [Accessed November 2023]

⁹⁷ Forest Research (2023) Woodland Statistics. Available at: [Woodland Statistics - Forest Research](https://www.forestresearch.gov.uk/woodland-statistics) [Accessed November 2023]

most versatile land grades as classified under the Agricultural Land Classification System (ALC)⁹⁸.

A total of 511 sites had been reported to the Environment Agency as ‘contaminated land’ at April 2016; however, this is likely to be an underestimate due to a low response rate from local councils. Less than 2% of the land area of England is estimated to have been affected by industrial activities of a type that could have caused contamination⁹⁹.

Wales

Geology

The bedrock geology of Wales is extremely varied and comprises sandstone, limestone and igneous rock¹⁰⁰. Permo-Triassic and Devonian sandstone as well as Carboniferous Limestone form important groundwater resources in South Wales. Peat, sand and gravel deposits along river valleys support strategic local water supplies.

Coal and metal mining has been very important to Wales historically. The South Wales Coalfield stretches across a large part of South Wales and is still mined to some extent, although less than previously (and from opencast or drift mines rather than deep mines). Lead and silver were once produced from mines in mid-Wales, from a series of mines inland from Aberystwyth. Copper, meanwhile, was mined in Parc Cenedlaethol and at Parys Mountain on Anglesey, whilst gold was exploited around Dolgellau and Pumpsaint. Various other metals were produced including zinc, arsenic, antimony and manganese. The geodiversity of Wales has led to the forming of landscapes and environmental settings that have strong cultural service value. For example, the mountains of Parc Cenedlaethol attract tourists to Wales whilst coal mining has helped to define the cultural identity of the South Wales Valleys.

Within Wales, there are approximately 300 SSSIs designated for geology and earth science features. The Joint Nature Conservation Committee (JNCC) has reported the first six years of Common Standards Monitoring for Geological SSSIs in the UK but limited information is available for SSSIs in Wales in this respect. There are two Global Geoparks located in Wales (Fforest Fawr and Ynys Môn)¹⁰¹ and UNESCO consider these areas to be of international importance for geological heritage.

⁹⁸ Natural England (2012) Agricultural Land Classification: protecting the best and most versatile agricultural land, TIN049. Available at: <http://publications.naturalengland.org.uk/file/4424325> [Accessed November 2023]

⁹⁹ Environment Agency (2016) Dealing with contaminated land in England. Available at: [State_of_contaminated_land_report.pdf](https://publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/544441/State_of_contaminated_land_report.pdf) (publishing.service.gov.uk) [Accessed November 2023]

¹⁰⁰ British Geological Survey (2018) Geology and landscape: Wales. Available at: [National geoscience - British Geological Survey \(bgs.ac.uk\)](https://www.bgs.ac.uk/Geology-and-landscape/Wales/) [Accessed November 2023]

¹⁰¹ UNESCO (2023) List of UNESCO Global Geoparks and Regional Networks. Available at: [List of UNESCO Global Geoparks and Regional Networks | UNESCO](https://www.unesco.org/en/geoparks/) [Accessed November 2023]

Land Use and Soils

As of mid-2021, the population density of Wales was 150 people per square km¹⁰².

Over 80% of Wales' approximately 2,078,260 hectares¹⁰³ of land is utilised for farming, with forestry utilising a further 15%¹⁰⁴. Upland and mountainous topography accounts for 20% of land¹⁰⁵.

The area designated as 'Best and Most Versatile' agricultural land accounts for approximately 7% of total land in Wales, which includes land of 'good to moderate' quality and above. 80% of the land in Wales is of ALC grades 3b to 5, due to the topography of the terrain.¹⁰⁶

The urban landscape accounts for 4.1% of Wales' land area¹⁰⁷, and Forest Research statistics for the UK highlight that the area of woodland in Wales at 31 March 2023 accounts for around 15% of Wales¹⁰⁸.

Carboniferous Peat covers 3-4% of Wales and is predominantly acid blanket peat. There are small areas of raised bog and fen peat scattered in lowland areas.

A total of 10,130 potentially contaminated sites had been brought to the attention of local authorities in Wales, with 175 determined as 'contaminated land' in Wales by the end of 2013. The most common contaminants were Benzo(a)pyrene, lead and arsenic, all of which were identified at over 60% of determined contaminated land sites¹⁰⁹.

¹⁰² ONS (2022) Population estimates for the UK, England, Wales, Scotland and Northern Ireland: mid-2021. Available at: [Population estimates for the UK, England, Wales, Scotland and Northern Ireland - Office for National Statistics \(ons.gov.uk\)](https://www.ons.gov.uk/populationandmigration/populationestimates/articles/populationestimatesfortheukenglandwalesscotlandandnorthernirelandmid2021) [Accessed November 2023]

¹⁰³ ONS (2022) Standard Area Measurements (2021) for Administrative Areas in the United Kingdom (V2). Available at: [Standard Area Measurements \(2021\) for Administrative Areas in the United Kingdom \(V2\) | Open Geography Portal \(statistics.gov.uk\)](https://statistics.gov.uk/standard-area-measurements) [Accessed December 2023]

¹⁰⁴ Natural Resources Wales (2023) Area Statements and farmers, foresters and land managers. Available at: [Natural Resources Wales / Area Statements and farmers, foresters and land managers](https://naturalresources.wales/area-statements) [Accessed November 2023]

¹⁰⁵ Natural Resources Wales (2021) The Second State of Natural Resources Report (SoNaRR2020). Available at: [SoNaRR2020: Theme Land use and soils \(naturalresources.wales\)](https://naturalresources.wales/so-narr-2020) [Accessed November 2023]

¹⁰⁶ Welsh Government (2016) Agricultural Land Classification. Available at: [Agricultural land classification | GOV.WALES](https://gov.wales/agricultural-land-classification) [Accessed November 2023]

¹⁰⁷ UNEP (2011) UK National Ecosystem Assessment Synthesis of the Key Findings. Available at: [UK NEA \(unep-wcmc.org\)](https://www.unep-wcmc.org/uk-neas) [Accessed November 2023]

¹⁰⁸ Forest Research (2023) Woodland Statistics. Available at: [Woodland Statistics - Forest Research](https://www.forestresearch.gov.uk/woodland-statistics) [Accessed November 2023]

¹⁰⁹ Natural Resources Wales (2016) The State of Contaminated Land in Wales. Available at: [The State of Contaminated Land in Wales \(naturalresources.wales\)](https://naturalresources.wales/state-of-contaminated-land) [Accessed November 2023]

Likely Evolution of the Baseline

Pressures on land use, as well as geology and soil resources, are likely to continue. Without the revised NPS for Ports the currently designated NPS for Ports would continue to set the framework for decisions on proposals for new port development promoted through a development consent order (DCO) application. As a result, it is therefore unlikely that there would be a significant change in the future baseline.

Key issues and opportunities

The policy context and baseline information have informed the identification of the following key issues and opportunities for land use, geology and soils:

- The setting of the UK's earth heritage features, including geological SSSIs should be protected and enhanced where possible.
 - Of UK land, 7% is currently classified as 'urban', and this coverage is increasing. Development pressure remains a constant factor in parts of the country, and it is not expected that previously developed land will be able to fully deliver the UK's future needs.
 - Coastal geodiversity and processes, including the management and maintenance of natural shoreline processes are a key issue for port development.
 - There is a need to protect, maintain and enhance geomorphological functions and services.
 - Some 1.6% of land in the UK is contaminated from industrial activity, although this is progressively being remediated as sites are redeveloped; however, this can be expensive.
 - There is currently increasing pressure on rural and agricultural land from developers as urban areas expand. Future infrastructure growth will put more pressure on protected land including important geological sites.
 - Soils in England and Wales continue to be degraded by human actions including intensive agriculture, historic levels of industrial pollution and development, making them vulnerable to erosion (by wind and water), compaction and loss of organic matter. Appropriate management and control of soils and sediments is key to their long-term sustainability.
 - As the climate (including temperature and rainfall patterns) changes in the future, it is likely that soils have the potential to be further degraded, due to increased seasonal aridity and wetness and variations in temperature. The effect of industry, agricultural practices, forestry and climate change upon soils, particularly carbon rich peat soils, is also a key issue. Key pollutants include chemicals, oil or waste. Organic waste, including sewage sludge, is one of the main sources of heavy metal contamination of soils from humans.
- Healthy soils are more resilient, and contribute to natural flood management solutions, SUDS, climate change mitigation and adaptation [25YEP]. Therefore, soils need to be sustainable used and managed.

Water Resources and Water quality

Introduction

The policy context, baseline information and key issues for the water resources topic are presented below. There are links between economy and skills and a number of other AoS topics, including biodiversity and nature conservation, population and human health, climate change, materials and waste, and landscape, townscape and seascape.

Policy context

United Kingdom

- The **Flood and Water Management Act 2010** makes provisions for water, including about the management of risks in connection with flooding and coastal erosion. The Act requires development of a strategy for flood and coastal erosion in England and Wales.
- The **Marine Strategy Regulations 2010** (SI 2010/1627) aims to achieve good environmental status of the UK's marine waters by 2021 and to protect the resource base upon which marine-related economic and social activities depend.
- The **Marine and Coastal Access Act 2009** sets out a number of measures including the establishment of Marine Conservation Zones (MCZs) and Marine Spatial Plans. The main objectives of the Marine Policy Statement (2011) also established under MCAA09 are to enable an appropriate and consistent approach to marine planning across UK waters, and to achieve sustainable development in the UK's marine area.
- The **Environmental Permitting (England and Wales) Regulations 2016** (SI 2016/1154) consolidates a range of previous permits required for processes which might cause pollution and could affect water quality. It covers water discharges, groundwater activities, radioactive substances, waste, mining, flood risk activities and installations. It requires operators to obtain permits for some facilities, to register others as exempt and provides for ongoing supervision by regulators.

England and Wales

- The **Water Environment (Water Framework Directive) (England and Wales) Regulations (2017)** lay out the duties for the governments of England and Wales, along with the Environment Agency and Natural Resources Wales to achieve compliance with the Water Environment Regulations, Environmental Quality Standards Directive and Groundwater Directive. As part of these duties, they must prevent deterioration of surface water or groundwater status of a body of water and support the achievement of the environmental objectives set out for a body of water.
- There are 11 River Basin Districts in England and Wales which each require (under the Water Environment Regulations) a **River Basin Management Plan (RBMP)** including objectives for surface water, groundwater, transitional and coastal water bodies. The Western Wales River Basin District is contained and managed wholly in Wales. The two

other River Basin Districts in Wales are cross-border with England: the Severn River Basin District and the Dee River Basin District. Updated RBMPs were published in February 2022 for eight river basin districts.

- **Water for people and the environment - Water resources strategy for England and Wales (2009)** published by Environment Agency, includes objectives relating to the protection of the water environment and water supply infrastructure, increasing resilience to climate change and reducing GHG emissions from the use of water.
- Other relevant strategies include the Environment Agency's **Catchment Abstraction Management Strategies (CAMS)** which have identified a number of catchments in England and Wales that are designated as 'over-licensed' or 'over-abstracted'. That is, where the current level of licensed abstraction could result in an unacceptable stress on the catchment's ecology (designated over-licensed) or possibly is resulting in an unacceptable effect (designated over-abstracted).
- The **Water Supply (Water Quality) Regulations 2016** consolidate legislation concerning the quality of water supplies for human consumption in England. The regulations also apply to supplies in Wales where the water undertaker or licensee is primarily based in England.
- The **Environment Act (2021)** sets out targets, plans and policies for improving the natural environment. Long-term targets will be set for the four priority areas, one of which is water. Targets must specify an objectively measurable standard to be achieved by a specific date.
- **Water resources planning guideline (2023)** sets out guides for water companies in England and Wales for producing water resources management plans (WRMP). They also set out guidance for regional water resources plans.

England

- The **Groundwater (Water Framework Directive) (England) Direction 2016** sets out instructions to the Environment Agency on obligations to protect groundwater (water found below the surface).
- The **Nitrate Pollution Prevention Regulations 2015** provides for, among other issues, the designation of land as nitrate vulnerable zones.
- **Marine Plans** - The Marine Management Organisation (MMO) is responsible for preparing marine plans in England. Marine plans are now in place across all of England's coastline, and the Marine Management Organisation (MMO) has recently consulted on a draft Statement of Public Participation for a replacement East Marine Plan. It's likely other marine plans will be reviewed in the lifespan of the next National Policy Statement for Ports.
- The **National Policy Statement for Waste Water (2012)** sets out Government policy for the provision of major waste water infrastructure in England. It will be used by the decision maker as the primary basis for deciding development consent applications for waste water developments that fall within the definition of Nationally Significant Infrastructure Projects (NSIP) set out in the Planning Act 2008.

- The **National Planning Policy Framework (2023)** expects the planning system to contribute to conserving and enhancing the natural environment, reducing pollution and mitigating and adapting to climate change. In particular, the planning system is expected to prevent new development from contributing to unacceptable levels of water pollution. Where possible, development should help to improve local environmental conditions, including water quality.
- **Planning Practice Guidance** relating to water supply, wastewater and water quality provides advice on how planning can ensure water quality and the delivery of adequate water and wastewater infrastructure, which is needed to support sustainable development. It promotes a catchment-based approach as set out by Defra in **Catchment Based Approach: Improving the Quality of our Water Environment (2013)**, which provided the initial framework to bridge the gap between local actions and RBMPs. It identifies the following key issues for plan-making to consider with regards to infrastructure:
 - Identifying suitable sites for new or enhanced infrastructure it will be important to recognise that water and wastewater infrastructure sometimes has particular locational needs (and often consists of engineering works rather than new buildings) which mean otherwise protected areas may exceptionally have to be considered where consistent with their designation.
 - Considering whether new development is appropriate near to sites used (or proposed) for water and wastewater infrastructure (for example, odour may be a concern).
 - Phasing new development so that water and wastewater infrastructure will be in place when needed.
- It also identifies the following issues with regards to water quality:
 - How to help protect and enhance local surface water and groundwater in ways that allow new development to proceed and avoids costly assessment at the planning application stage. For example, can the plan steer potentially polluting development away from the most sensitive areas, particularly those in the vicinity of potable water supplies (designated source protection zones or near surface water drinking water abstractions)?
 - The type or location of new development where an assessment of the potential impacts on water bodies may be required.
 - Where particular types of sustainable drainage systems may not be practicable.

A Green Future: Our 25 Year Plan to Improve the Environment (HM Government, 2018) includes policies and actions designed to reform the approach to water abstraction and improve water quality. The Plan contains a target to ensure that at least three quarters of waters are as close to their natural state as soon as is practicable. This includes (inter alia) measures to: reduce abstraction of water from rivers and groundwater where detrimental; reaching or exceeding objectives for rivers, lakes, coastal and ground waters

that are specially protected for biodiversity or drinking water; and minimising bacteria (Intestinal Enterococci and E. Coli) in designated bathing waters.

- Goal 3 of **The Environmental Improvement Plan (2023)** sets out the aim to achieve clean and plentiful water across England, in support of the overall vision to help the natural world regain and retain good health. This will be achieved through actions including tackling nutrient pollution, restoring extensive stretches of river, rolling out of water efficiency labelling on appliances and ensuring water companies reduce leakage.
- **Plan for Water: our integrated plan for delivering clean and plentiful water (2023)**, sets out a blueprint for how government will achieve its goal for clean and plentiful water.
- **Meeting our future water needs: a national framework for water resources (2020)**, which explores England's long term water needs, setting out the scale of action needed to ensure resilient supplies and an improved water environment. A refresh of the framework is expected to be published in 2025.
- **National Policy Statement for Water Resources Infrastructure (2023)** sets out the need and government's policies for, development of nationally significant infrastructure projects for water resources in England.

Wales

- The **Water Strategy for Wales (2015)** sets out the strategic direction for water policy in Wales over the next 20 years and beyond. Water is one of the greatest natural assets and an integral part of Wales' culture, heritage and national identity. The Strategy highlights the Welsh Government's vision to ensure that Wales continues to have a thriving water environment which is sustainably managed to support healthy communities, flourishing businesses and the environment.
- The **Welsh National Marine Plan (WNMP)**, which covers Welsh inshore and offshore waters was published in 2019. The Welsh Government is responsible for marine planning in Wales and marine planning will help to manage marine activities sustainably. The WNMP provides a 20-year outlook and provide important information and guidance to those who wish to use or undertake development in the marine area.
- **Planning Policy Wales (Edition 12) (2024)** sets out the land use planning policies of the Welsh Government. Regarding water quality, Planning Policy Wales seeks to protect and improve water supplies through reducing pollution where possible, and ensuring that appropriate sewerage facilities are provided to convey, treat and dispose of waste water in accordance with appropriate legislation and sustainability principles. Impacts on water quality and cumulative impacts e.g. with biodiversity and ecosystem resilience will be considered in planning decisions.
- The **Water Resources (Control of Agricultural Pollution) (Wales) Regulations 2021** replace and revoke the Nitrate Pollution Prevention (Wales) Regulations 2013 that implemented Council Directive 91/676/EEC concerning the protection of waters against pollution by nitrates from agricultural sources. The new regulations do this by requiring:
 - Nutrient management planning;
 - Sustainable fertiliser applications linked to the requirement of the crop;

- Protection of water from pollution related to when, where and how fertilisers are spread; and
 - Manure and silage storage standards.
- The **Well-being of Future Generations (Wales) Act 2015** became law in Wales on 29th April 2015 and strengthens existing governance arrangements for improving the well-being of Wales to ensure that present needs are met without compromising the ability of future generations to meet their own needs. Water Quality has been identified as impacting the following well-being indicators; a resilient Wales, a healthier Wales, a Wales of cohesive communities, a Wales of vibrant culture and thriving Welsh language, and a globally responsible Wales.
 - The **Environment (Wales) Act 2016** recognises that natural resources, such as water, are amongst the most important assets. The Act includes features that will ensure that managing these natural resources sustainably will be a core consideration in decision-making including providing for targets for reducing emissions of GHG's. It also established the Flood and Coastal Erosion Committee and made minor changes to the law about land drainage.
 - The **Groundwater (Water Framework Directive) (Wales) Directions 2016** gives direction to Natural Resources Wales on implementing the Water Framework Directive and the Groundwater Directive in Wales.

Baseline information

England

Waterbodies in the UK are split into river basin districts (RBDs) that cover an entire river system, including river, lake, groundwater, estuarine and coastal water bodies. The River Basin Management Plans (RBMPs) are designed to protect and improve the quality of our water environment. Good quality water is essential for wildlife, agriculture, and business to thrive.

The Environment Agency manages, and produces RBMP's for the following seven RBDs in England¹¹⁰:

- Anglian RBD
- Humber RBD
- Northumbria RBD
- North West RBD
- South East RBD

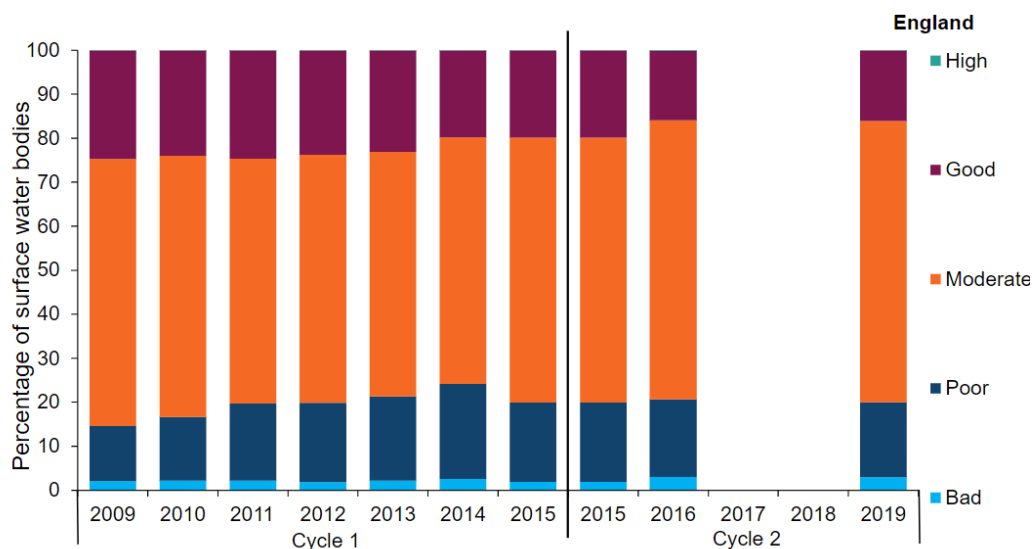
¹¹⁰ Environment Agency (2022) River basin management plans: updated 2022. Available at: [River basin management plans: updated 2022 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/river-basin-management-plans-updated-2022) [Accessed November 2023]

- South West RBD
- Thames RBD

The Environment Agency also jointly manages the Dee RBD and Severn RBD along with Natural Resources Wales. There are also 147 shellfish protected areas under the Water Environment Regulations (2017) in England and Wales.

Figure A5 shows the status classification of surface water bodies in England under the Water Environment Regulations¹¹¹. The figure shows data from both cycle 1 and cycle 2 in 2015, though the two are not comparable due to a change in methodology. In 2019, 16% of English water bodies were of high or good ecological status, a decrease from 20% in 2015. The percentage of moderate waterbodies has increased by 4% from 60% to 64% between 2015 and 2019, whereas the proportion of poor and bad waterbodies have shown little variation.

Figure A5 - Status classifications of surface water bodies in England under the Water Framework Directive, 2009 to 2019



Estuaries and coastal waters in England are generally in better condition than rivers and canals, or lakes. In 2019, 29% of estuaries and coastal waters in the UK were in good status, as opposed to 16% of rivers and canals, and 14% of lakes¹¹². 22% of rivers and canals were in poor or bad status in 2019, as were 12% of lakes, whereas only 6% of estuaries or coastal waters were at poor or bad status. River water quality has been increasing since 2015, with a decline in poor and bad quality waterbodies. Lakes have also

¹¹¹ Department for Environment Food & Rural Affairs (2023) 21. Surface water status. Available at: [21. Surface water status - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/statistics/surface-water-status) [Accessed November 2023]

¹¹² Ibid.

seen a decrease in poor and bad quality waterbodies in recent years, however, this is coupled with a decline in good quality waterbodies and an increase in moderate classifications¹¹³.

Estuaries and coastal waters are also increasing in quality, whilst the proportion of waters assessed as poor and bad have remained relatively the same, the proportion of good waters has increased. However, current Water Environment Regulations classification results and past maps produced by the Environment Agency indicate that there are still a large proportion of coastal waters in England and Wales that are classified as being of Moderate Ecological Status, i.e. are failing to meet 'Good Ecological Status' (GES) on the basis of a number of physio-chemical and biological standards and are therefore in need of measures to achieve GES.

A Nitrate Vulnerable Zone (NVZ) is an area of land that drains into polluted waters and contributes to the pollution of those waters. Polluted waters are waters that are affected by nitrate pollution or could be if the Regulations are not applied in the area concerned. In England, this applies to approximately 55% of land¹¹⁴.

The Nitrate Pollution Prevention Regulations 2015 require the review of NVZs at least every four years. The latest review took place in 2021 and found no substantial changes in patterns of nitrate pollution in England, carrying forward the designated NVZs from the previous review in 2017¹¹⁵.

The Environment Agency has designated over 2,000 groundwater supply sources (wells, boreholes and springs) as Groundwater Source Protection Zones. The designation indicates the level of risk to the source from contamination¹¹⁶.

In 2023, 95.7% of bathing waters in England met the minimum standard of the Bathing Water Directive, with 66.4% reaching the excellent standard. A total of 18 bathing waters, representing 4.3% of the total, did not meet the minimum requirement. Due to a change in recording methodology, bathing water quality statistics can only be compared to statistics from the year 2015 onwards. The data for 2023 showed that bathing water quality in England remains largely similar to that in 2015, though there are poorer (2.9% in 2015) and excellent (63.6% in 2015) bathing waters¹¹⁷.

¹¹³ Ibid.

¹¹⁴ Defra and Environment Agency (2021) Nitrate Vulnerable Zones. Available at: [Nitrate vulnerable zones - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/collections/nitrate-vulnerable-zones) [Accessed November 2023]

¹¹⁵ Defra and Environment Agency (2021) Nitrate Vulnerable Zones. Available at: [Nitrate vulnerable zones - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/collections/nitrate-vulnerable-zones) [Accessed November 2023]

¹¹⁶ DEFRA (2022) MAGIC. Available at: [MAGIC \(defra.gov.uk\)](https://magic.defra.gov.uk/) [Accessed December 2023]

¹¹⁷ Defra (2023) 2023 Statistics on English coastal and inland bathing waters: A summary of compliance with the 2013 bathing water regulations. Available at: [2023 Statistics on English coastal and inland bathing waters](https://www.gov.uk/government/statistics/2023-statistics-on-english-coastal-and-inland-bathing-waters):

Compared to 2021, bathing water quality has decreased. The percentage of excellent sites has dropped from 72.1% in 2021, good sites have risen from 20.8%, whereas the proportion of sufficient and poor sites have risen from 4.3% and 2.9% respectively¹¹⁸.

Wales

There are three river basin districts in Wales. As previously mentioned, the Dee RBD and Severn RBD cross the border with England, and are managed by both the Environment Agency and Natural Resources Wales, whilst Natural Resources Wales solely manage the Western Wales RBD¹¹⁹.

In 2021, 40% of Wales' surface water and ground water bodies were at good or better status, a 3% improvement on 2015 and 8% improvement on 2009¹²⁰. In 2020, Wales had no surface waters at high status, 39% were at good, 51% were at moderate, 9% at poor, and 1% at bad¹²¹.

In Wales, NVZs have historically accounted for around 2.3% of total land¹²², however these were revoked in 2021 due to changing of the regulations as the Water Resources (Control of Agricultural Pollution) (Wales) Regulations were introduced¹²³. It should be noted that the designated Nitrate Vulnerable Zone applies to all holdings in Wales.

Welsh Government provide a map showing the contours of Groundwater Source Protection Zones for Wales¹²⁴.

In Wales, 99.1% of bathing waters met the minimum standard of the Bathing Water Directive, with 80% reaching the excellent standard. A total of one bathing water site, representing 0.9% of the total, did not meet the minimum requirement. Similarly, comparisons can only be made with post 2015 data. Compared to 2021, the number of excellent sites has remained the same, however the number of those classified as good has

A summary of compliance with the 2013 bathing water regulations - GOV.UK (www.gov.uk). [Accessed December 2023]

¹¹⁸ Ibid.

¹¹⁹ Environment Agency (2022) River basin management plans: updated 2022. Available at: [River basin management plans: updated 2022 - GOV.UK \(\[www.gov.uk\]\(http://www.gov.uk\)\)](https://www.gov.uk/government/publications/river-basin-management-plans-updated-2022) [Accessed November 2023]

¹²⁰ Natural Resources Wales (2023) River Basin Management Plans 2015-2021. Available at: [Natural Resources Wales / River basin management plans 2015-2021](https://www.gov.uk/government/publications/natural-resources-wales-river-basin-management-plans-2015-2021) [Accessed November 2023]

¹²¹ JNCC (2023) B7. Surface water status. Available at: [UKBI - B7. Surface water status | JNCC - Adviser to Government on Nature Conservation](https://www.gov.uk/government/publications/ukbi-b7-surface-water-status) [Accessed November 2023]

¹²² Welsh Government (2014) SMR 1: Nitrate Vulnerable Zones. Available at: [WG23793 Farmers Cross Compliance Factsheets \(gov.wales\)](https://www.gov.wales/government/publications/wg23793-farmers-cross-compliance-factsheets) [Accessed November 2023]

¹²³ Welsh Government (2017) Datamap Wales: Nitrate Vulnerable Zones. Available at: [Nitrate Vulnerable Zones \(NVZ\) | DataMapWales \(gov.wales\)](https://www.gov.wales/government/publications/nitrate-vulnerable-zones-nvz-datamap-wales) [Accessed November 2023]

¹²⁴ DataMapWales (2023) Source Protection Zones (SPZ) Merged. Available at: [Source Protection Zones \(SPZ\) Merged | DataMapWales \(gov.wales\)](https://www.gov.wales/government/publications/source-protection-zones-spz-merged-datamap-wales) [Accessed December 2023]

risen by two (1.9%). In 2021, no sites failed to meet the minimum requirement¹²⁵. Other than the one site at poor classification, bathing water quality in Wales remains similar to that in 2015¹²⁶.

Likely Evolution of the Baseline

Pressures on water resources are likely to continue, especially with the effects of climate change, which in turn can lead to negative impacts on water quality. Without the revised NPS for Ports the currently designated NPS for Ports would continue to set the framework for decisions on proposals for new port development promoted through a development consent order (DCO) application. As a result, it is therefore unlikely that there would be a significant change in the future baseline.

Key issues and opportunities

The policy context and baseline information have informed the identification of the following key issues and opportunities for water resources:

- There is considerable pressure on water resources in many parts of England and Wales, which can in turn affect water quality leading to impacts on biodiversity and availability for sustainable supplies.
- There is a legacy of groundwater pollution from historical mining and other industrial activities.
- Climate change is expected to have significant impacts on the water environment. Areas where the underlying geology is generally impermeable are expected to be particularly affected as river flows would be likely to fall to low levels in drier periods and quickly react to rainfall episodes. There is also the potential for sea level rise and an increase of flood risk from all sources. Climate change is also expected to lead to changes in water temperature and cause sedimentation.

Many waterbodies are subject to pressure from multiple sources including rural diffuse pollution, waste water discharges, acidification and urban diffuse pollution.

- A significant portion of rivers and canals, and lakes, are yet to reach good or higher Water Environment Regulations classification.
- Approximately a quarter of estuarine and coastal waterbodies are failing to meet good Water Environment Regulations status.
- Over 50% of land in England is designated as a Nitrate Vulnerable Zone.
- A higher number of designated bathing waters were classified as poor in England and Wales during the 2022 bathing season than previous years.
- There is a need to encourage the efficient use of water throughout the life of development and this should be considered early in the design-stage.

¹²⁵ Cyfoeth Naturiol Cymru Natural Resources Wales (2022) Wales Bathing Water Report 2022. Available at: [Wales bathing water report 2022 \(naturalresources.wales\)](https://naturalresources.wales/wales-bathing-water-report-2022) [Accessed November 2023]

¹²⁶ Cyfoeth Naturiol Cymru Natural Resources Wales (2015) Bathing Waters in Wales 2015. Available at: [Bathing Waters in Wales 2015 \(naturalresources.wales\)](https://naturalresources.wales/bathing-waters-in-wales-2015) [Accessed November 2023]

- A number of catchments have been designated as sensitive catchment areas for phosphorus and nitrogen under the Water industry Act 1991.

Air Quality

Introduction

The policy context, baseline information and key issues for the air quality topic are presented below. There are links between the air quality topic and other topics in the AoS including biodiversity and nature conservation, population and human health, climate change (mitigation and adaption) and traffic and transport.

Policy context

United Kingdom

- The **Environment Act 2021** seeks to set legislation to (inter alia) improve air quality and the natural environment. The Act amends the Environment Act 1995, which prescribed standards and objectives which local authorities were required to assess local air quality against, and, if objectives were not being achieved, required local authorities to designate air quality management areas (AQMAs) and prepare and implement remedial action plans. The 2021 Act introduces two targets for fine particulate matter (PM_{2.5}):
 - The Annual Mean Concentration Target for PM_{2.5}, which states that by the end of 31st December 2040 the annual mean level of PM_{2.5} in ambient air must be equal to or less than 10 µg/m³; and,
 - Population exposure reduction target for PM_{2.5}, which states that there should be at least a 35% reduction in population exposure by the end of 31 December 2040, as compared with the average population exposure in the three-year period from 1 January 2016 to 31 December 2018.
- The **Ozone-Depleting Substances Regulations 2015** (SI 2015/168) introduces controls on the production, use and emissions from equipment of a large number of 'controlled substances' that deplete the ozone layer.
- The **Air Quality Plan for Nitrogen Dioxide (NO₂) in UK (2017)** sets out how the Government will improve air quality in the UK by reducing nitrogen dioxide emissions in towns and cities. The air quality plans set out targeted local, regional and national measures across 37 zone plans (areas which have identified air quality issues with nitrogen dioxide), a UK overview document and a national list of measures. Measures relate to freight, rail, sustainable travel, low emission vehicles and cleaner transport fuels, among others.
- The **Environmental Permitting (England and Wales) Regulations 2016** sets up a pollution control regime. The environmental regulator would specify conditions for environmental permits, for example limiting the type and quantity of emissions released to air.
- The **Clean Air Strategy 2019** sets out proposals for tackling all sources of air pollution, making air healthier to breathe, protecting nature and boosting the economy. This

includes specific actions relating to fine particulate matter (PM_{2.5}), ammonia (NH₃), nitrogen oxides (NO_x), sulphur dioxide (SO₂) and non-methane volatile organic compounds (NMVOCs). The strategy includes a section setting out action to reduce emissions from transport, including a specific sub-section on maritime transport. This sets out action taken to date and details about the UK's long term maritime strategy (Maritime 2050) and Clean Maritime Plan. It also includes commitments to: publish a Call for Evidence to explore options for standardising environmental regulations for vessels operating domestically within the UK, including inland waterways; consult on options for extending the current Emissions Control Areas (ECAs) in UK waters; and publish guidelines to advise ports on how to develop effective and targeted Air Quality Strategies.

- **Maritime 2050** sets out the government's vision and ambitions for the future of the British maritime sector. The strategy sets out a number of short, medium and long term recommendations relating to seven themes, which the strategy is focused on, in order to achieve the ambitions and goals of the government for the sector. This includes the environment theme, which includes a number of recommendations, but which fall broadly under the following headline recommendations:
 - *“Government will assess how economic instruments could support the transition to zero emission shipping in the medium to long term.*
 - *In line with the Industrial Strategy, government aims to launch a number of “zero-emission shipping ambitions” in the Clean Maritime Plan.*
 - *Government will consider the merits of introducing a medium term target for emissions of GHGs and air quality pollutants from UK shipping. Further detail on this consideration will be set out in the Clean Maritime Plan”.*
- The **Clean Maritime Plan (2019)** is the environmental route map of Maritime 2050, which sets out the UK Governments vision of the UK's transition to a future of zero emission shipping and encompasses the maritime commitments within the Clean Air Strategy. The plan includes a number of commitments/actions made by the government in to support the transition of the maritime sector move towards a vision of zero emissions shipping.
- The **UK Government's Public Health Outcomes Framework for England (2016 – 2019)** examines indicators to help understand trends in public health¹²⁷. One of the indicators included in the framework is the fraction of adult mortality attributable to long-term exposure to particulate air pollution (measured as fine particulate matter, PM_{2.5}).

¹²⁷ Office for Health Improvement and Disparities (2023) Public Health Outcomes Framework. Available online at: <https://www.gov.uk/government/collections/public-health-outcomes-framework#review-of-phof-indicators-2019-to-2022-> [Accessed November 2023]

England

- The **Air Quality Standards Regulations 2010** aim to improve air quality by reducing the impact of air pollution on human health and ecosystems. The standards set out air quality objectives, limit values and target values for pollutants, namely benzene, 1,3 butadiene, carbon monoxide, lead, nitrogen dioxide, sulphur dioxide, PM₁₀, and PM_{2.5}. Following the UK's exit from the EU, the following amendments were made to the regulations: the **Air Quality (Amendment of Domestic Regulations) (EU Exit) Regulations (2019)** introduced provisions to allow for PM₁₀ limit values being exceeded due to the re-suspension of particulates following winter sanding or salting of roads and transfer responsibilities from the Member State to the Government, whilst the **Air Quality (Miscellaneous Amendment and Revocation of Retained Direct EU Legislation) (EU Exit) Regulations (2018)** makes amendments to transfer responsibilities from the Member State to the Government¹²⁸.
- The **Environmental Targets (Fine Particulate Matter) (England) Regulations 2023** set a legally mandatory target of 10 µg m⁻³ for annual mean PM_{2.5} concentrations at all monitoring stations in England, to be achieved by 2040. It also set a legally mandatory PM_{2.5} population exposure reduction target of 35% compared to 2018 to be achieved by 2040.
- The **Air Quality Strategy (2023)** sets out the actions that Defra expects local authorities to take to support the achievement of Defra's long-term air quality goals, including new PM_{2.5} targets. The strategy provides a framework to enable local authorities to make the best use of their powers and make air quality improvements for communities. The revised strategy supersedes the air quality strategy: Volume 1 in England¹²⁹.
- **A Green Future: Our 25 Year Plan to Improve the Environment (25YEP) (2018)** includes policies and actions to reduce air pollution including a commitment to publish a Clean Air Strategy and curbing emissions from combustion plants and generators.
- The **Environmental Improvement Plan (EIP) (2023)** (the first revision to the 25YEP) includes Goal 2: Clean Air. Under this goal, the EIP includes a number of targets and commitments relating to reduced population exposure to PM_{2.5}, legal concentration limits for a number of key pollutants (the majority of which are already met), a legal target for PM_{2.5} concentration and legal emission reduction targets for nitrogen oxides, sulphur dioxide, PM_{2.5}, ammonia and non-methane volatile organic compounds. To meet these targets and commitments the EIP sets out a number of actions, including, of particular

¹²⁸ Defra (2023) Air Pollution in the UK 2022. Available online at: https://uk-air.defra.gov.uk/library/annualreport/viewonline?year=2022_issue_1&jump=2-5#report_pdf [Access November 2023]

¹²⁹ Defra (2023) Air Quality Strategy. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1180706/Air_Quality_Strategy_Web.pdf [Accessed November 2023]

relevance, consulting on an extension to the existing North Sea Emission Control Area to cover the Irish Sea, establishing a 'course to zero' for the domestic maritime sector and publishing a refreshed Clean Maritime Plan.

- The **National Planning Policy Framework (2024)** places a duty on planning policy and decisions to prevent new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by unacceptable levels of air pollution and states that development should (where possible) help to improve local air quality. It also states that planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. The NPPF also highlights that opportunities to improve air quality or mitigate impacts should be identified and as far as possible considered at the plan-making stage and that planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan.
- The **National Planning Practice Guidance relating to Air Quality (2019)** provides guiding principles on how planning can take account of the impact of new development on air quality. The guidance provides information on a range of topics including (inter alia) air quality considerations that planning should address, the role of plan-making with regards to air quality, what information is available about air quality, when air quality could be relevant to the development management process, and specific issues that may need to be considered when assessing air quality impacts.

Wales

- The **Air Quality Standards (Wales) Regulations 2010** (WSI 2010/1433) bring into law in Wales the limits set out in European Union (EU) Daughter Directives on Air Quality. The regulations require that Welsh Ministers divide Wales into air quality zones.
- The **Well-being of Future Generations (Wales) Act 2015** requires public bodies including the Welsh Government to undertake sustainable development. At the national level, the Welsh government have published 46 national indicators for Wales, which includes 'Levels of nitrogen dioxide (NO₂) pollution in the air' (Indicator No. 4).
- **Planning Policy Wales (Edition 12) (2024)** sets out the land use planning policies of the Welsh Government. Regarding air quality, Planning Policy Wales sets out potential material planning considerations in relation to: location and site selection; impact on health and amenity; the risk and impact of potential pollution from the development as well as the effect of the surrounding environment; the prevention of nuisance; and the impact on the road and other transport networks.
- In June 2017 the Welsh Government published **Local Air Quality Management in Wales 2017** which provides policy guidance on the overall approach to local air quality management in Wales.

Baseline information

United Kingdom

Emissions Trends

The UK emissions of sulphur dioxide (SO₂), oxides of nitrogen (NO_x), non-methane volatile organic compounds (NMVOCs), ammonia (NH₃) and particulate matter (as PM₁₀ and PM_{2.5}), are reported annually via a National Statistics Release. The most recent release covers the period 1970 to 2021. The most recent release shows that:

Emissions of SO₂ fell by 98% since 1970, to 126 thousand tonnes in 2021. This was driven by a decline in coal use in the energy sector, the emissions from which decreased by 8% from 1970 to 1991, followed by a more rapid decrease, falling by 83% of 1991 levels by 2005, followed by a further 97% reduction from 2005 levels through to 2021. Stricter limits on sulphur content of liquid fuels have also reduced emissions in the long-term. Emissions of sulphur dioxide decreased by 5% from 2020 to 2021 (the lowest level in the period covered)¹³⁰.

- Emissions of NO_x have fallen by 77% since 1970, to 677,000 tonnes in 2021, driven by a decline in coal use in power stations and modernisation of the road transport fleet. There was an increase of less than 1% between 2020 and 2021 and since 2020 total emissions have not changed significantly since 2020, in part attributed to the Covid-19 restrictions. This is in contrast to the long-term trend, as UK emissions have fallen by an average of 4% per year between 1990 and 2021¹³¹.
- Emissions of NH₃ have fallen by 14% since 1980, to 265,000 tonnes in 2021. The majority of this reduction occurred between 1980 and 2008, after which, up until 2013 annual emissions remained relatively stable, with the lowest emissions in the period covered being in 2013 (255,000 tonnes). This was followed by a 7% increase in emissions between 2013 to 2017, then a 5% decline to 2020, followed by an increase of 2% to 2021. Changes in the trend of emissions of ammonia are largely driven by changes to farming practices and herd sizes¹³².
- Emissions of NMVOCs have fallen by 68% since 1970, to 781,000 tonnes in 2021. NMVOC emissions reached the highest point in the time series in 1989 and then fell by

¹³⁰ DEFRA (2023) Emissions of air pollutants in the UK – Sulphur dioxide (SO₂). Available online at: <https://www.gov.uk/government/statistics/emissions-of-air-pollutants/emissions-of-air-pollutants-in-the-uk-sulphur-dioxide-so2> [Accessed October 2023]

¹³¹ DEFRA (2023) Emissions of air pollutants in the UK – Nitrogen oxides (NO_x). Available online at: <https://www.gov.uk/government/statistics/emissions-of-air-pollutants/emissions-of-air-pollutants-in-the-uk-nitrogen-oxides-nox> [Accessed October 2023]

¹³² DEFRA (2023) Emissions of air pollutants in the UK – Ammonia (NH₃). Available online at: <https://www.gov.uk/government/statistics/emissions-of-air-pollutants/emissions-of-air-pollutants-in-the-uk-ammonia-nh3> [Accessed October 2023]

an average of 5% per year between 1990 and 2009, largely due to improvements to emissions standards for road transport and stricter limits applied to industrial processes. Since 2010, annual changes have been much smaller, averaging a decrease of just 2% each year (including a 2% decrease between 2020 and 2021). Since 1990, NMVOC emissions have fallen by 72%¹³³.

- Annual emissions of PM₁₀ have fallen by 79% since 1970, to 143,900 tonnes in 2021. There was an increase of 8% between 2020 and 2021. Annual emissions of PM_{2.5} have fallen by 85% since 1970, to 83,200 tonnes in 2021. There was an increase of 6% between 2020 and 2021. The UK has seen a 28% reduction in PM_{2.5} emissions between 2005 and 2021. In 2021, the UK did not meet the 30% emission reduction commitment required between 2020 to 2029. Levels of both pollutants generally decreased year-on-year between 1970 and the late-2000s. The long-term decrease is driven by decreases in most emissions sectors, but the reduction in the burning of coal and improved emission standards for transport and industrial processes are major drivers, however, considerable decreases have been largely offset by increases in emissions from wood burning in domestic settings and from solid fuel burning by industry (particularly biomass)¹³⁴.

Shipping fuels produce significant quantities of air pollutants, reducing the air quality in coastal areas¹³⁵. In 2016, domestic shipping (ships that start and end their journey in the UK) accounted for 10% of the UK's total domestic NO_x emissions, 2% of primary PM_{2.5} and 7% of SO₂; however, these figures do not include the emissions from visiting international ships in UK ports (ships calling at UK ports which come from or are going to international destinations) and shipping in transit through UK waters are much larger than emissions from domestic shipping. Analysis completed by Imperial College showed that in 2016, NO_x emissions from international shipping and shipping in transit were three and six times higher

¹³³ DEFRA (2023) Emissions of air pollutants in the UK – Non-methane volatile organic compounds (NMVOCs). Available online at: <https://www.gov.uk/government/statistics/emissions-of-air-pollutants/emissions-of-air-pollutants-in-the-uk-non-methane-volatile-organic-compounds-nmvocs> [Accessed October 2023]

¹³⁴ DEFRA (2023) Emissions of air pollutants in the UK – Non-methane volatile organic compounds (NMVOCs). Available online at: <https://www.gov.uk/government/statistics/emissions-of-air-pollutants/emissions-of-air-pollutants-in-the-uk-non-methane-volatile-organic-compounds-nmvocs> [Accessed October 2023]

¹³⁵ Environment Agency (2023) State of the environment: the coastal and marine environment. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1130743/State_of_the_environment_-_the_coastal_and_marine_environment_-_report.pdf [Accessed November 2023]

respectively (233 thousand tonnes and 433 thousand tonnes respectively) than that of domestic shipping (75 thousand tonnes)¹³⁶.

Air Quality Compliance

For the purposes of air quality monitoring and assessment of compliance with the Air Quality Standards Regulations (2010), the UK is divided into 43 zones for air quality assessment. There are 28 agglomeration zones (large urban areas) and 15 non-agglomeration zones. In terms of compliance in 2022¹³⁷:

- The limit value for hourly mean nitrogen dioxide (NO₂) was met in all 43 zones;
- 34 zones met the limit value for annual mean NO₂, with nine zones (all in England) exceeding;
- All zones required to meet the critical level for annual NO_x set for protection of vegetation (non-agglomeration zones) did so (and have done since 2008);
- All zones met the limit value for daily mean concentration and annual mean concentration of PM₁₀, without the need for the subtraction of the contribution from natural sources;
- All zones met both limit values for annual mean concentration of PM_{2.5} particulate matter: the Stage 1 limit value (in force since 1st January 2015), and the Stage 2 limit value (in force since 2020);
- The UK has previously achieved its 2020 national exposure reduction target for PM_{2.5}, based on the Average Exposure Indicator (AEI) statistic. In 2022, the three-year running mean AEI was 8 µg m⁻³ and therefore remained within the target value;
- The legally mandatory target (set under the Environmental Targets (Fine Particulate Matter) (England) Regulations (2023) (as described above)) for annual mean PM_{2.5} was exceeded at six monitoring stations in England in 2022. No monitoring stations exceeded the interim target, to be met by January 2028. In terms of the legally mandatory PM_{2.5} population reduction target (also set by the Regulations), the population exposure for 2022 was 8.13 µg m⁻³, which is a reduction of 19% compared to 2018 (the interim target to be met by January 2028 is 22%);
- All zones met both the target values for ozone; the target value based on the daily maximum eight-hour mean, and the target value based on the AOT40 statistic¹³⁸;

¹³⁶ Environment Agency (2023) State of the environment: the coastal and marine environment. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1130743/State_of_the_environment_-_the_coastal_and_marine_environment_-_report.pdf [Accessed November 2023]

¹³⁷ Defra (2023) Air Pollution in the UK 2022. Available online at: https://uk-air.defra.gov.uk/library/annualreport/viewonline?year=2022_issue_1#report_pdf [Accessed October 2023]

¹³⁸ The AOT40 statistic (expressed in µg m⁻³.hours) is the sum of the difference between hourly concentrations greater than 80 µg m⁻³ (= 40 ppb) over a given period using only the hourly mean values measured between 08:00 and 20:00 Central European Time each day

- No zones were compliant with the long-term objective for ozone, set for the protection of human health, based on the daily maximum eight-hour mean;
- 32 zones met the long-term objective for ozone, set for the protection of vegetation, based on the AOT40 statistic;
- All zones met the limit values for sulphur dioxide, carbon monoxide, benzene and lead, and the target values for arsenic and cadmium;
- Three zones (two in England, one in Wales) exceeded the target value for nickel; and
- Two zones in Wales exceeded the target value for benzo[a]pyrene.

Air Quality Management Areas (AQMAS)

As of July 2023 there were 217 local authorities in England (33 of which were in London) and 11 local authorities in Wales with AQMAS. Most AQMAS in the UK are in urban areas and have been established to address the contribution to air pollution from traffic emissions of nitrogen dioxide or PM₁₀, or in some cases both; however, there are also a small number for SO₂. In total in England (outside of London) as of July 2023 there were 509 AQMAS for NO₂, whilst in London there were a further 34 and in Wales there were 43. For PM₁₀ in England (outside of London) there were 26 AQMAS, whilst there were a further 28 in London, and in Wales there was one. There was also a total of five AQMAS for SO₂ in England; however, none of these were in London and there were also none in Wales. Emissions from transport (primarily related to roads), were the main source of pollutants in declared AQMAS.

In total, within 30km of the coast of England and Wales, as of November 2023, there were 234 AQMAS across 86 local authorities.

Likely Evolution of the Baseline

Air quality is expected to continue to improve into the future due to the move towards the electrification of vehicles and other improvements in technology. Without the revised NPS for Ports the currently designated NPS for Ports would continue to set the framework for decisions on proposals for new port development promoted through a development consent order (DCO) application. As a result, it is therefore unlikely that there would be a significant change in the future baseline

Key issues

The policy context and baseline information have informed the identification of the following key issues and opportunities for air quality:

- Poor air quality is generally associated with urban/ industrial areas and major road infrastructure. A relatively large number of AQMAS are located in urban areas, many of which have been designated due to high NO₂ and PM₁₀ levels.
- Emissions from shipping can combine with other pollutants to form secondary PM_{2.5} which travels long distances and can impact health outside the local area.
- Domestic policy on transport-related air pollutant emissions to-date has largely focused on roads (particularly in relation to nitrogen dioxide concentrations); however, as long-

term emissions from road transport begin to decrease, the relative contribution of other sources of air pollution, including the maritime sector, will increase.

Noise

Introduction

The policy context, baseline information and key issues for the noise topic are presented below. There are links between the noise topic and other topics in the AoS, specifically population and human health and biodiversity and nature conservation.

Policy context

The policies outlined below aim to manage both ambient noise as well as that emitted for a specific point source. In relation to ports, elevated noise levels could occur during the construction phase, both on site and associated with transport, as well as during operation as ports are utilised.

United Kingdom

- The **Environmental Protection Act (1990)** defines the legal framework within England, Scotland and Wales for the duty of care for waste, contaminated land, and statutory nuisance (including noise emitted from Premises be prejudicial to health or a nuisance). Further provisions with respect to noise (as well as waste disposal, water pollution, atmospheric pollution and public health) are set out in the **Control of Pollution Act 1974**. Noise, litter and waste controls are introduced in the **Clean Neighbourhoods and Environment Act 2005**.
- The **Control of Noise at Work Regulations 2005** (the Noise Regulations) (SI 2005/1643) aims to ensure that workers' hearing is protected from excessive noise at their place of work, which could cause them to lose their hearing and/or to suffer from tinnitus.
- The Institute of Environmental Management and Assessment (IEMA) / Institute of Acoustics document updated **Guidelines for Noise Impact Assessment** were published in October 2014. The guidelines are applicable to noise impact assessments for any scale of development proposal.
- The **British Standards Institution (BSI) document BS 8233: 2014 - Sound Insulation and Noise Reduction for Buildings - Code of Practice** gives recommendations for the control of noise in and around buildings and suggests appropriate criteria and limits for different situations. The code is primarily intended to guide the design of new or refurbished buildings, but it does provide a source of noise levels for common situations, such as typical traffic noise levels at the facades of buildings.
- The BSI document **BS 5228-1: 2009 Code of Practice for Noise and Vibration Control on Construction and Open Sites** gives recommendations for basic methods of noise control relating to construction and open sites where work/activities generate significant noise levels. Part 1 provides guidance concerning methods of predicting and measuring noise and assessing its effects. Part 2 provides guidance concerning methods of predicting and measuring vibration and assessing its effects.

England

- The **National Planning Policy Framework (2024)** sets out the core land use planning principles that should underpin both plan-making and decision taking. The NPPF expects the planning system to prevent “*both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of, [inter alia] noise pollution*”.
- In addition, paragraph 198 of the NPPF provides that planning policies and decisions should ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life; identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason; and limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.
- The noise section of the **Planning Practice Guidance** provides advice regarding the consideration of potential noise impacts in planning decisions regarding new development.
- The **Noise Policy Statement for England (Defra, 2010)** sets out the long-term vision of Government noise policy which seeks to promote good health and quality of life through the effective management of noise within the framework of Government policy on sustainable development.
- In accordance with the **Environmental Noise (England) Regulations 2006**, Defra prepares **Noise Action Plans in five-yearly cycles**, designed to address the management of noise issues and effects from roads and railways in the 65 agglomeration areas in England. The Action Plan is underpinned by the results of regular strategic mapping exercises.

State of the Environment: health, people and the environment is a report published by the Environment Agency in 2023 that focusses on the relationship between human health and access to a clean and high-quality natural environment. The Noise section outlines the effects of noise pollution on human health in England.

Wales

- Welsh Government published a new spatial strategy for Wales in February 2021; **Future Wales: The National Plan 2040**. The Plan sets out a 20-year development plan for the whole of Wales, by addressing national priorities through the planning system. Through developing infrastructure, the Plan aims to reduce noise pollution.
- **Planning Policy Wales Edition 11 (Chapter 3 – Strategic and Spatial Choices) (2021)** will tackle issues, including noise pollution, by ‘considering the design of a

development and its impacts upon everyday lives as well as thinking holistically about where people might live and work and which areas should be protected’.

- **Technical Advice Note (TAN) 11: Noise (1997)** sets out the Welsh Government’s land use planning policy in respect of noise generating development, noise-sensitive development and measures to mitigate the impact of noise. It sets out that local planning authorities must ensure that noise generating development does not cause an unacceptable degree of disturbance. They should also bear in mind that if subsequent intensification or change of use results in greater intrusion, consideration should be given to the use of appropriate conditions.
- The **Environmental Noise (Wales) Regulations 2006** require the Welsh Government to produce noise maps for Wales’ three agglomerations, major roads, and major railways, and action plans every five years, to determine areas that are likely to be exposed to noise pollution and establish methods to reduce this.
- The **Noise and Soundscape Action Plan 2018-2023** outlines what the Welsh Government are doing to manage the impact of noise over the plan period. The Welsh Government are currently drafting the **Noise and Soundscape Plan for Wales 2023-2028**, and at the time of writing are seeking public views on their strategy towards soundscapes.

Baseline information

United Kingdom

Noise and vibration are predominantly local in nature and difficult to measure on a regional or national scale.

The National Noise Attitude Survey 2012 – NO0237 (December 2014)¹³⁹ was undertaken to:

- provide the Government with a good estimate of current attitudes to various aspects of environmental, neighbour and neighbourhood noise (including the percentage of the population affected); and
- allow the Government to detect any substantive changes in attitudes to noise in the UK since the 2000 survey.

A summary of findings revealed that 72% of respondents reported general satisfaction with their noise environment. However, between 2000 and 2012 there was an increase of between 11% and 17% (depending on the noise source) in the proportion of people surveyed who felt that they were to some extent adversely affected by the four most

¹³⁹ Defra (2014) National Noise Attitude Survey 2012 (NNAS2012). Available at: [12378_SummaryReportV1.0.pdf](#) [Accessed November 2023]

commonly heard sources of noise ('road traffic', 'neighbours and/or other people nearby', 'aircraft, airports and airfields' and 'building, construction, demolition, renovation and road works'). Also in the same period, there was a decrease of between 10% and 16% (depending on the noise source) in the proportion of people surveyed who felt that they were not at all adversely affected by the four most common sources of noise.

The survey also found that the proportion of those reporting themselves as being significantly adversely affected by noise had remained broadly the same since 2000, i.e., the proportion of those experiencing potentially significant adverse effects had not worsened. The number reporting hearing the four most common sources of noise had also remained broadly the same. In general, 48% of respondents said that their home life was spoilt to some extent by noise, with 52% reporting that noise did "not at all" spoil their home life.

After air pollution, noise has the second most detrimental impact on health of any form of pollution¹⁴⁰. The World Health Organisation has linked noise pollution to health and wellbeing issues including¹⁴¹:

- Sleep disturbance
- Severe chronic annoyance
- Coronary heart disease
- Metabolic health outcomes e.g., diabetes and obesity
- Disruption to children's learning and development

The aims of the Noise Policy Statement for England (2010) also highlight the links between noise impacts and health and wellbeing. A 2013 study put the cost of noise-related hypertension and associated conditions to the UK at £1.09 billion per annum. It also found that exposure to high levels of noise led to an additional 1,169 dementia cases, 788 strokes and 542 heart attacks during the study year¹⁴².

¹⁴⁰ Environment Agency (2023) State of the environment: health, people and the environment. Available at: [State of the environment: health, people and the environment - GOV.UK \(www.gov.uk\)](https://www.gov.uk/state-of-the-environment/health-people-and-the-environment) [Accessed November 2023]

¹⁴¹ World Health Organization (2019) Environmental Noise Guidelines for the European Region. Available at: [9789289053563-eng.pdf \(who.int\)](https://www.who.int/publications-detail/9789289053563-eng) [Accessed November 2023]

¹⁴² Harding, A-H. and Others (2013) The cost of hypertension-related ill-health attributable to environmental noise. Available at: [The cost of hypertension-related ill-health attributable to environmental noise Harding AH, Frost GA, Tan E, Tsuchiya A, Mason HM - Noise Health \(noiseandhealth.org\)](https://noiseandhealth.org/publications/the-cost-of-hypertension-related-ill-health-attributable-to-environmental-noise) [Accessed November 2023]

Another study estimates the total social cost of road traffic noise pollution, including health related costs, loss of productivity, and chronic severe annoyance, at over £9 billion per annum¹⁴³.

England

The main source of noise pollution comes from road traffic¹⁴⁴, with recent noise mapping data showing that the number of people exposed to traffic related noise that exceeds WHO guidelines in England was estimated to be approximately 11.5 million in 2019. For rail traffic, this was estimated to be 1.5 million people¹⁴⁵.

The proportion of people making noise complaints in England - as reported within the last published edition of the Office for National Statistics Sustainable Development Indicators publication¹⁴⁶ (note that this is no longer published, but data for the indicators is still available from its original source) – has decreased from 2006/07 to 2012/13 but not significantly.

In the year 2020/21, the number of complaints received increased by 54% from 2019/20 in the 89 local authorities who had responded to the Noise Survey in both years¹⁴⁷. A total of 356,367 complaints were received by the 144 local authorities who responded to the survey (45% of local authorities in England), 14.9 per 1,000 people on average. This has more than doubled from 6.7 per 1,000 people out of 117 local authorities in the year 2019/20¹⁴⁸.

Under the terms of the Environmental Noise (England) Regulations 2006, Defra has prepares Noise Action Plans in five-yearly cycles, underpinned by the results of a strategic mapping exercise¹⁴⁹. They indicate that road traffic is the most dominant noise exposure source.

Defra has identified a number of 'Important Areas' or 'noise hotspots' through strategic mapping¹⁵⁰ and these are generally aligned with urban areas. The Campaign to Protect

¹⁴³ The Interdepartmental Group on Costs and Benefits Noise Subject Group (2010) Noise & Health – Valuing the Human Health Impacts of Environmental Noise Exposure. Available at: [Noise & Health – Valuing the Human Health Impacts of Environmental Noise Exposure \(khub.net\)](#) [Accessed November 2023]

¹⁴⁴ Environment Agency (2023) State of the environment: health, people and the environment. Available at: [State of the environment: health, people and the environment - GOV.UK \(www.gov.uk\)](#) [Accessed November 2023]

¹⁴⁵ Ibid.

¹⁴⁶ ONS (2015) Sustainable Development Indicators: July 2015. Available at: [Sustainable Development Indicators - Office for National Statistics \(ons.gov.uk\)](#). [Accessed November 2023]

¹⁴⁷ Chartered Institute of Environmental Health (2022) CIEH Noise Survey 2020/21 Report on Findings – England. Available at: [cieh-noise-survey-england-2020-21.pdf](#) [Accessed November 2023]

¹⁴⁸ Chartered Institute of Environmental Health (2021) CIEH Noise Survey 2019/20 Report on findings – England. Available at: [cieh-noise-survey-findings-2019_20.pdf](#) [Accessed November 2023]

¹⁴⁹ Extrium (2019) England Noise and Air Quality Viewer. Available at: [Extrium > England Noise and Air Quality Viewer](#) [Accessed November 2023]

¹⁵⁰ Ibid.

Rural England published a tranquillity map for England in 2007¹⁵¹. The least tranquil areas are again the urban areas, with the most tranquil in the rural areas.

Wales

24% of people in Wales report that they are regularly bothered by noise¹⁵². Reducing noise pollution and improving the quality of soundscapes in Wales has been highlighted as contributing to all seven of the well-being goals highlighted in the Well-being of Future Generations (Wales) Act.

The Chartered Institute of Environmental Health (CIEH) Noise Survey 2019/20 received responses from all local authorities in Wales, and reported a total of 20,445 noise complaints over the period of study, an average of 6.5 per 1,000 people and an increase of 10% from 18,567 complaints in the year 2018/19¹⁵³.

The most common source of noise complaints during 2019/20 was residential (73.2%), this was the case across all local authorities. 'Other' sources of noise are the second most common (14.5%), this includes noise in the street, noise from machinery and equipment, traffic and aircraft noise. The third most common source of noise is commercial or leisure (8.5%), followed by construction (2.5%) and industrial noise (1.3%)¹⁵⁴.

Interactive noise maps showing estimated levels of road traffic, railway and industrial noise in Wales' three largest urban areas, and noise from the busiest roads and railways across Wales are available via the Welsh Government's website¹⁵⁵.

In 2016, there were 247 priority areas associated with road traffic and railway noise identified in Wales¹⁵⁶. Under the Environmental Noise Regulations, the Welsh Government has an obligation to produce noise maps for agglomerations (urban areas with a population of over 100,000), of which there are three within Wales: Cardiff and Penarth, Newport, and Swansea and Neath Port Talbot¹⁵⁷.

¹⁵¹ Campaign to Protect Rural England (2007) Tranquillity Map: England. Available at: [tranquillity map england regional boundaries 1.pdf \(cpre.org.uk\)](#) [Accessed November 2023]

¹⁵² Chartered Institute of Environmental Health (2021) CIEH Noise Survey 2019/20 Report on Findings – Wales. Available at: [wales-noise-survey-2019-2020.pdf \(cieh.org\)](#) [Accessed November 2023]

¹⁵³ Ibid.

¹⁵⁴ Ibid.

¹⁵⁵ Welsh Government (2022) Environmental Noise Mapping 2022. Available at: [Environmental Noise Mapping 2022 | DataMapWales \(gov.wales\)](#) [Accessed November 2023]

¹⁵⁶ Welsh Government (2016) Local Air Quality and Noise Management in Wales. Available at: [160913 air quality noise management en.pdf \(gov.wales\)](#) [Accessed November 2023]

¹⁵⁷ Ibid.

Tranquillity is part of the Welsh Government's Noise Action Plan, and tranquil areas in Wales are identified as with England identified in the more rural areas with less tranquil areas in the urban areas and along main roads¹⁵⁸.

Likely Evolution of the Baseline

The amount of people affected by noise from transport has increased in recent years although this increase is likely slow in future given the transition to vehicles with quieter propulsion systems. Without the revised NPS for Ports the currently designated NPS for Ports would continue to set the framework for decisions on proposals for new port development promoted through a development consent order (DCO) application. As a result, it is therefore unlikely that there would be a significant change in the future baseline.

Key issues and opportunities

The policy context and baseline information have informed the identification of the following key issues and opportunities for noise:

- Ambient noise levels are gradually rising as a result of a growing - and increasingly mobile - population. This, in turn, increases the value of tranquil places. The cumulative impacts of noise on sensitive groups in local communities may create or exacerbate existing health issues.
- Road traffic is a dominant source of noise.
- Noise from the construction and operation of ports infrastructure will need to be assessed and where possible reduced or mitigated through guidance in the draft revised NPS.
- Noise is difficult to measure on a national scale.
- Dissatisfaction with noise levels is increasing as more people are adversely affected by noise.
- Noise can have serious detrimental impacts on physical and mental health and wellbeing, as well as causing disruption to everyday life.
- The number of noise complaints is increasing across both England and Wales.
- Millions of people across England and Wales live with unacceptable levels of noise from road traffic and railways.

¹⁵⁸ Natural Resources Wales (2022) Tranquil Areas Wales. Available at: [Tranquil Areas Wales | DataMapWales \(gov.wales\)](https://gov.wales/data-map-wales) [Accessed November 2023]

Climate Change (Mitigation and Adaptation)

Introduction

The policy context, baseline information and key issues for the climate change topic are presented below. There are links between climate change and all the other topics in the AoS, either through the avoidance or reduction of GHGs (mitigation) or adapting to the consequences of climate change, such as more extreme weather events, increased temperatures and rising sea levels.

Policy context

United Kingdom

- In the UK, the **Climate Change Act 2008** introduced legislative targets for reducing the UK's impacts on climate change and the need to prepare for its impacts. The Act sets binding targets for a reduction in CO₂ emissions of 80% by 2050, compared to a 1990 baseline. Interim targets and five-year carbon budget periods are used to ensure progress towards the 2050 target. The Climate Change Act 2008 also requires the Government, on a regular basis, to assess the risks to the UK from the impact of climate change and report to Parliament. The UK Committee on Climate Change Adaptation Sub-committee is responsible for preparing these climate change risk assessments, the latest of which, the Third UK Climate Change Risk Assessment (CCRA3) Evidence Report, was published in January 2022.
- As required under sections 12 and 14 of the Climate Change Act 2008, **The Carbon Plan: Delivering our Low Carbon Future (2011)** sets out proposed measures to implement the UK's first four carbon budgets and thereby achieve a 50% reduction in the UK's annual net carbon account by 2027 (from 1990 levels). The plan builds upon the previous Low Carbon Transition Plan (2009) and includes proposals for energy efficiency, heating, transport and industry.
- The 2019 amendment to the Act, **The Climate Change Act 2008 (2050 Target Amendment) Order 2019**, includes a target of reducing emissions by 100% (compared to 1990 levels) by 2050, known as a 'net zero' target. The UK Government has confirmed its intention within the Sixth Carbon Budget to reduce UK GHG emissions by 78%, by 2035, relative to 1990 levels. The Sixth Carbon Budget also incorporates the UK's share of international aviation and shipping emissions for the first time in any UK Carbon Budget¹⁵⁹. This is in line with advice provided to the UK Government by the UK

¹⁵⁹ Defra (2021) UK enshrines new target in law to slash emissions by 78% by 2035. Available online at: <https://www.gov.uk/government/news/uk-enshrines-new-target-in-law-to-slash-emissions-by-78-by-2035> [Accessed November 2023]

Committee on Climate Change. A report (**Carbon Budget Delivery Plan**) on policies and proposals to achieve this Sixth Carbon Budget was laid before the UK Parliament in March 2023¹⁶⁰.

- The **Flood and Water Management Act (2010)** aims to provide better, more sustainable management of flood risk for people, homes and businesses, help safeguard community groups from unaffordable rises in surface water drainage charges and protect water supplies to the consumer.
- **Net Zero Strategy: Build Back Greener (2021)** sets out policies and proposals for keeping the UK on track for carbon budgets, the Nationally Determined Contribution, and sets out our vision for a decarbonised economy in 2050. The Strategy sets out a delivery pathway showing indicative emissions reductions across sectors to meet targets up to the sixth carbon budget (2033-2037).
- The **UK Carbon Budgets** set the UK budgets for GHG emissions for varying periods. The budgets set reductions in emissions based on levels from 1990 and aim to achieve Net Zero by 2050. The Fourth Carbon Budget aims for a 52% reduction on 1990 levels between 2023-2027 (1,950 MtCO_{2e}), the Fifth Carbon Budgets aims for a 58% reduction between 2028-2032 (1,725 MtCO_{2e}), and the Sixth Carbon Budget aims for a 78% reduction in emissions between 2033-2037 (965 MtCO_{2e}).
- **Decarbonising transport: a better, greener Britain (2021)** sets out a long list of commitments made by The Department of Transport to help decarbonise the transport sector, with the aim of achieving Net Zero by 2050. The commitments cover a range of topics including increasing active travel, accelerating maritime decarbonisation and maximising the benefits of sustainable low carbon fuels amongst others.
- The **Nationally Determined Contribution (NDC) 2030** was first announced in December 2020, in line with Article 4 of the Paris Agreement. In the 2020 NDC, the UK committed to reducing economy-wide GHG emissions by 68% by 2030, compared to 1990 levels. In 2022, this commitment remains the same, however, the NDC has been strengthened in a number of ways, including explaining more clearly how the UK will deliver targets by 2030.
- The **Committee on Climate Change Progress Report (2023)** provides an update on the UK's progress of reducing GHG emissions, breaking down the progress into various topics including surface transport, waste, buildings, aviation, and shipping. The report also gives an update on the state of the climate. Moreover, the report provides recommendations in how progress can be improved, and provides a review of progress made against the recommendations made in last year's report.

¹⁶⁰ HM Government (2023) Carbon Budget Delivery Plan. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1147369/carbon-budget-delivery-plan.pdf [Accessed December 2023]

- **UK CCRA3 (2022)** outlines the UK government and devolved administrations' position on the key climate change risks and opportunities that the UK faces today. As required by the Climate Change Act 2008, the UK government has undertaken the third five-year assessment of the risks of climate change on the UK. This is based on the Independent Assessment of UK Climate Risk, the statutory advice provided by the Climate Change Committee (CCC), commissioned by the UK government and devolved administrations.
- The **UK Second National Adaptation Programme (NAP3) (2023-2028)** contains a mix of policies and actions to help adapt successfully to future weather conditions, by dealing with the risks and making the most of the opportunities. It sets out a number of objectives, including to ensure infrastructure is located, planned, designed and maintained to be resilient to climate change, including increasingly extreme weather events.
- The **Accounting for the Effects of Climate Change, Supplementary Green Book (2020)** is supplementary guidance to HM Treasury's Green Book (2020, updated in 2022). This guidance provides support to analysts and policymakers to ensure that policies, programmes, and projects are resilient to climate change impacts, and that those impacts are accounted for when appraising options.
- **Maritime 2050** includes the following relevant key recommendations:
 - *"Government will assess how economic instruments could support the transition to zero emission shipping in the medium to long term.*
 - *In line with the Industrial Strategy, government aims to launch a number of "zero-emission shipping ambitions" in the Clean Maritime Plan.*
 - *Government will consider the merits of introducing a medium term target for emissions of GHGs and air quality pollutants from UK shipping. Further detail on this consideration will be set out in the Clean Maritime Plan".*
- The **Clean Maritime Plan (2019)** is the environmental route map of Maritime 2050, which sets out the UK Governments vision of the UK's transition to a future of zero emission shipping and includes a number of commitments/actions made by the government in to support the transition of the maritime sector move towards a vision of zero emissions shipping.

England

- The **National Planning Policy Framework (MHCLG, 2023)** provides a set of core land-use planning principles that should underpin both plan-making and decision-taking. These include supporting *"the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in GHG emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure"* (paragraph 152). In turn, Plans are expected to take a proactive approach

to mitigating and adapting to climate change in light of its long-term implications including changes to flood risk and water supply. New development should both avoid increased vulnerability to the range of impacts arising from climate change and help to reduce GHG emissions, such as through its location, orientation and design.

- The section of **Planning Practice Guidance (2019)** regarding Climate Change advises how planning can identify suitable mitigation and adaptation measures in plan-making and the application process to address the potential impacts of climate change. This includes potential climate change adaptation options such as the availability of water and water infrastructure for the lifetime of the development and design responses to promote water efficiency and protect water quality.
 - In 2010 Defra published **Adapting Energy, Transport and Water Infrastructure to the Long-term Impacts of Climate Change**. The report sets out the case for adapting infrastructure in the energy, transport and water sectors so that new and existing infrastructure is able to operate effectively in a long-term changing climate. The report focuses on the long-term impacts of climate change (2030s to 2100) to the infrastructure in the three sectors.
 - **A Green Future: Our 25 Year Plan to Improve the Environment (25YEP) (2018)** includes policies and actions designed to promote climate change mitigation and adaptation including: continuing to cut GHG emissions; making sure that all policies, programmes and investment decisions take into account the possible extent of climate change this century; and implementing a sustainable and effective second National Adaptation Programme.
 - Goal 8 of the **Environmental Improvement Plan (EIP) (2023)** is to reduce the risk of harm to people, the environment and the economy from natural hazards including flooding, drought, and coastal erosion. To achieve this goal, the EIP includes a delivery plan setting out actions under seven themes: upgrading and expanding national flood defences and infrastructure; using nature to reduce flood and coastal erosion risk; managing the flood risk from surface water; better preparing communities; supporting sharing best practice and innovative approaches at a local level; building resilience to increasing wildfire risk; reducing risks from heat. There are three target/s commitments that the EIP aims to achieve under Goal 8:
 - Invest in flood and coastal defence schemes to better protect more properties from flooding and coastal erosion impacts.
- Double the number of government-funded projects to reduce flooding and coastal erosion through nature-based solutions.
- Through to March 2025, maintain at least 94% of major flood defences to be fully fit for their designed purpose, with a long-term aim for this to be 98% of major flood defences.
- The EIP also sets out other relevant goals and targets relating to: emissions reductions (Goal 2: Clean Air– see **the Air Quality section of the baseline**), including actions such as establishing a ‘course to zero’ for the domestic maritime sector and the publishing of a

refreshed Clean Maritime Plan; and sustainable resource use (Goal 6: using resources from nature sustainably) which includes targets/commitments and actions relating to (inter alia) the halt and reversal of global forest loss (including commitments to plant more trees), restoration of peatlands and improving soil health to help to prevent climate change and protect against its impacts.

Accounting for the Effects of Climate Change Supplementary Green Book Guidance, was published by Defra in 2020 and provides support to analysts and policymakers to ensure, where appropriate, that policies, programmes and projects are resilient to the effects of climate change, and that such effects are being taken into account when appraising options.¹⁶¹

- The **National Flood and Coastal Change Risk Management Strategy for England**, was originally published by the Environment Agency in 2011 and provided the overarching framework for action by all risk management authorities to tackle all sources of flooding and coastal change. Significant progress has been made and, on the whole, risk management authorities have met the original strategic objectives and measures. Within the National Strategy, Flood Risk Management Plans (FRMPs) have been prepared setting out what measures will be taken to help manage the risk of flooding to people, the environment and economic activity. In 2020 a revised Strategy was published which sets out a vision for a nation ready for, and resilient to, flooding and coastal change up to 2100. The revised strategy includes three long term ambitions, underpinned by evidence about future risk and investment needs:
 - climate resilient places: working with partners to bolster resilience to flooding and coastal change across the nation, both now and in the face of climate change
 - today's growth and infrastructure resilient in tomorrow's climate: making the right investment and planning decisions to secure sustainable growth and environmental improvements, as well as infrastructure resilient to flooding and coastal change
 - a nation ready to respond and adapt to flooding and coastal change: ensuring local people understand their risk to flooding and coastal change, and know their responsibilities and how to take action¹⁶².

¹⁶¹ Defra (2020) Accounting for the Effects of Climate Change Supplementary Green Book Guidance.

Available online at:

https://assets.publishing.service.gov.uk/media/5fabacf98fa8f56da26ba375/Accounting_for_the_Effects_Of_Climate_Change_-_Supplementary_Green_Book_...pdf [Accessed December 2023]

¹⁶² Environment Agency (2022) National flood and coastal erosion risk management strategy for England: executive summary. Available online at: <https://www.gov.uk/government/publications/national-flood-and-coastal-erosion-risk-management-strategy-for-england--2/national-flood-and-coastal-erosion-risk-management-strategy-for-england-executive-summary#the-2020-flood-and-coastal-erosion-risk-management-strategy> [Accessed December 2023]

An initial 1-year action plan setting out actions needed was published in 2021, however, a longer-term roadmap was published in 2022. The **Flood and Coastal Erosion Risk Management Strategy Roadmap to 2026** contains practical actions out to 2026.¹⁶³

Wales

- **Energy Wales: A Low Carbon Transition (2012)** sets out the Welsh Government's aim to enhance the economic, social and environmental wellbeing of the people and communities of Wales - to achieve a better quality of life for our own and future generations. As set out in the Programme for Government, their ambition is therefore to: 'create a sustainable, low carbon economy for Wales'. In doing so, they want to ensure full advantage is taken of the transition to a low carbon economy to secure a wealthier, more resilient and sustainable future for Wales.
- The Welsh Government have a clear role to play in tackling climate change. The **Climate Change Strategy for Wales (2010)** and its associated delivery plans set targets to reduce GHG emissions in Wales by 3% every year and achieve at least a 40% reduction by 2020 compared to figures from 1990, as well as establishing measures to address climate change adaption.
- The **Well-being and Future Generations Act (Wales) 2015** requires Welsh Ministers and public bodies to take account of the report containing an assessment of the risks for the UK of the current and predicted impact of climate change most recently sent to the Welsh Ministers under section 56(6) of the Climate Change Act 2008 (c.27) (the UK Climate Change Risk Assessment).
- Part 2 of the **Environment (Wales) Act 2016** establishes a statutory framework for action on climate change, including targets for reducing emissions of GHG's and associated duties. The Welsh Ministers are required to ensure that the 'net Welsh emissions account' for the year 2050 is at least 80% lower than the baseline, set at 1990 emissions levels, and they must also specify in regulations interim targets for 2020, 2030 and 2040 and set five yearly carbon budgets. The Act also contains a range of other provisions regarding the sustainable management of natural resources, specifically including measures to enhance resilience. It also provided powers to establish a new Flood and Coastal Erosion Committee, which was set up in 2019.
- **Planning Policy Wales (Edition 12, 2024) (PPW)** sets out several objectives in respect of climate change mitigation and adaptation. It promotes planning to minimise the causes of climate change by taking decisive action to move towards a low carbon economy by proactively reducing the demand for energy, facilitating the delivery of new

¹⁶³ Environment Agency (2022) Flood and Coastal Erosion Risk Management Strategy Roadmap to 2026. Available online at: <https://www.gov.uk/government/publications/flood-and-coastal-erosion-risk-management-strategy-roadmap-to-2026> [Accessed December 2023]

and more sustainable forms of energy provision at all scales and minimising the emissions of GHG's to the atmosphere. It also promotes planning for the consequences of climate change. Chapter 6 and explains the inter-relationship between the need to protect, maintain and enhance the resilience of ecosystems and their ability to adapt to challenges presented by the climate change emergency. PPW is supported by the following Technical Advice Notes (TANs) that are particularly relevant to climate change:

- TAN12: Design (2016); and,
 - TAN15: Development and Flood Risk (2004).
- The Welsh Government's **Prosperity for All: A Low Carbon Wales (2019)** aims to ensure a fairer and healthier Welsh society, as well as maximise other wider benefits for Wales. The plan sets out the Government's approach to reducing emissions and increasing efficiency and includes 100 policies that aim to directly reduce emissions and support the growth of the low carbon economy.
 - The Welsh Government's **Net Zero Wales Carbon Budget 2 (2021) (2021 - 2025)** sets out 123 policies and proposals across all ministerial portfolios that commit to achieving Net Zero in Wales by 2050. The plan calls for action for the UK Government and states that the legislative foundation for tackling climate change has been laid, and that this decade should be the decade of action for Wales.
 - **Prosperity for All: A Climate Conscious Wales** is a climate change adaptation plan for Wales.

The **National Strategy for Flood and Coastal Erosion Risk Management in Wales (FCERM)** (2020)¹⁶⁴ is the second iteration of the Strategy (replacing the original, published in 2011). The Strategy sets out how the Welsh Government intends to manage the risks from flooding and coastal erosion across Wales over the 10 year period that the Strategy covers. The aim of the Strategy is to reduce the risk to people and communities from flooding and coastal erosion. To achieve this, the strategy sets out five key objectives:

- Improving our understanding and communication of risk;
- Preparedness and building resilience;
- Prioritising investment to the most at-risk communities;
- Preventing more people becoming exposed to risk; and
- Providing an effective and sustained response to events.

¹⁶⁴ Welsh Government (2023) The National Strategy for Flood and Coastal Erosion Risk Management in Wales. Available online at: <https://www.gov.wales/sites/default/files/publications/2020-11/the-national-strategy-for-flood-and-coastal-erosion-risk-management-in-wales.pdf> [Accessed December 2023]

Baseline information

United Kingdom

Adaptation

The State of the UK Climate Report 2022¹⁶⁵ provides a summary of the UK's weather and climate through the calendar year 2022, alongside the historical context for a number of essential climate variables. The 2022 report is the most recent 'State of the UK Climate' publication and the ninth published to date, providing up-to-date assessment of UK climate trends, variations and extremes based on the most up-to-date observational datasets of climate quality. The 2022 Report includes the following key findings:

Temperatures

- In terms of temperatures on land, 2022 was the warmest year in the UK data series from 1884, 0.9°C above the 1991–2020 average. It was also the first year to record a UK annual mean temperature above 10°C and the first time a temperature of 40°C was recorded in the UK. Furthermore, winter, spring, summer and autumn 2022 were all ranked in the top 10 warmest seasons for the UK in series from 1884 (winter from 1885). All of the top-10 warmest years for the UK in the data series from 1884 have occurred in the 21st century. The most recent decade (2013–2022) has been on average 0.3°C warmer than the 1991–2020 average and 1.1°C warmer than 1961–1990. This is the warmest 10-year period in both the UK series from 1884 and Central England Temperature (CET) series from 1659.
- The year 2022, was the warmest year for UK near-coast surface sea temperature (SST), in a data series from 1870. Furthermore, the 2013–2022 decade has been on average 0.2°C warmer than the 1991–2020 average and 0.8°C warmer than 1961–1990 for UK near-coast SST and all the top 10 warmest years for UK near-coast SST for the UK have occurred in the 21st century.

Sea Levels

- Since the 1900s, the sea level around the UK has risen by about 18.5 cm. Over the past 30 years (1993–2022) the sea level has risen by 11.4 cm. The rate of sea-level rise is increasing, with rates over the past 30 years in several locations around the UK range from 3.0 to 5.2 mm year⁻¹ (corrected for vertical land movement). Over the past 30 years the rate of sea-level rise around the UK is close to global sea-level rise estimates.

¹⁶⁵ Royal Meteorological Society (2023) International Journal of Climatology – State of the UK Climate 2022. Available online at: <https://rmets.onlinelibrary.wiley.com/doi/10.1002/joc.8167> [Accessed December 2023]

Weather Trends

- In terms of extreme weather events, Storm Eunice in February 2022 was the most severe storm to affect England and Wales since February 2014. A heatwave in July 2022 set a new UK all-time temperature record of 40.3°C in Lincolnshire. The period January–August 2022 was the driest across England and Wales since 1976, with drought status declared across parts of England and all of Wales. In December 2022, the UK experienced one of the most significant spells of low winter temperatures since December 2010. However, the observations show a clear downward trend in events of this type.
- Rainfall in 2022 rainfall was 94% of the 1991–2020 average. Five of the 10 wettest years for the UK in a data series from 1836 have occurred in the 21st century. Since 2009, the UK has had its wettest February, April, June, November and December on record (in monthly series from 1836 – 5 of 12 months) – as well as its two wettest winters. The most recent decade (2013–2022) has been on average as wet as 1991–2020 (i.e. anomaly 0%) and 8% wetter than 1961–1990 for the UK overall. For the 2013–2022 decade, UK winters have been 10% wetter than 1991–2020 and 25% wetter than 1961–1990, with much smaller changes for spring, summer and autumn overall. There has also been a slight increase in heavy rainfall in recent decades.
- The number and severity of widespread snow events have generally declined since the 1960s and 2022 was one of the least snowy years on record when compared to the last 60 years, similar to several other recent years (2020, 2019, 2016 and 2014).
- There have been fewer occurrences of max gust speeds exceeding 40/50/60 Kt in the last two decades compared to the 1980s and 1990s. The UK annual mean wind speed from 1969 to 2022 shows a downward trend, consistent with that observed globally.

The UK Climate Projections 2018 (UKCP18)¹⁶⁶ includes the following headline climate projections for the UK:

- By the end of the 21st century, all areas of the UK are projected to be warmer, more so in summer than in winter. By 2070 across the UK in a high emission scenario, temperatures are projected to increase by 1.3°C to 5.1°C in summer, and 0.6°C to 3.8°C in winter. Hotter summers are expected to become more common, with the temperature of hot summer days, by the 2070s, showing increases of 3.8°C to 6.8°C, under a high emissions scenario, along with an increase in the frequency of hot spells (defined as two or more days of maximum daytime temperatures exceeding 30°C). Whilst hot spells are

¹⁶⁶ Met Office (2022) UK Climate Projections: Headline Findings. Available online at: https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/research/ukcp/ukcp18_headline_findings_v4_aug22.pdf [Accessed December 2023]

usually confined to the South East of UK in the present day, by the 2070s the frequency will increase.

- Rainfall patterns across the UK, will continue to not be uniform and vary on seasonal and regional scales. By 2070, in a high emission scenario, changes in the levels of precipitation are projected to range between -45% to +5% in summer, and -3% to +39% in winter. Despite overall summer drying trends in the future, data suggests future increases in the intensity of heavy summer rainfall events, which will impact on the frequency and severity of surface water flooding, particularly in urban areas. Climate change is also projected to bring about a change in the seasonality of extremes, including significant increases in heavy hourly rainfall intensity in the autumn. Data also suggests there will be significant increases in hourly precipitation extremes in the future, however, it is noted that overall, summers are projected to become drier. By the end of the 21st century, lying snow is projected to decrease by almost 100% over much of the UK, although smaller decreases are seen over mountainous regions in the north and west.
- In terms of sea levels, the UKCP18 notes that the pattern of sea level rise is not uniform across the UK, with sea level rise being less in the north and more in the south; mainly due to the movement of land, up and down. For London, sea level rise by the end of the century (when compared to 1981-2000), for a low emission scenario is very likely to range between 0.29m to 0.70m, whereas for a high emission scenario, the range is very likely to be between 0.53m to 1.15m. In Cardiff, under a low emission scenario it is between 0.27m and 0.69m and under a high emission scenario it is between 0.51m and 1.13m¹⁶⁷.

England

Mitigation

UK Greenhouse Gas Inventory, 1990 - 2021 (2023)¹⁶⁸ presents the latest estimates of GHG emissions for the UK Devolved Administrations (Das): England, Scotland, Wales and Northern Ireland. The inventory shows that England was responsible for 74.7% of total net UK GHG emissions in 2021. There has been a decrease of 48.8% in GHG emissions between 1990 and 2021 In England with a reduction of approximately 10% between 2019 and 2021. The decreases have predominantly been driven by a reduction in emissions from

¹⁶⁷ Met Office (2022) Marine climate change projections. Available online at: <https://www.metoffice.gov.uk/research/approach/collaboration/ukcp/summaries/marine-climate-change-projections> [Accessed December 2023]

¹⁶⁸ Ricardo Energy & Environment for the Department of Energy and Climate Change, The Scottish Government, The Welsh Government and The Northern Ireland Department for Agriculture, Environment and Rural Affairs (2023) Greenhouse Gas Inventories for England, Scotland, Wales and Northern Ireland: 1990 – 2021. 2023. Available online at: https://naei.beis.gov.uk/reports/reports?report_id=1110

the use of coal in the power generation sector and natural gas in the residential sector, with a reduction in emissions from anaerobic managed waste disposal sites also making a substantial contribution.

GHG emissions for England in 2021 totalled 333,631 kilotonnes of carbon dioxide equivalent (ktCO₂e), with the dominant sources of GHG emissions being from Transport (26.8%), Energy Supply (17.3%), and Residential (17.0%). Key sectoral trends in England up to 2021 include:

- Emissions from the industrial process sector decreased significantly since 1990 by 85.2%, mainly as a result of a declining chemical and fluorocarbon production industry.
- Emissions from the waste management sector significantly declined by 74.6% since 1990, largely due to the progressive introduction of methane capture and oxidation systems within landfill management.
- Emissions from the business sector reduced by 32.7% since 1990 as a result of reduced emissions in manufacturing industries (led by chemicals, non-ferrous metals and other manufacturing) through industrial decline and efficiency improvements. Emissions have recently remained relatively stable, decreasing by 2.7% between 2020 and 2021.
- Emissions from the residential sector decreased by 11% since 1990 as a result of a switch from less efficient solid and liquid fuels to natural gas for heating, and improvements in energy efficiency. Emissions between 2014 and 2021 increased by 7.5% primarily as a result of an increased energy demand for natural gas for residential heating.
- Emissions from the agricultural sector reduced by 17.6% since 1990 mainly due to reductions in fertiliser use and resulting nitrous oxide emissions from soils, and reduced animal numbers resulting in reduced methane from dairy cattle. There was a 2.4% decrease in agricultural emissions from 2020 to 2021.
- Emissions from the transport sector decreased by 14.9% between 1990 and 2021 due to a decrease in travel demands due to the Covid-19 pandemic. Emissions between 2020 and 2021 increased by 10% mainly due to increasing transport demands following the pandemic.
- Emissions from the public sector reduced by 49.8% since the Base Year. This is due to increased energy efficiency measures and the switch to gas-fired heating. There was a 5.2% increase in public sector emissions from 2020 to 2021, likely due to more activity following the Covid-19 pandemic.

Shoreline Management Plans (SMP) help to deliver the ambitions of the National Flood and Coastal Erosion Risk Management Strategy. They set out a planned approach to managing flood and coastal erosion risk around the coast of England to 2105.

Wales

Mitigation

UK Greenhouse Gas Inventory, 1990 – 2021 (2023)¹⁶⁹ provides the latest estimates of GHG emissions in Wales, up to the year 2021. This publication notes that total emissions from Wales reduced between 1990 and 2021 by 35%. These emission reductions are mainly due to efficiencies in energy generation and business sector heating, the use of natural gas to replace some coal and other fuels as well as abatement in some chemical industries, and variations in manufacturing output (e.g. in iron and steel, bulk chemical production). Total greenhouse emissions increased between 2020 and 2021 by 6.6%; however, this is likely due to an increase in activity following the Covid-19 pandemic. Overall, total greenhouse emissions decreased by 6.0% between 2019 and 2021. Further details from the inventory include:

- Emissions from the energy supply sector decreased by 50.0% between 1990 and 2021 due to decreases in emissions from power stations. There was an 8.5% increase in energy supply sector emissions from 2020 to 2021, likely due to increased activity following the Covid-19 pandemic.
- Emissions from the transport sector decreased by 15.2% between 1990 and 2021. This is likely due to the significant decrease in transport demand in 2019/2020 due to the Covid-19 pandemic, as 2019 figures do not differ significantly from previous years. Emissions between 2020 and 2021 increased by 11.4% likely due to increased activity and demand after the pandemic.
- Emissions from the residential sector decreased by 25.8% since 1990 partly due to a change in the fuel mix from coal towards natural gas and also energy efficiency measures. Emissions between 2014 and 2015 increased by 5% mainly as a result of an increased demand for heating.
- Emissions from the business sector reduced by 28.6% since 1990, however, there was a 1.3% increase in emissions between 2020 and 2021. The trends in this sector are primarily driven by the activities from the iron and steel industry.
- Emissions from the public sector reduced by 65.3% since 1990. This is due to increased energy efficiency measures and fuel switching from more carbon-intensive fuels such as coal and oil to natural gas. Emissions between 2020 and 2021 increased by 6.2%.

¹⁶⁹ Ricardo Energy & Environment for the Department of Energy and Climate Change, The Scottish Government, The Welsh Government and The Northern Ireland Department for Agriculture, Environment and Rural Affairs (2023) Greenhouse Gas Inventories for England, Scotland, Wales and Northern Ireland: 1990 – 2021. 2023. Available online at: https://naei.beis.gov.uk/reports/reports?report_id=1110

- Emissions from the industrial process sector decreased by 19.5% since 1990 and have shown significant fluctuations during this timeframe reflecting manufacturing output and abatement installations. The trend is heavily influenced by iron and steel production.
- Emissions from the agricultural sector reduced by 5.4% since 1990 mainly due to a decrease in livestock numbers. There was an increase of 4.7% in emissions from 2020 to 2021.
- Emissions from the waste management sector declined by 69.1% since 1990, largely due to the progressive introduction of methane capture and oxidation systems within landfill management. Emissions continued to fall between 2014 and 2015, decreasing by 1.7%.

The Welsh Government's Final Statement for the First Carbon Budget and 2020 Interim Target (2022)¹⁷⁰ provides the official overview of GHG emissions trends and determines the progress made in reducing GHG emissions in Wales against pre-defined targets.

The Welsh Government's First Carbon Budget (2016-2020) required Welsh emissions to reduce by 23% from the 1990 levels (a total budget of 212,933 ktCO₂e)¹⁷¹. The budget was successfully achieved, as emissions levels were reduced by 27.8% (a total budget of 199,718 ktCO₂e) meaning the budget was not just met but surpassed by 13,216 ktCO₂e.

The Second Carbon Budget (2021-2025) sets a target to achieve an average reduction in emissions of 37% compared to 1990 levels. As of 2021, Welsh emissions have reduced by 35% from the 1990 levels, from 56.1 MtCO₂e to 36.3 MtCO₂e¹⁷².

Likely Evolution of the Baseline

In recent years, England and Wales has been significantly reducing GHG emissions, but the transport sector remains one of the highest emitting sectors. The future baseline is likely to see a continuation in emissions reductions, due to advances in technology including cleaner fuels and vehicles running on renewable power.

Key issues and opportunities

The policy context and baseline information have informed the identification of the following key issues and opportunities for climate change:

- The input of GHG's resulting from fossil fuel usage, agriculture and other land use have been linked with atmospheric warming and undesirable climate change.

¹⁷⁰ Welsh Government (2022) Final Statement for the First Carbon Budget and 2020 Interim Target. Available online at: <https://www.gov.wales/sites/default/files/publications/2022-12/final-statement-of-progress-cb1.pdf>

¹⁷¹ Ibid

¹⁷² Ricardo Energy & Environment for the Department of Energy and Climate Change, The Scottish Government, The Welsh Government and The Northern Ireland Department for Agriculture, Environment and Rural Affairs (2023) Greenhouse Gas Inventories for England, Scotland, Wales and Northern Ireland: 1990 – 2021. 2023. Available online at: https://naei.beis.gov.uk/reports/reports?report_id=1110

- Fossil fuel dependency remains high and is likely to remain so for some time.
- Legally binding government targets (see: the Climate Change Act 2008 and subsequent revisions: The Climate Change Act 2008 (2020 Target, Credit Limit and Definitions) Order 2009, The Carbon Budgets Order 2009) seek to reduce emissions (based on a carbon budget of MtCO₂ equivalent) by 80% on 1990 levels by 2050, with an interim target of 34% by 2020.
- Changes in temperature and rainfall patterns, along with more frequent extreme weather events will require adaptation actions that can lead to a greater degree of resilience and must be incorporated into plans and proposals.
- The UK's Climate Projections (UKCP18) show that the UK as a whole is likely to experience hotter, drier summers, warmer, wetter winters and increased flood risk including rising sea levels, particularly in the south east of England. This is likely to have a significant effect on a range of environmental conditions.
- Sensitive ecosystems are likely to come under increasing pressure as a result of climate change.
- Climate change will exacerbate flood risk and coastal change, which can cause major issues for ports infrastructure.
- Flooding, changes in wind patterns, higher wind speeds, changes in wave height/frequency, more extreme storms and storm surges, extreme high/low flows impacting navigability, potential for increased fog, proliferation of underwater plant growth impacting navigability, higher water temperatures.
- Resilience of infrastructure that ports depend on, e.g. roads and railways that could flood or overheat. Planning for new port infrastructure should be aware of the interdependencies with wider infrastructure resilience.
- Climate impacts disproportionately impact those experiencing deprivation and can exacerbate existing inequalities. Climate change mitigation and adaptation measures should be incorporated to enable a fair transition.
- The carbon storage of existing sites, e.g. peat and woodland (mitigation)
- Nature-based solutions to help adapt to changes in climate, including sea level rise.
- Need to plan for worst case scenarios for sea level rise including the impacts on the natural environment.

Materials and Waste

Introduction

The policy context, baseline information and key issues for the materials and waste topic are presented below. There are links between materials and waste and other topics in the AoS, in particular climate change given the potential for waste to be recovered for energy use.

Policy context

United Kingdom

- The **Waste (England and Wales) Regulations 2011** (and subsequent amendments) require businesses to confirm that they have applied the waste management hierarchy and requires that they declare this on their waste transfer or consignment note. The regulations made amendments to hazardous waste controls and also set up a two-tier system for waste broker and carrier registration.
- The **Hazardous Waste (England and Wales) Regulations 2005** (and subsequent amendments) make provision for the controlled management of hazardous waste from the point of production to the final point of disposal or recovery. The regulations include provisions relating to the movement of hazardous waste, including in relation to shipments, and specifically, duties relating to the assignment of consignment codes and documents required for consignments, including the removal of ships' wastes in harbour areas.
- The **Environment Act (2021)** seeks to set legislation to (inter alia) tackle waste, increase recycling and improve the natural environment. The Act sets out the legal framework for reforms to local authority waste and recycling services and contains provisions relating to waste and resource efficiency, including in relation to recycling, and litter and waste crime enforcement. The Act includes amendments to the Environmental Protection Act 1990, the Environment Act 1995 and the Transfrontier Shipment of Waste Regulations 2007, in relation to transfrontier shipments of waste.
- **Circular Economy Package policy statement (2020)** sets out the key changes made by the EU's Circular Economy Package (CEP) and the UK's approach in terms of the transposition of the 2020 CEP measures into the UK.
- **UK Plan for Shipments of Waste (2021)** amends earlier versions of the plan (of the same name) and implements the UK's long-standing policy of self-sufficiency in the disposal of waste, by strictly limiting when waste can/cannot be shipped to or from the UK for disposal.

England

- **Waste Management Plan for England (2021)** is an analysis of the current waste management situation in England. The plan does not introduce new policies or change

how waste is managed in England. Its aim is to bring current waste management policies together under one national plan.

- **Our Waste, Our Resources, a Strategy for England (2018)** sets out how the Government intends to preserve resource stocks through minimising waste, promoting resource efficiency and moving towards a circular economy. The strategy also sets out how the government intends to minimise harm to the environment through sustainable and effective waste management, waste reduction and tackling waste crime. The strategy includes actions relating to (inter alia) international waste shipments and marine plastics.
- **A Green Future: Our 25 Year Plan to Improve the Environment (HM Government, 2018)** includes policies and actions relating to increasing resource efficiency and reducing waste. This includes a target to eliminate all avoidable waste by 2050 and all avoidable plastic waste by end of 2042.
- **Environmental Improvement Plan (2023)** includes the following goals relating to materials and waste: Goal 5: Maximise our resources, minimise our waste and Goal 6: Using resources from nature sustainably. The Plan includes actions relating to the regulation of waste shipments.
- **National Planning Policy Framework (NPPF) (2024)** highlights that in relation to achieving sustainable development, the planning system has three overarching objectives: an economic objective; a social objective; and an environmental objective – the latter of which is to protect and enhance our natural, built and historic environment, including (inter alia) using natural resources prudently and minimising waste. Section 17 of the NPPF includes policies relating to the facilitation of the sustainable use of minerals.
- **National Planning Policy for Waste (October 2014)** sets out detailed waste planning policies and is intended to be read in conjunction with the National Planning Policy Framework, the Waste Management Plan for England and National Policy Statements for Waste Water and Hazardous Waste.
- **The National Policy Statement for Hazardous Waste (Defra, 2013)** provides the framework for decisions on proposals for new nationally significant hazardous waste infrastructure.
- **Waste: export and import guidance (2023)** sets out and provides guidance on the controls that apply to the transportation of waste out of or into England.
- **Planning Practice Guidance (PPG) for Waste (2015)** provides further information in support of the implementation of waste planning policy.
- **Planning Practice Guidance (PPG) for Minerals (2014)** provides guidance on the planning for mineral extraction in the plan making and the application process.
- **Resource Security Action Plan (Defra, 2012)** provides a framework for business action to address risks about the availability of some non-renewable raw materials (including minerals) and sets out high level actions to build on the developing partnership between Government and businesses to address resource concerns. It emphasises the need to use resources efficiently, minimise resource consumption, reduce waste and maximise the use of recycled materials.

Wales

- **Part 1 of the Environment (Wales) Act 2016** is concerned with the sustainable management of natural resources. It makes provisions for a new iterative process for Welsh Government, NRW and other public bodies to contribute to achieving the sustainable management of natural resources. It defines natural resources, sustainable management of natural resources and the principles of sustainable management of natural resources, and it confers functions on the Welsh Government and others to assist in the delivery of sustainable management of natural resources. Part 4 of the Act, meanwhile, is concerned with the collection and disposal of waste.
- **Planning Policy Wales (Edition 11) Chapter 5: Productive and Enterprising Places** sets out Welsh land use planning policies in relation to the economic components of placemaking, including (inter alia) minerals (including marine sources) and waste prevention and management.
- **Minerals Technical Advice Note (MTAN) Wales 1: Aggregates (March 2004)** sets out planning policy guidance in relation to aggregates extraction (including marine sources) and related development in Wales is to provide aggregate resources in a sustainable way to meet society's needs in respect of aggregates related development.
- **Towards Zero Waste (2010)** sets out at a high-level strategy for the management of waste in Wales to produce benefits not only for the environment, but also for the economy and social wellbeing. It set out the aim to be recycling 70 per cent of waste in Wales by 2025 and to be a zero-waste nation by 2050. Delivery actions have been developed in a series of sector plans, a **Waste Prevention Programme (2013) and Technical Advice Note (TAN) 21: Waste (2014)**, which provides advice on the role of land use planning in the management and control of waste. **Beyond Recycling: A strategy to make the circular economy in Wales a reality (2021)** represents a refresh of the Towards Zero Waste initiative and sets the target of a 26 per cent reduction in waste and zero waste to landfill by 2025, a 33 per cent reduction in waste by 2030 and 62% reduction in waste by 2050.
- **Hazardous Waste (Wales) Regulations 2005 (as amended)** set out the regime in Wales for the control and tracking of the movement of hazardous waste.
- Welsh Government created the **Natural Resource Management Programme** to take forward the policy commitments proposed in the **Sustaining a Living Wales Green Paper on a New Approach to Natural Resource Management in Wales (2012)**. This Programme includes amongst other items a natural resource management policy, including the setting of national priorities.
- **Technical Advice Note (TAN) 12: Design (2016)** sets out the Welsh Government's land use planning policy in respect of promoting sustainability through good design and planning for sustainable buildings. Achieving the efficient use and protection of natural resources is identified as an objective for good design.

Baseline information

Materials

United Kingdom

Much of the baseline relating to materials presented in this section is presented at the UK level as equivalent data relating to England and Wales is not currently available.

Table A3 below sets out material flows in terms of imports and exports in the UK in 2021 across six broad categories of materials/resources (biomass and biomass products, metal ores and concentrates (raw and processed), non-metallic minerals (raw and processed), fossil energy materials/carriers (raw and processed), other products, and waste for final treatment and disposal) for the UK for the year 2021. The table shows that overall in 2021, 267.9 million tonnes of materials were imported into the UK whilst, 135.1 million tonnes were exported. The material category with the highest volume (tonnes) of imports was fossil energy materials/carriers, which also had the highest volume of exports.

Table A4 - Material flows account for the United Kingdom: imports and exports (1,000 metric tonnes) 2021¹⁷³

Material Category	Imports (1,000 tonnes)	Exports (1,000 tonnes)
Biomass and biomass products	68,166.8	17,884.4
Metal ores and concentrates, raw and processed	30,741.1	23,261.3
Non-metallic minerals, raw and processed	23,372.2	10,987.5
Fossil energy materials/carriers, raw and processed	129,054.9	73,546.4
Other products	16,517.0	7,789.0
Waste for final treatment and disposal	6.4	1,662.2
Total	267,858.4	135,130.8

¹⁷³ ONS (2023) Material flow accounts: 2023. Available online at: <https://www.ons.gov.uk/economy/environmentalaccounts/datasets/ukenvironmentalaccountsmaterialflowsaccountunitedkingdom> [Accessed November 2023]

Table A4 sets out the material flows in terms of domestic extraction in the UK in 2021. This shows that the material type which was most extracted in the UK in 2021 was non-metallic minerals, whilst metal ores (gross ores) was the least extracted resource. Overall, 411.4 million tonnes of materials were extracted in the UK in 2021.

Table A5 - Material flows account for the United Kingdom: Domestic extraction (1,000 metric tonnes) – 2021

Material Category	2021 (1,000 tonnes)
Biomass	135,823.6
Metal ores (gross ores)	1.3
Non-metallic minerals ¹⁷⁴	205,177.9
Fossil energy materials/carriers ¹⁷⁵	70,445.2
Total domestic extraction¹⁷⁶	411,448.1

Domestic consumption of fossil fuels in the UK has reduced from a high of 254.2 million tonnes in 2004 to a low of 120.9 million tonnes in 2020. The domestic consumption of metal ores has fluctuated over the period, albeit remaining consistently much lower than the other material types. Domestic consumption of biomass has also fluctuated; however, in the past decade has shown a slight increase. Domestic consumption of non-metallic minerals decreased between 2001 and 2012, with a more marked reduction year on year between 2007 and 2009; however, between 2012 and 2021 has shown an upward trend.

Material Footprint

England

The ‘material footprint’ is a measure of the global primary raw material extraction attributable to final domestic demand for goods and services by the residents of an institutional unit, typically a nation. Available data shows that¹⁷⁷:

¹⁷⁴ Data for 2015 onwards has been estimated due to unavailable data sources. In addition some non-metallic mineral data were not available from 2016. This may mean total figures are a slight underestimate.

¹⁷⁵ Lack of data for peat, included in ‘coal and other solid energy materials/carriers, is not available from 2016 onwards. This may mean total figures are an underestimate.

¹⁷⁶ Total domestic extraction may be a slight underestimate due to missing data sources as detailed above.

¹⁷⁷ Defra (2023) England’s Material Footprint. Available online at: <https://www.gov.uk/government/statistics/englands-material-footprint/englands-material-footprint> [Accessed November 2023]

- England's material footprint was an estimated 783 million tonnes in 2020 (84% of the UK's material footprint).
- England's material footprint was over a third (35%) lower in 2020 than in 2004, when at its highest in the series.
- Over half (55%) of England's material footprint in 2020 was made up of non-metallic minerals, whilst biomass made up around a quarter (24%).

England's material footprint in 2020 was primarily associated with household consumption (47%), followed by gross fixed capital formation (investment in produced fixed assets) (31%) and expenditure on government services (20%).

Wales

Wales' Material Footprint was estimated to be 33.5 million tonnes in 2019 (3.2% of the estimated UK total). Whilst some of the difference between the Welsh and UK results is because Wales has a much smaller population than the UK overall, some of it is also because each individual within Wales has a smaller material footprint than each individual within the UK on average; Welsh Material Footprint per capita is estimated to be 68% of UK Material Footprint per capita. Wales material footprint in 2019 was primarily associated with household consumption at 62%, government consumption (public services, schools, policing and defence) at 17% and gross fixed capital formation (long-term assets purchased by households (e.g. new houses, white goods), firms (e.g. machinery) and governments (e.g. transport infrastructure)) at 21%.¹⁷⁸

Waste

United Kingdom, England and Wales

The UK statistics on waste from June 2023¹⁷⁹ includes the following key points:

- The total amount of Waste from Households (WfH) in the UK in 2021 was 27.7 million tonnes, of which 12.3 million tonnes was recycled (including Incinerator Bottom Ash metal (IBAm)) with an overall recycling rate of 44.6%; up from 44.4% in 2020.
- In England the recycling rate was 44.1% (total of 23.1 million tonnes of waste generated/10.2 million tonnes recycled), up from 44.0% in 2020.

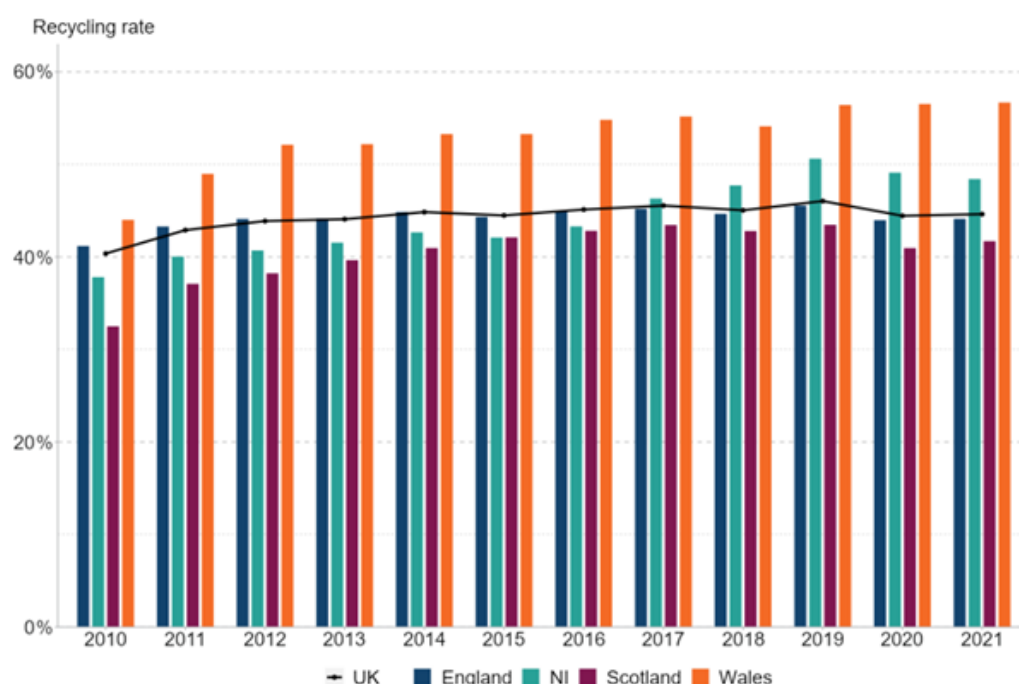
¹⁷⁸ JNCC (2023) understanding the Global Environmental Footprint and Impacts of Welsh Consumption. Available online at: <https://hub.jncc.gov.uk/assets/dc81dd16-9b1c-4eeb-b350-dcadd5ade736>

¹⁷⁹ Defra (2023) UK Statistics on waste. Available online at: [https://www.gov.uk/government/statistics/uk-waste-data/uk-statistics-on-waste#:~:text=The%20latest%20estimates%20for%20England,tonnes\)%20of%20the%20UK%20total.](https://www.gov.uk/government/statistics/uk-waste-data/uk-statistics-on-waste#:~:text=The%20latest%20estimates%20for%20England,tonnes)%20of%20the%20UK%20total.) [Accessed November 2023]

- The total amount of WfH generated in England made up the majority of the UK total at 84%. In Wales the recycling rate was higher, at 56.7% (1.3 million tonnes of waste produced/0.7 million tonnes recycled), up from 56.5% in 2020.

Figure A6 below shows how the recycling rate from WfH has changed between 2010 and 2021 in the UK and constituent countries. Overall, it shows an upward trend in recycling rates over the period.

Figure A6 - Recycling rate from Waste from Households, UK and country split, 2010 - 2021

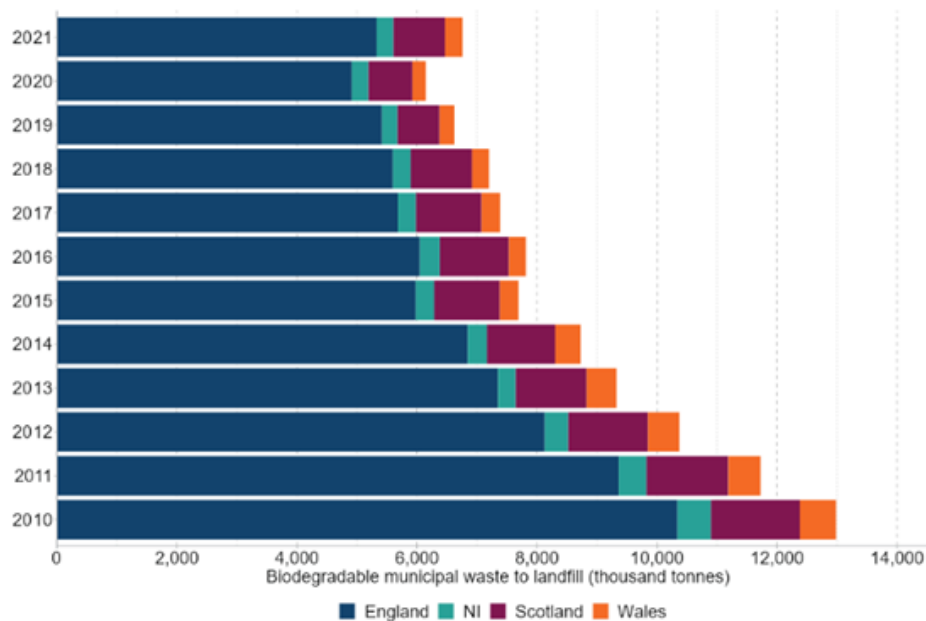


Total WfH generation in both England and Wales and the United Kingdom as a whole in 2021 represented an increase of 2.4% compared to 2020.

The total amount of municipal waste sent to landfill in the UK in 2021 was 14.0 million tonnes, up from 12.7 million tonnes in 2020, the majority of which was from England. The total amount of municipal waste generated in both England and Wales increased between 2020 and 2021.

UK biodegradable municipal waste (BMW) sent to landfill increased to 6.8 million tonnes in 2021 from 6.1 million tonnes in 2020. Of this total, the majority was from England, whilst the amount from Wales was more modest (both of which increased between 2020 and 2021). Figure A7 shows the split of total UK biodegradable municipal waste sent to landfill by country between 2010 and 2021. Overall, over the period shown, it highlights that the amount of biodegradable municipal waste sent to landfill has decreased.

Figure A7 - UK biodegradable municipal waste sent to landfill split by country 2010 - 2021



In 2020, the UK generated 59.1 million tonnes of non-hazardous C&D waste, of which 92.6% was recovered. The UK recovery rate from non-hazardous C&D waste has remained at similar levels from 2010 to 2020. In 2020, England generated 53.6 million tonnes of non-hazardous C&D waste, of which 93.2% was recovered. The England recovery rate from non-hazardous C&D waste has remained similar between 2010 to 2020. Equivalent data for Wales is not currently available.

It is estimated that the UK generated 40.4 million tonnes of commercial and industrial (C&I) waste in 2020, of which 84% was generated in England. The latest estimates for England only (equivalent data for Wales is not currently available), indicate that C&I waste generation was around 33.9 million tonnes in 2021. Over two thirds of C&I waste is generated by the commercial sector, in both the UK and England.

The UK generated a total of 222.2 million tonnes in 2018, an increase of 1.8% compared to 2016. England generated 187.3 million tonnes of total waste in 2018 an increase of 1.4% from 2016, and 84% of the UK total. Equivalent data for Wales is not currently available.

Figure A8 shows the amount of waste generated split by source in the UK in 2018. Construction, demolition and excavation (CD&E; including dredging) generated 62% of total UK waste in 2018, whilst commercial and Industrial (C&I) waste accounted for 19%, 'Households' accounted for 12% and 'Other' activities accounted for 7%. The share of CD&E was higher in England at 64% of the total waste, whilst 'Households' and C&I were similar to the UK, and the 'Other' contributions were slightly lower than the UK at 5%. Equivalent data is not currently available for Wales.

Figure A8 – Waste generation split by source, UK, 2018

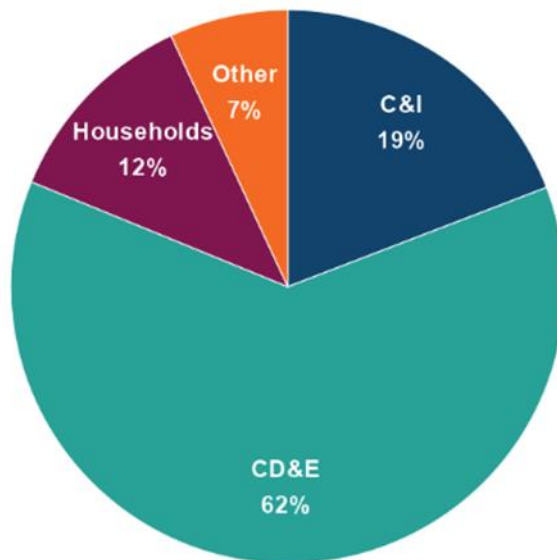
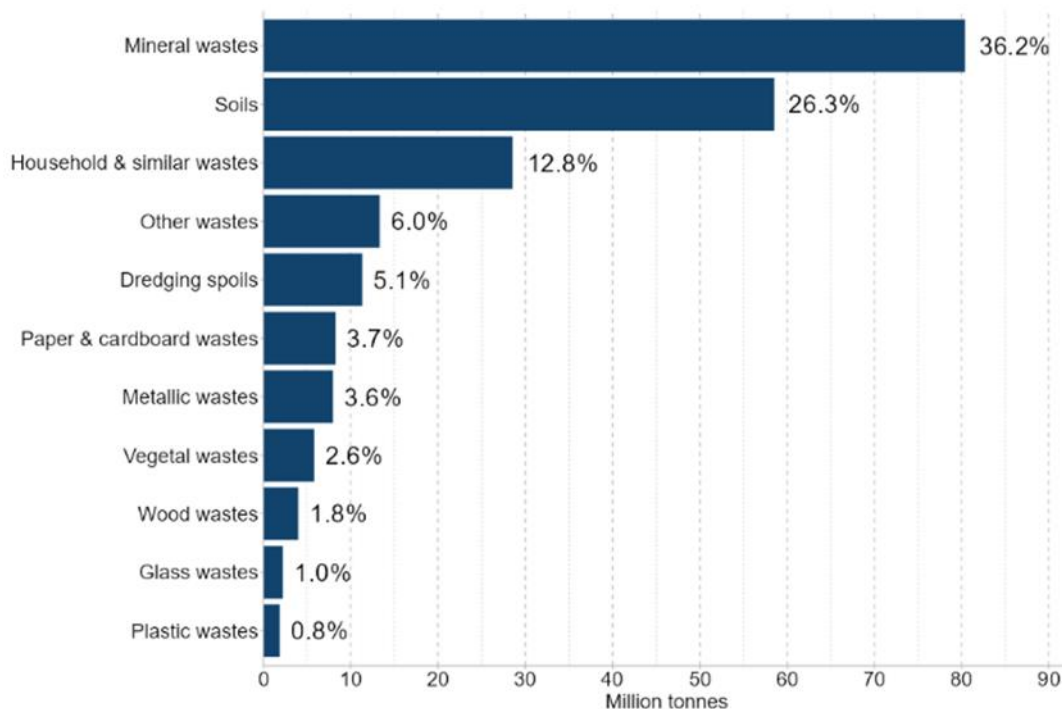


Figure A9 sets out the amount of waste generated in the UK in 2018 split by material type as categorised by European Waste Catalogue (EWC) codes. In 2018 'Mineral Wastes' was the largest contributor to overall waste, followed by 'Soils', which combined made up almost two thirds of waste (63%).

Figure A9 - Waste generation by waste material type, UK, 2018



Likely Evolution of the Baseline

Without the revised NPS for Ports the currently designated NPS for Ports would continue to set the framework for decisions on proposals for new port development promoted through a development consent order (DCO) application. Furthermore, the legislative and policy provisions for the reuse of materials and minimisation and recycling of waste would continue. As a result, it is considered that there would not be any significant change in the future baseline.

Key issues and opportunities

The policy context and baseline information have informed the identification of the following key issues and opportunities for materials and waste:

- The consumption of non-renewable sources will deplete overall stocks and result in a scarcity of resources for future generations.
- Large scale port development may require both short-term (i.e. during construction) and long-term (i.e. during operation) use of materials that are non-renewable or are imported. In doing so, schemes may have an environmental impact that extends beyond the local area/ region.
- Encourage a move towards a circular economy in the port industry, which involves maximising resources and resource efficiency, and minimising waste.

Traffic and Transport

Introduction

The policy context, baseline information and key issues for the traffic and transport topic are presented below. There are links between the traffic and transport topic and the majority of other AoS topics.

Policy context

United Kingdom

- The **Transport Act 2000** aimed to give effect to the then UK Government's strategy for an integrated transport policy set out in the White Paper entitled A New Deal for Transport: Better for Everyone (1998). The Act introduced a number of reforms to local transport planning and delivery, including the requirement for all local transport authorities in England, outside of London, to produce a local transport plan. It also granted new powers for local authorities to enter into quality partnerships with bus operators and to introduce road user charging schemes and workplace parking levies.
- The **Local Transport Act 2008** empowers local authorities to take appropriate steps to meet local transport needs in the light of local circumstances.
- Transport is the largest contributor to UK emissions, responsible for 27% in 2019, without international aviation or shipping. **Decarbonising Transport: Setting the Challenge was published in 2020**, and brought together work to reduce emissions across all forms of transport and laid out the scale of reductions needed to deliver the aim of reaching net zero.
- **Decarbonising Transport: A Better, Greener Britain (2021)**, outlines the plan to decarbonise the entire transport system in the UK as part of the requirement to reach net zero.
- **The Future of Transport is a programme** delivered by the Department for Transport, Office for Low Emission Vehicles, and the Centre for Connected and Autonomous Vehicles that aims to shape transport innovation in the UK and establish the UK as a world leader in transport movement. It aims to stimulate innovation, create new markets, secure a 21st century transport system and secure the UK's position as a leading innovator, decarbonising the transport system. This will provide opportunities to advance decarbonisation, improve air quality, tackle congestion, and improve communities.
- The **COP26 declaration: zero emission cars and vans (2022)** commits to accelerating the transition to 100% zero emission cars and vans, including HGV's, by 2035 at the latest in leading markets, and 2040 globally.
- The **Future of freight plan** published in 2022 by the Department for Transport sets out a long-term vision for the freight sector in the UK, for the freight and logistics sector to be cost-efficient, reliable, resilient, environmentally sustainable, and valued by society. The plan identifies the main challenges, objectives and actions to be taken for the five

identified priority areas; National Freight Network (NFN), transition to net zero, planning, people and skills, and data and technology.

- **Net zero highways: our 2030/2040/2050** plan outlines National Highways ambition to put roads at the heart of Britain's path to net zero. It outlines three main commitments; to reach net zero in their own operations by 2030, net zero for maintenance and construction by 2040, and net zero for carbon travel on roads by 2050.

England

- **Cutting Carbon, Creating Growth: Making Sustainable Local Transport Happen White Paper (Department for Transport (DfT), 2011)** sets out a vision for a transport system that is an engine for economic growth and also greener and safer and improves quality of life in communities. The White Paper sets out the Government's priority for local transport which is to encourage sustainable local travel and economic growth by making public transport and cycling and walking more attractive and effective, promoting lower carbon transport and tackling local road congestion.
- **The National Planning Policy Framework (2023)** aims to integrate planning and transport to promote more sustainable transport choices, enhance accessibility to jobs, shopping, leisure facilities and services by public transport, walking and cycling and to reduce the need to travel, especially by car.
- **The National Networks National Policy Statement (DfT, 2014)** sets out the need for development of road, rail and strategic rail freight interchange projects on the national networks and the policy against which decisions on major road and rail projects will be made. A Draft revised National Networks Policy Statement was published for consultation in 2023.

Wales

- **Llwybr Newydd: the Wales transport strategy 2021** seeks to shape the future of transport in Wales over 20 years. It aims to put people and climate at the centre of the transport system, reducing the number of cars on the roads and increasing use of public transport as well as walking and cycling rates. How the priorities and ambitions of this strategy will be delivered is set out in the National Transport Delivery Plan 2022 to 2027.
- **The National Transport Finance Plan: 2018 update (2019)** identifies the improvements made to the transport network made between 2017 and 2018, and gives a plan out to 2020. It sets out financing and delivery timetables for transport schemes undertaken by the Welsh government, the estimated expenditure required to deliver the schemes, and the likely sources of financing.
- **Planning Policy Wales (Edition 12) (2024)** identifies several objectives including facilitating accessible and healthy environments that are accessible by public transport and active travel,
- **Technical Advice Note (TAN 18)** on Transport and the Transport Strategy for Wales (2008) sets out key planning policy objectives for transport. These include promoting resource and travel efficient settlement patterns, ensuring new development is located

where there is or will be good access by public transport, walking and cycling and managing parking provision.

- **Supporting Welsh ferry ports (5 point plan) (2021)** is a Welsh Government report that identifies priority issues facing logistics around ports in Wales. It looks at solutions to these problems and aims to develop an understanding of long term implications for Welsh and UK wide trade and business.

Baseline information

England

Road

England has a road infrastructure network of approximately 301,269 km (as at 2022), of which 12% comprises major roads¹⁸⁰. The average speed on local 'A' roads in England during the weekday morning peak in the year ending March 2021 was 27.3 mph. This is a 15.2% increase on the year ending March 2021¹⁸¹.

Traffic levels in 2022 were higher than those seen in 2021; however, the impacts of travel restrictions imposed between March 2020 and March 2022 due to the Covid-19 pandemic remained evident, as traffic remains below pre-pandemic levels¹⁸².

In 2022, the Strategic Road Network (motorways and major trunk roads) accounted for 2.4% of the English network, at around 7,280km, though carried 33.9% of England's traffic in 2022. The Strategic Road Network saw the biggest increase in traffic compared to 2021, at 12.7%, down 3.2% since 2019. Traffic on local authority managed roads increased by 8.3% on motorways and 5.4% on minor roads from 2021 to 2022, these both also remain below pre-pandemic levels by 6% and 4.4% respectively. The motorway and 'A' road network accounted for 9.6% of England's road length yet carried 31.2% of its traffic in 2022, with the remaining 34.9% being carried by England's minor roads, which account for 88% of road length¹⁸³.

Van traffic has grown faster than car traffic on all types of road in recent years. HGV vehicles are travelling less distance, but carrying more goods since the 1990s, owing to a shift away from using smaller HGV vehicles towards larger vehicles or vans. HGV traffic

¹⁸⁰ Department for Transport (2023) Road lengths in Great Britain: 2022. Available at: [Road lengths in Great Britain: 2022 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/statistics/road-lengths-in-great-britain-2022) [Accessed November 2023]

¹⁸¹ Department for Transport (2021) Historic SRN and Local 'A' roads travel time data. Available at: [Historic SRN and Local 'A' roads travel time data - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/statistics/historic-srn-and-local-a-roads-travel-time-data) [Accessed November 2023]

¹⁸² Department for Transport (2023) Road Traffic Estimates in Great Britain, 2022: Headline Statistics. Available at: [Road Traffic Estimates in Great Britain, 2022: Headline Statistics - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/statistics/road-traffic-estimates-in-great-britain-2022-headline-statistics) [Accessed November 2023]

¹⁸³ Ibid.

has not yet returned to pre-recession levels. Recent trends show a resumption of traffic growth after the recession¹⁸⁴.

Rail

Rail accounted for 1% of trips, 7% of distance and 6% of travel time out of all travel in England during 2021. Commuting was the most common purpose for rail trips in England during 2021, accounting for 49% of all trips, with leisure being the second most common reason, accounting for 32% of trips. The remaining 19% is made up of education (7%), shopping (5%), personal business (3%), business (3%) and other (1%).

Those with mobility difficulties made two rail trips per year on average during 2021, as opposed to 14 made by those without mobility difficulties¹⁸⁵.

Aviation

Heathrow is the busiest airport in the UK, followed by Gatwick and Manchester, with approximately 61.6 million passengers in 2022¹⁸⁶. The other major airports in London are Gatwick, Luton, Stansted and London City, and other major airports in England include Birmingham, Bristol, Newcastle, East Midlands International and Liverpool (John Lennon).

Water

In 2022, London was England and the UK's busiest port in terms of tonnage, handling 12% of the UK market. Grimsby and Immingham (both operated by ABP and combined in DfT statistics) has historically been the busiest port; however, in 2022 it came second to London, having handled 11% of tonnage. Other English ports in the top 10 in terms of tonnage include Liverpool, Southampton, Tees & Hartlepool, Felixstowe, and Dover¹⁸⁷.

Modes of Transport

On average, 757 trips were made per person using both public and private transport in 2022, similar to 2021. The majority of trips were made using private transport methods, such as cars, vans, cycles and walking, accounting for 93% of all trips. Of those trips

¹⁸⁴ Department for Transport (2016) Road Use Statistics Great Britain 2016. Available at: [Road Use Statistics, Great Britain 2016 \(publishing.service.gov.uk\)](https://publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/544444/Road_Use_Statistics_Great_Britain_2016.pdf) [Accessed November 2023]

¹⁸⁵ Ibid.

¹⁸⁶ Civil Aviation Authority (2023) Annual airport data 2022. Available at: [Annual airport data 2022 | Civil Aviation Authority \(caa.co.uk\)](https://www.caa.co.uk/airports/annual-airport-data-2022) [Accessed November 2023]

¹⁸⁷ Department for Transport (2023) Port freight annual statistics 2022: Overview of port freight statistics and useful information. Available at: [Port freight annual statistics 2022: Overview of port freight statistics and useful information - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/115444/Port_freight_annual_statistics_2022_Overview_of_port_freight_statistics_and_useful_information.pdf) [Accessed November 2023]

conducted using public transport, around half were made on buses and less than 1% of trips were on other public transport, which includes air, ferries and light rail.¹⁸⁸

Wales

Road

The total road length in Wales in 2022-23 was approximately 35,150km. Minor surfaced roads account for the majority of Wales' road network, at 50.6%, followed by B and C roads accounting for 36.6%. The remainder of the road network is comprised of A county roads (7.9%), and motorway and trunk roads (4.9%)¹⁸⁹.

Of the local authorities within Wales, Powys is home to the largest road network, with 27.3% of trunk roads, 21% of B and C roads, and 12.3% of minor surfaced roads, accounting for 15.7% of the total road length in Wales. Newport contains the longest stretch of motorway, with 19.2% of the Welsh total¹⁹⁰.

Rail

The numbers of rail passenger journeys in Wales were increasing over two decades, up until the Covid-19 pandemic. In 2021-22, the effects of the pandemic were still being felt.

17.7 million train journeys, either began or ended in Wales during the year 2021-22, over triple the amount seen in the previous year yet still 41% below the year 2019-20. 64% of these journeys took place within Wales¹⁹¹.

Aviation

The total number of passengers using Cardiff International Airport, Wales' only major domestic and international airport, sharply fell at the start of the Covid-19 pandemic in 2020, with travel restrictions continuing into 2021. In 2022, passenger numbers increased sevenfold from 123,000 in 2021 to 857,397, yet still remained below pre-pandemic levels. There were around 19,000 flights in and out of Cardiff airport in 2022, an increase of 67% on 2021 and decrease of 41% on 2019¹⁹². In 2022, air freight through Cardiff airport

¹⁸⁸ Department for Transport (2022) Transport Statistics Great Britain: 2022 Domestic Travel. Available at: [Transport Statistics Great Britain: 2022 Domestic Travel - GOV.UK \(www.gov.uk\)](https://www.gov.uk/transport-statistics-great-britain-2022-domestic-travel) [Accessed November 2023]

¹⁸⁹ Welsh Government (2023) Road lengths and conditions: April 2022 to March 2023. Available at: [Road lengths and conditions: April 2022 to March 2023 | GOV.WALES](https://gov.wales/road-lengths-and-conditions) [Accessed November 2023]

¹⁹⁰ Ibid.

¹⁹¹ Welsh Government (2023) Rail Transport, 2021-2022. Available at: [Rail transport, 2021-2022 \(gov.wales\)](https://gov.wales/rail-transport) [Accessed November 2023]

¹⁹² Welsh Government (2023) Air Transport: 2022. Available at: [Air transport: 2022 | GOV.WALES](https://gov.wales/air-transport) [Accessed November 2023]

accounted for 96 tonnes, a 74% decrease compared to 2021 and 95% decrease compared to 2019¹⁹³.

Water

In Wales during 2021 total freight traffic through Welsh ports was 47.0 million tonnes (Mt), a decrease of 8.2% on the previous year. Of this, 87.2% was international traffic (76.8% of which being imports). Milford Haven handled the most freight out of Welsh ports in 2021, at 30.3Mt followed by Port Talbot which handled 7.4Mt and Holyhead, which handled 3.8Mt. Other major ports in Wales include Fishguard, Swansea, Cardiff and Newport. Milford Haven was the fourth largest port in the UK by volume of freight in 2021.

Total freight has been decreasing gradually over the previous 12 years. In 2021, imports outweighed exports, at 31.1Mt and 9.4Mt respectively.

Modes of Transport

The Census 2021 estimates that approximately 350,000 people in Wales work mainly at home, or from home¹⁹⁴. This ranges from 14% of employees in Blaenau Gwent, to 36.1% in Cardiff, with an average of 25.6% across the whole country¹⁹⁵.

1.02 million Welsh residents (74.4%) over 16 did not work predominantly from home in 2021. Of these, 772,600 (56.5%) travelled to work mainly by driving a car or van, and 66,000 (4.8%) travelled as passengers in a car or van. A higher proportion of employees travel to work by car or van than in England (44.5%)¹⁹⁶.

Other than driving a car or a van, the most common method of travelling to work is on foot, accounting for 7.1% of people. Other methods of travel to work, in order of popularity, are passenger in a car or van, bus, minibus or coach, bicycle, other, train, taxi, motorcycle, scooter or moped, and underground, metro, light rail or tram¹⁹⁷.

Likely Evolution of the Baseline

The amount of people affected by noise from transport has increased in recent years although this increase is likely slow in future given the transition to vehicles with quieter propulsion systems. Without the revised NPS for Ports the currently designated NPS for Ports would continue to set the framework for decisions on proposals for new port

¹⁹³ Ibid.

¹⁹⁴ Welsh Government (2022) Labour market and travel to work in Wales (Census 2021). Available at: [Labour market and travel to work in Wales \(Census 2021\) | GOV.WALES](#) [Accessed November 2023]

¹⁹⁵ ONS (2022) Travel to work, England and Wales: Census 2021. Available at: [Travel to work, England and Wales - Office for National Statistics \(ons.gov.uk\)](#) [Accessed November 2023]

¹⁹⁶ Welsh Government (2022) Labour market and travel to work in Wales (Census 2021). Available at: [Labour market and travel to work in Wales \(Census 2021\) | GOV.WALES](#) [Accessed November 2023]

¹⁹⁷ Ibid.

development promoted through a development consent order (DCO) application. As a result, it is therefore unlikely that there would be a significant change in the future baseline.

Key issues and opportunities

The policy context and baseline information have informed the identification of the following key issues and opportunities for traffic and transport:

- All modes of transport have been affected by the Covid-19 pandemic, and although movement is increasing, levels of transport and travel generally remain below 2019 levels.
- The development of port infrastructure has the potential to increase levels of terrestrial and marine transport.
- HGV traffic in England is still suffering from the impacts of the recession, though has been increasing.
- There are areas of the UK's transport network which are stretched beyond their capacity at peak times.
- There is a need for investment in transportation infrastructure to meet future demand and support economic growth.
- There is a need to reduce the need to travel and facilitate a shift towards more sustainable modes of transport.
- Port development will play an important role in enabling the decarbonisation of freight and shipping.

Cultural Heritage

Introduction

The policy context, baseline information and key issues for the cultural heritage topic are presented below. There are links between the cultural heritage topic and other topics in the AoS, specifically landscape, townscape and seascape and land use, geology and soils, climate change, and traffic and transport.

Policy context

United Kingdom

- The **UNESCO World Heritage Convention (1972)** was ratified in the UK in 1984 and aims to promote co-operation amongst nations to protect heritage that is of such outstanding value that its conservation is important for current and future generations. The Convention also established a register of World Heritage Sites. It is intended that properties on the World Heritage List will be conserved for all time. UNESCO member states commit themselves to ensure the identification, protection, conservation, and presentation of World Heritage properties.
- The **Historic Buildings and Ancient Monuments Act 1953** provides the legislative basis for statutory agencies to prepare the parks and gardens and battlefields registers.
- The **Ancient Monuments and Archaeological Areas Act 1979** provides for the scheduling of ancient monuments and offers the only legal protection specifically for archaeological sites in the UK. The Planning (Listed Buildings and Conservation Areas) Act 1990 outlines the level of protection received by listed buildings and Conservation Areas in England and Wales.
- There are a number of other Acts which afford protection to cultural and historical assets, including the **Protection of Wrecks Act 1973**, which provides protection for shipwrecks of historical, archaeological or artistic value; the **Protection of Military Remains Act 1986**, which provides protection for the wreckage of military aircraft and designated military vessels, and the **Treasure Act 1996**, which sets out procedures for dealing with finds of treasure, its ownership and rewards, in England, Wales and Northern Ireland.
- **National Heritage Act 2002** builds on the preceding National Heritage Acts of 1980, 1983 and 1997. All four Acts define the way in which National heritage assets are managed and protected. The 2002 Act extended the powers of the Historic Buildings and Monuments Commission to include underwater archaeology within the territorial waters of the United Kingdom.
- The **Enterprise and Regulatory Reform Act 2013** made a number of changes to the specialised heritage protection system that affect heritage protection.
- **Principles of Selection for Listed Buildings (2018)** sets out the criteria and principles applied by the Secretary of State (SoS) when deciding whether a building is of special architectural or historic interest and should become listed under the terms of the Planning

(Listed Buildings and Conservation Areas) Act 1990. It also sets out the circumstances under which the SoS will consider granting a request for a certificate of immunity (Col) from listing in respect of a building under the terms of the Act.

England

- **National Planning Policy Framework (2023)** sets out the core land use planning principles that should underpin both plan-making and decision-taking and in doing so expects planning to conserve heritage assets “in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of existing and future generations”.
- **National Planning Practice Guidance** for the Historic Environment (2019) provides advice on the conservation and enhancement of the historic environment and includes guidance on consideration of the historic environment in plan-making and decision-making as well as guidance on designated and non-designated heritage assets, heritage consent processes, consultation and notification requirements for heritage related applications and information on heritage and planning issues.
- Historic England, the Government's statutory adviser on the historic environment in England, and its predecessor organisations have published a number of relevant guidance documents, including the following:
 - Preserving Archaeological Remains (2016);
 - Conservation Area Designation, Appraisal and Management: Historic England Advice Note 1 (Second Edition) (2019);
 - Historic Environment Good Practice Advice in Planning Note 2: Managing Significance in Decision-Taking in the Historic Environment (2015);
 - Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets (2nd Edition) (2017);
 - The Historic Environment and Site Allocations in Local Plans. Historic England Advice Note 3 (2015);
 - Sustainability Appraisal and Strategic Environmental Assessment. Historic England Advice Note 8 (2016); and
 - Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment (2008).
- **Heritage Statement 2017 (DDCMS, 2017)** sets out the government will support the heritage sector and help it to protect and care for heritage and historic environment, in order to maximise the economic and social impact of heritage and ensuring it can be enjoyed by all. The statement applies to England only, except where it relates to international issues or UK policies and programmes.
- **Environmental Improvement Plan (EIP) (2023)** this includes the following goal relating to cultural heritage: Goal 10: Enhancing beauty, heritage, and engagement with the natural environment.

- **Scheduled Monuments & nationally important but non-scheduled monuments (2013)** sets out Government policy on the identification, protection, conservation and investigation of nationally important ancient monuments, under the provisions of the Ancient Monuments and Archaeological Areas Act 1979. It includes principles relating to the selection of scheduled monuments and the determination of applications for scheduled monument consent.

Wales

- The framework for the protection and management of the Welsh historic environment is underpinned mainly by two pieces of UK legislation:
 - The **Ancient Monuments and Archaeological Areas Act 1979**; and
 - The **Planning (Listed Buildings and Conservation Areas) Act 1990**.
- **The Historic Environment (Wales) Act 2016** amends and augments this framework for the protection and sustainable management of the Welsh historic environment. In broad terms, the Act: creates new measures for the protection of listed buildings and scheduled monuments; enhances existing mechanisms for the sustainable management of the historic environment; and introduces greater transparency and accountability into decisions taken on the historic environment.
- **The Historic Environment (Wales) Act 2023** consolidates enactments contained in or made under a number of other acts and makes provisions about (inter alia) the conservation of monuments of special historic interest, buildings of architectural or historic interest and conservation areas.
- **The Well-being of Future Generations (Wales) Act 2015** aims to improve the social, economic, environmental and cultural well-being of Wales. For those public bodies listed in the Act, it encourages a more joined-up approach to consider more long term, work better with people and communities and each other to prevent problems.
- **Planning Policy Wales (Edition 11, 2021)** includes a number of objectives relating to the protection/preservation of the historic environment/heritage assets and their setting.
- **Technical Advice Note 12 (TAN 12): Design (2016)** sets out the Welsh Government's policy and advice in respect of the design of new development, including sustaining or enhancing local character.
- **Technical Advice Note 24 (TAN 24): the historic environment (2017)** sets out guidance on how to consider the historic environment in development plans and planning decisions. It includes guidance on world heritage sites, scheduled monuments, archaeological remains, listed buildings, conservation area, historic parks and gardens, historic landscapes and historic assets of special local interest.

Baseline information

Designated Heritage Assets

England

The National Heritage List for England (NHLE) is a register of all nationally protected historic buildings and sites in England¹⁹⁸. As of November 2023, there were a total of 19 World Heritage Sites (WHS), 19,961 Scheduled Monuments, 379,444 Listed Buildings, 57 Protected Wrecks, 1,704 Registered Parks and Gardens and 47 Registered Battlefields on the NHLE¹⁹⁹. It is noted that the number of Listed Buildings set out above does not represent the exact number of buildings included on the NHLE, as this is unknown, as one single entry on the NHLE can sometimes cover a number of individual units, such as a row of terraced houses. However, it is estimated that there are some 500,000 individual Listed Buildings on the NHLE²⁰⁰.

There is a total of seven WHS in England within 30km of the English coastline: Durham Castle and Cathedral; Canterbury Cathedral, St. Augustine's Abbey and St. Martin's Church; Frontiers of the Roman Empire (Hadrian's Wall); Dorset and East Devon Coast; City of Bath; Cornwall and West Devon Mining Landscape; and The English Lake District. Additionally, as of November 2023, in England there were 10,023 Scheduled Monuments, 26,624 Listed Buildings, 569 Registered Parks and Gardens, 19 Registered Battlefields and over 2,600 Conservation Areas within 30km of the English coastline on the NHLE.

In terms of the distribution of NHLE assets, the south of England contains a much greater proportion of assets on the NHLE than the north or the midlands.

Every local authority area in England contains at least one Conservation Area and in total there are around 10,000 Conservation Areas in England²⁰¹. There are also five areas designated as Areas of Archaeological Importance in England; with these being the historic city centres of Canterbury, Chester, Exeter, Hereford and York²⁰².

¹⁹⁸ Historic England (undated) Search the List. Available online at: <https://historicengland.org.uk/listing/the-list/> [Accessed November 2023]

¹⁹⁹ Historic England (undated) The List – Advanced Search. Available online at: <https://historicengland.org.uk/listing/the-list/advanced-search-results> [Accessed October 2023]

²⁰⁰ Historic England (undated) Listed Buildings. Available online at: <https://historicengland.org.uk/listing/what-is-designation/listed-buildings/> [Accessed November 2023]

²⁰¹ Historic England (undated) What is a Conservation Area?. Available online at: <https://historicengland.org.uk/listing/what-is-designation/local/conservation-areas/> [Accessed November 2023]

²⁰² Historic England (undated) Areas of Archaeological Importance. Available online at: <https://historicengland.org.uk/advice/hpg/has/archaeologicalimportance/> [Accessed November 2023]

Wales

In Wales, Cadw keeps records of heritage assets. As of November 2023, there were four WHS (two of which are split across multiple sites)²⁰³, 4,229 Scheduled Monuments, 30,104 Listed Buildings, 384 Registered Historic Parks and Gardens and six Protected Wrecks in Wales²⁰⁴. There are also over 500 Conservation Areas in Wales²⁰⁵.

There are a total of three WHSs within 30km of the coastline of Wales: The Castles and Town Walls of King Edward in Gwynedd (total of four sites: Beaumaris Castle; Caernarfon Castle and Town Walls; Conwy Castle and Town Walls; and Harlech Castle); Blaenavon Industrial Landscape; and The Slate Landscape of Northwest Wales (total of six sites: Penrhyn Slate Quarry and Bethesda, and the Ogwen Valley to Port Penrhyn; Dinorwig Slate Quarry Mountain Landscape; Nantlle Valley Slate Quarry Landscape; Gorseddau and Prince of Wales Slate Quarries, Railways and Mill; Ffestiniog: its Slate mines and Quarries, 'city of slates' and Railway to Porthmadog; and Bryneglwys Slate Quarry, Abergynolwyn Village and the Tallylyn Railway). Additionally, as of November 2023, in Wales, there were 2,937 Scheduled Ancient Monuments, 21,622 Listed Buildings, 292 Registered Historic Parks and Gardens and over 400 Conservation Areas within 30km of the Welsh coastline.

Heritage at Risk

England

Historic England's Heritage at Risk (HAR) programme identifies historic sites that are most at risk of being lost as a result of neglect, decay or inappropriate development in England. Every year Historic England updates the Heritage at Risk Register, which assesses Grade I, Grade II*, Grade II listed places of worship across England and Grade II listed buildings in London, in addition to other heritage assets, such as buildings and structures, places of worship, archaeology entries, Registered Parks and Gardens, Registered Battlefields, Protected Wreck sites and Conservation Areas²⁰⁶.

There was a total of 4,871 entries on the HAR Register in 2023, including 2,053 Listed Buildings, 2,224 Scheduled Monuments, 104 Registered Parks and Gardens, four Protected Wreck sites, three Registered Battlefields and 483 Conservation Areas²⁰⁷.

²⁰³DataMapWales (2021) World Heritage Sites in Wales. Available online at: <https://datamap.gov.wales/layergroups/inspire-wg:WorldHeritageSites> [Accessed November 2023]

²⁰⁴ Cadw (undated) Search Cadw records. Available online at: <https://cadw.gov.wales/advice-support/cof-cymru/search-cadw-records> [Accessed November 2023]

²⁰⁵ Cadw (undated) Conservation areas. Available online at: <https://cadw.gov.wales/advice-support/placemaking/legislation-guidance/conservation-areas> [Accessed November 2023]

²⁰⁶ Historic England (undated) What is the Heritage at Risk Programme? Available online at: <https://historicengland.org.uk/advice/heritage-at-risk/types/> [Accessed November 2023]

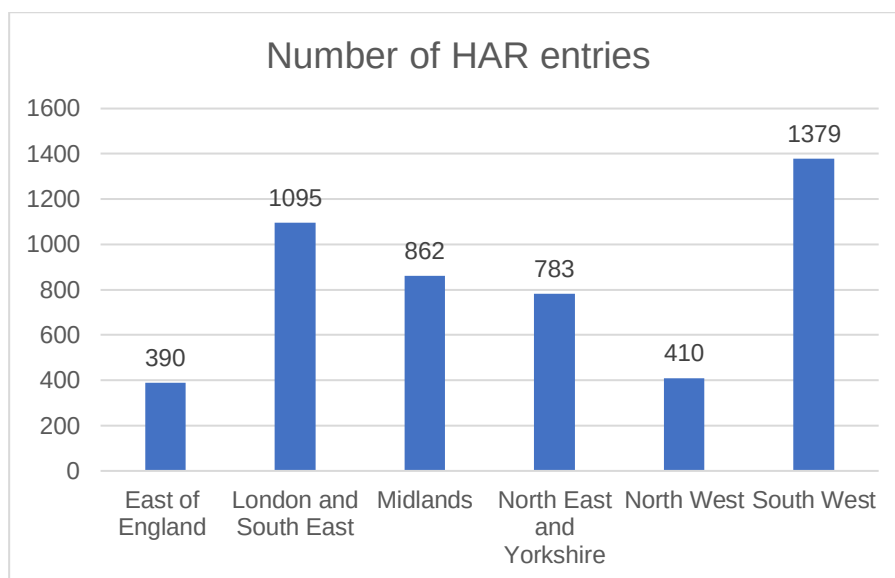
²⁰⁷ Historic England (2023) Heritage at Risk 2023 Registers (Excel file). Available online at: <https://historicengland.org.uk/images-books/publications/har-2023-registers> Accessed November 2023]

There was a total of 159 additions to the HAR Register in 2023, 91 Listed Buildings, 61 Scheduled Monuments, three Registered Parks and Gardens and four Conservation Areas. A total of 203 heritage assets were removed from the register in 2023 for positive reasons, (e.g. repairs/consolidation, grant aid, improved site management and vulnerability or risk removed), this included 80 Listed Buildings, 109 Scheduled Monuments, three Registered Parks and Gardens and 11 Conservation Areas.

The number of entries on the HAR register has reduced year on year over the last decade. Additionally, in general the number of new entries to the list has reduced year on year as well as the number of removals from the list due to positive reasons.

The HAR register is reported across six English regions, the East of England, London and the South East, Midlands, North East and Yorkshire, North West and South West. Figure A10 below shows the split of the total number of entries on the HAR register across each of the reported regions in 2022. This shows that the region with the largest number of HAR register entries was the South West (1,379) followed by London and the South East (1,095), whilst the East of England had the lowest number of entries (390).

Figure A10 – Number of heritage at risk register entries by reporting region



As of November 2023, there were 2,215 entries on the HAR Register which were situated within 30km of the English coastline in England.

Wales

Cadw does not currently maintain a national heritage at risk register for Wales: however, Listed Buildings at risk are managed by individual local authorities across Wales²⁰⁸.

Surveys of the condition of Listed Buildings in Wales prior to 2012 were commissioned by individual local authorities with Cadw funding. However, at the end of 2012, to ensure a consistent approach across Wales, Cadw appointed consultants to undertake an all-Wales condition review of listed buildings over a five-year rolling period, surveying approximately 20 per cent of listed buildings stock in Wales per year. The Condition & Use Survey of Listed Buildings in Wales 2015 Update estimated that 8.54% of Welsh Listed Buildings were at risk (compared to 8.92% in 2013) and 12.20% were vulnerable (compared to 13.81% in 2013), whilst 79.26% were not at risk (compared to 77.27% in 2013). This shows that when compared to the figures for 2013, for 2015 there were reductions in the percent of Listed Buildings classified as being at risk or vulnerable, whilst there was an increase in the percentage of listed buildings that were classified as being not at risk²⁰⁹.

Likely Evolution of the Baseline

Without the revised NPS for Ports the currently designated NPS for Ports would continue to set the framework for decisions on proposals for new port development promoted through a development consent order (DCO) application. Furthermore, the legislative and policy provisions for the protection and enhancement of the historic environment and designated heritage assets would also continue as they do now. As a result, it is considered that there would not be any significant change in the future baseline.

Key issues and opportunities

The policy context and baseline information have informed the identification of the following key issues and opportunities for cultural heritage:

- There are a significant number of designated and non-designated heritage assets (terrestrial and marine) spread across England and Wales and within 30km of the coastline where port related development is likely to occur.
- The significance and setting of designated and non-designated heritage assets are at risk from the delivery of new infrastructure.
- Increase awareness of buried archaeology / unknown heritage – and recognition that some historic assets can be offshore.

²⁰⁸ Historic England (undated) Other Heritage at Risk Registers. Available online at: <https://historicengland.org.uk/advice/heritage-at-risk/other-heritage-at-risk-registers/> [Accessed November 2023]

²⁰⁹ The Handley Partnership (undated) Condition & Use Survey of Listed Buildings in Wales 2015 Update. Available online at: <https://cadw.gov.wales/advice-support/historic-assets/listed-buildings/listed-buildings-risk#section-the-condition-of-listed-buildings-in-wales-> [Accessed November 2023]

- Challenging economic conditions are reducing the funds available to conserve and manage heritage assets.
- New port related development could provide an opportunity to restore and enhance access to designated and non-designated heritage assets.
- The effects of climate change (e.g. storm events and extreme weather conditions, rising sea levels, shoreline change/coastal erosion and ocean acidification) will increase in frequency and intensity, posing a threat to underwater and coastal heritage assets (e.g. protected wrecks).

Landscape, Townscape and Seascape

Introduction

The policy context, baseline information and key issues for the landscape, townscape and seascape topic are presented below. There are links between the landscape, townscape and seascape topic and other topics in the AoS, including in particular population and human health and cultural heritage.

Policy context

United Kingdom

- In the UK, there are numerous Acts governing the protection of the countryside, landscape and natural environment. The **National Parks and Access to the Countryside Act 1949** makes provision for National Parks, confers powers for the establishment and maintenance of nature reserves, makes provision for the recording, creation, maintenance and improvement of public paths and for securing access to open country and confers further powers for preserving and enhancing natural beauty.
- The **Environment Act 1995** revised the National Parks and Access to the Countryside Act 1949 and set out two statutory purposes for National Parks in England and Wales:
 - conserve and enhance the natural beauty, wildlife and cultural heritage; and
 - promote opportunities for the understanding and enjoyment of the special qualities of National Parks by the public.

When National Parks carry out these purposes, they also have the duty to seek to foster the economic and social well-being of local communities. The Act also updated the Sandford Principle to state “*if it appears that there is a conflict between those purposes, [the National Park Authority] shall attach greater weight to the purpose of conserving and enhancing the natural beauty, wildlife and cultural heritage of the area*”.

- The **Countryside and Rights of Way Act 2000** increased the duty of provision of public access to the countryside and strengthened legislation relating to Sites of Special Scientific Interest (SSSIs). In particular, it requires public bodies to further the conservation and enhancement of SSSIs both in carrying out their operations, and in exercising their decision-making functions. With specific regard to Areas of Outstanding Natural Beauty (AONBs), now National Landscapes, section 85 of the Act sets out that relevant authorities including statutory undertakers should have regard to the purpose of conserving and enhancing the natural beauty of National Landscapes.
- The **Marine and Coastal Access Act 2009** seeks to ensure clean, healthy, safe, productive and biologically diverse oceans and seas, by putting in place better systems for delivering sustainable development of marine and coastal environment. The Act established the Marine Management Organisation (MMO).

- The **Commons Act 2006**, which protects common land and promotes sustainable farming, public access to the countryside and the interests of wildlife as well as conserving landscape where in the public interest.

England

- The **Natural Environment and Rural Communities Act 2006** ('the NERC Act') is designed to help achieve a rich and diverse natural environment and thriving rural communities through modernised and simplified arrangements for delivering Government policy. The NERC Act established a new independent body - Natural England - responsible for conserving, enhancing, and managing England's natural environment for the benefit of current and future generations. The Act made amendments to both the Wildlife and Countryside Act 1981 and the Countryside and Rights of Way Act 2000.
- The **National Planning Policy Framework (2023)** includes strong protections for valued landscapes and townscapes as well as recognising the intrinsic character and beauty of the countryside. It advises that planning policies and decisions are expected to be sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change. The Framework has a number of specific requirements relating to planning and landscape, including a clear expectation that the planning system should contribute to, and enhance, the natural and local environment by protecting and enhancing valued landscapes. The Framework states that "great weight" should be given to "conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty". The Framework also restricts the scale of development in these areas, setting out that major development should be refused "other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest" (paragraph 177).
- **National Planning Practice Guidance** relating to the Natural Environment (2019) provides guidance on the application of landscape policies. It sets out that planning policies and decisions should be based on up-to-date information about the natural environment and other characteristics of the area including management plans for National Parks and National Landscapes in addition to advice on Heritage Coasts and guidance on marine planning.

A Green Future: Our 25 Year Plan to Improve the Environment (25YEP) (2018) seeks to conserve and enhance landscape. It includes (inter alia) Government commitments to review National Parks and National Landscapes, work with National Park Authorities and National Landscapes Partnerships and Conservation Boards to deliver environmental enhancement and to identify opportunities for environmental enhancement in all of England's National Character Areas. The **Environmental Improvement Plan (EIP) (2023)** (the first revision to the 25YEP) includes Goal 10: Enhancing beauty, heritage, and engagement with the natural environment. The EIP includes the target/commitments to make the England Coast Path fully walkable by the end of 2024, deliver a new National Trail along the route of the Coast-to-Coast path by 2025. The EIP also includes commitments to

progress assessments to designate two new National Landscapes and two extensions to existing National Landscapes and to invest in a new national landscapes partnership for National Parks, Areas of Outstanding Natural Beauty, and National Trails.

- **Independent report Landscapes review: National Parks and AONBs (2019)** is an independent review commissioned by the government into whether the protections for National Parks and AONBs are still fit for purpose, focussing on what could be improved and whether the definitions and systems in place are still valid.
- **Policy paper Landscapes review (National Parks and AONBs): Government response (2022)** sets out the government's response to the proposals of the Landscapes Review independent report. The response includes proposals for changes to the legislative framework of Protected Landscapes, their role in environmental land management schemes and the planning system, and the potential for greater enforcement powers to manage visitor pressures.

Wales

- The **Well-being of Future Generations (Wales) Act 2015** strengthens existing governance arrangements for improving the well-being of Wales to ensure that present needs are met without compromising the ability of future generations to meet their own needs. The Act puts in place seven well-being goals, including, of particular relevance to the landscape, townscape and seascape topic: “A Resilient Wales”: “A nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change.”
- The **Environment (Wales) Act 2016** establishes the principles that determine how the sustainable management of natural resources is to be delivered. The principles, which are complementary and interlinked, include requirements that the benefits provided by natural resources and ecosystems be identified and considered, as well as the intrinsic value of those ecosystems and resources, which is the value of natural resources and ecosystems for their own sake. All provisioning, supporting, regulating and cultural benefits (or services) should be considered, as appropriate, in the sustainable management of natural resources, recognising the explicit link between natural resources and wellbeing.
- The **Planning (Wales) Act 2015** requires public bodies to exercise their functions relating to development plans and applications for planning permission as part of carrying out sustainable development, so that the development and use of land contribute to improving the well-being of Wales.
- **Planning Policy Wales (Edition 12) (2024)** sets out several objectives regarding landscape, including promoting the conservation of landscape and biodiversity, ensuring that Wales contributes to meeting international responsibilities and obligations and ensuring that statutorily designated sites are properly protected and managed. It also notes that it is important that landscape considerations are taken into account at an early stage in both development plan preparation and development management.

- **Technical Advice Note (TAN) 6: Planning for Sustainable Rural Communities (2010)** provides practical guidance on the role of the planning system in supporting the delivery of sustainable rural communities. The TAN seeks to protect and enhance Wales' landscapes.

Technical Advice Note 12 (TAN 12): Design (2016) sets out the Welsh Government's policy and advice in respect of the design of new development, including sustaining or enhancing local character.

Baseline information

Designated Landscapes and Defined Areas

England

Statutory sites designated (wholly or partially) for their landscape value in England and Wales include National Parks, Areas Outstanding Natural Beauty (AONBs) (now National Landscapes) and World Heritage Sites (see the Cultural Heritage section of the baseline). Other important (non-statutory) sites include Heritage Coasts (in England and Wales) and National Trust properties.

National Parks are areas of relatively undeveloped and scenic landscape. Designation as a National Park may include substantial settlements and human land uses which are often integral parts of the landscape and the land within a National Park remains largely in private ownership. There is a total of ten National Parks in England²¹⁰. Each National Park is run by its own National Park Authority for the purpose of conserving and enhancing the natural beauty, wildlife and cultural heritage; and to promote opportunities for the understanding and enjoyment of the special qualities of National Parks by the public. The Broads Authority in England has a third purpose to protect the interests of navigation²¹¹. A total of nine out of the ten of the National Parks in England are at least partially situated within 30km of the English coastline.

National Landscapes are areas of high scenic quality that have statutory protection in order to conserve and enhance the natural beauty of their landscapes. In England there are a total of 34 National Landscapes²¹², of which a total of 25 are situated within 30km of the English coastline.

²¹⁰ Natural England (2023) National Parks (England). Available online at: <https://naturalengland-defra.opendata.arcgis.com/datasets/Defra:national-parks-england/explore?location=52.242930%2C0.629834%2C6.97> [Accessed November 2023]

²¹¹ Broads Authority (undated) About Us. Available online at: <https://www.broads-authority.gov.uk/> [Accessed November 2023]

²¹² Natural England (2018) Areas of outstanding natural beauty (AONBs): designation and management. Available online at: <https://www.gov.uk/guidance/areas-of-outstanding-natural-beauty-aonbs-designation-and->

Heritage Coasts were established as a way to conserve stretches of undeveloped coastline and protect them from insensitive development. Heritage coasts are defined rather than designated and as such there isn't a statutory designation process like that associated with National Parks and National Landscapes^{213 214}. In total there are 32 Heritage Coasts in England, covering a length of over 1,000km. In England most (89%) Heritage Coasts are within the boundaries of National Parks or National Landscapes; however, Durham, Flamborough Headland, Spurn, Lundy and St Bees Head Heritage Coasts are independent of National Landscape and National Parks²¹⁵.

England has been divided into areas with similar landscape character, which are called National Character Areas (NCAs). A total of 159 NCAs have been identified in England, each of which is distinctive with a unique 'sense of place'²¹⁶. The boundaries of the NCAs are not precise and many should be considered as broad zones of transition. Natural England rewrote and redesigned all of England's 159 NCA profiles and published the revised profiles in September 2014²¹⁷.

Wales

In Wales, there are a total of three National Parks, these are Eryri/Snowdonia National Park, Bannau Brycheiniog/Brecon Beacon National Park and Arfordir Penfro/Pembrokeshire Coast National Park²¹⁸; all of which are situated within 30km of the Welsh coastline.

There is a total of five National Landscapes in Wales; these are the Gower National Landscape; Bryniau Clwyd a Dyffryn Dyfrdwy/Clwydian Range and Dee Valley; Ynys Mon/Anglesey; Llyn; and the Wye Valley, which straddles the border of Wales and England²¹⁹; all of which are within 30km of the Welsh Coastline.

[management#:~:text=An%20area%20of%20outstanding%20natural,and%20enhance%20its%20natural%20beauty.](#) [Accessed November 2023]

²¹³ Natural England (2023) Heritage Coasts (England). Available online at: <https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::heritage-coasts-england/about> [Accessed November 2023]

²¹⁴ DataMapWales (2022) Heritage Coasts. Available online at: https://datamap.gov.wales/layers/inspire-nrw:NRW_HERITAGE_COAST [Accessed November 2023]

²¹⁵ Land Use Consultants (2006) Review and evaluation of heritage coasts in England. Available online at: <https://publications.naturalengland.org.uk/publication/4594438590431232> [Accessed November 2023]

²¹⁶ Natural England (2023) National Character Areas (England). Available online at: <https://www.data.gov.uk/dataset/21104eeb-4a53-4e41-8ada-d2d442e416e0/national-character-areas-england#:~:text=Summary,unique%20'sense%20of%20place'> [Accessed November 2023]

²¹⁷ Natural England (2014) National Character Area profiles. Available online at: <https://www.gov.uk/government/publications/national-character-area-profiles-data-for-local-decision-making/national-character-area-profiles> [Accessed November 2023]

²¹⁸ DataMapWales (2023) National Parks. Available online at: https://datamap.gov.wales/layers/inspire-nrw:NRW_NATIONAL_PARK [Accessed November 2023]

²¹⁹ DataMapWales (2022) Area of Outstanding Natural Beauty (AONB). Available online at: https://datamap.gov.wales/maps/new?layer=inspire-nrw:NRW_AONB#/ [Accessed November 2023]

There are also 14 Heritage Coasts in Wales, which occupy about a third of the Welsh coastline (approximately 500 km/ 300 miles).

National Landscape Character Areas (NLCAs) are defined at a broad landscape scale throughout Wales; and in total there are 48 NLCAs in Wales. The descriptive profiles for the 48 individual character areas highlight what distinguishes one landscape from another, with reference to their regionally distinct natural, cultural and perceptual characteristics²²⁰.

Natural Resources Wales (NRW) was commissioned by Welsh Government to identify the character of Wales' seascapes at a broad scale. As a result of this NRW divided the Welsh inshore waters into 29 Marine Character Areas, which highlight the key natural, cultural and perceptual influences that make the character of each seascape distinct and unique²²¹.

To recognise the value of Wales' historic landscapes, Cadw in partnership with the then Countryside Council for Wales (now NRW) and the International Council on Monuments and Sites (ICMS) compiled a non-statutory Register of 58 landscapes of outstanding or special historic interest in Wales²²². It is a non-statutory, advisory register whose primary aim is to provide information and raise awareness of an initial selection of the most important and significant historic landscape areas in Wales in order to aid their protection and conservation.

Likely Evolution of the Baseline

Without the revised NPS for Ports the currently designated NPS for Ports would continue to set the framework for decisions on proposals for new port development promoted through a development consent order (DCO) application. The legislation and policy provisions for the protection and enhancement of the designated landscape would also continue as they do now. As a result, it is considered that there would not be any significant change in the future baseline.

Key issues and opportunities

The policy context and baseline information have informed the identification of the following key issues and opportunities for landscape, townscape and seascape:

²²⁰ Natural Resources Wales (2023) National Landscape Character Areas. Available online at: <https://naturalresources.wales/evidence-and-data/maps/nlca/?lang=en> [Accessed November 2023]

²²¹ Natural Resources Wales (2023) Marine Character Areas. Available online: <https://naturalresources.wales/evidence-and-data/maps/marine-character-areas/?lang=en> [Accessed November 2023]

²²² Cadw (undated) Registered Historic Landscapes. Available online at: <https://cadw.gov.wales/advice-support/historic-assets/conservation-areas-and-other-historic-assets/other-historic-assets-0> [Accessed November 2023]

- There are a number of nationally designated landscapes across England and Wales and within 30km of the coastline.
- Port development and the intensification of any coastal developments as a result of development pressures can impact on coastal landscape and seascape.
- Light pollution appears to have increased considerably in recent decades across much of the UK. The growth of urban areas, road networks and industrial areas are all major contributors to increased light levels. Light pollution can reach coastal waters from nearby urban areas, whilst areas further out to sea are affected by shipping and offshore industry and exploration as well as light from the land, scattered in the atmosphere and reflected back down.
- The increasing effects of climate change (and effects arising from the increased frequency and intensity of storm and flood events, increasing sea levels (and associated increases in coastal erosion), increased likelihood of droughts and the anticipated increased in wildfires) can all significantly affect landscape, townscape and seascape. Human responses/prevention measures implemented to address the effects of climate change (e.g. increased flood/coastal defences) can also have impacts on the landscape/ seascape.
- New energy and associated infrastructure (e.g. offshore wind) can have a negative impact on local landscape/ seascape.

Appendix B

Schedule of Consultation Responses

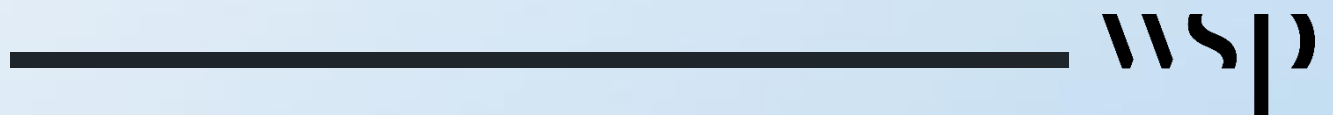


Table B-1 – Comments received on the AoS Scoping Report and how they have been taken into account

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
Environment Agency (EA)				
EA1	Question 1 - key issues	The impacts and opportunities of physical modifications on estuaries and waterbodies from port development are significant and should be recognised as a key issue. The long term integrity of habitats and species are affected by modifications associated with port development, for example modifications to watercourses and coastal habitats impacting the ability of species to recolonise isolated reaches/areas, and the genetic viability of species at isolated sites.	Noted, this issue has been included as a guide question under the Water Resources topic in the AoS Framework.	See Chapter 4, Table 4-1.
EA2	Question 1 - key issues	There are national targets for habitats and species, including those established under the Environment Act 2021, and the role of ports NSIPs in helping to meet these targets should be reflected in the key issues and opportunities.	The Environment Act 2021 is referenced within the Policy Context sections also referenced within the AoS Framework.	N/A
EA3	Question 1 - key issues	We welcome recognition of the importance of the use of nature-based solutions and green-blue infrastructure. Such measures will be critical to the role of ports in enabling measures that support climate adaptation and wider social outcomes, and therefore we advise the statement is	Noted, the key issues for biodiversity and nature conservation have been updated to reflect this comment.	Appendix B, biodiversity and nature conservation under key

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		strengthened to ‘Ports should prioritise the use of nature-based solutions...’		issues and opportunities.
EA4	Question 1 - key issues	Blue spaces are an important element of networks of green-blue infrastructure, particularly in the context of coastal development like ports. We therefore suggest considering using the term ‘green-blue infrastructure’ rather than ‘green infrastructure’ throughout.	Noted, reference to green-blue infrastructure included within the AoS Framework.	See Chapter 4, Table 4-1.
EA5	Question 1 - key issues	The protection and enhancement of locally designated sites should be included as a key issue. In addition to nationally and internationally designated sites, there is an extensive network of locally designated sites (e.g. Local Wildlife Sites, County Wildlife Sites) which are recognised through national planning policy as being locally significant sites for biodiversity, and they are key sites for the development of Local Nature Recovery Strategies (LNRS) and Nature Recovery Networks (NRN).	Noted, key issues and opportunities have been updated to reflect this comment.	See Appendix A, biodiversity and nature conservation under key issues and opportunities.
EA6	Question 1 - key issues	We welcome reference to Local Nature Recovery Strategies when considering delivery of environmental net gains, and suggest reference is also made here to Green-Blue Infrastructure Strategies, along with stronger language to make clear that the key opportunity is that ports can be ‘realizing’ these plans rather than just ‘connecting’ with them.	Noted, reference to green-blue infrastructure included within the AoS Framework and reference also made to increased access to natural and green and blue space.	See Table 3-1, Table 4-1 and Appendix A.

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		Considering the location of ports, reference should also be made to 'increased access to natural green and blue space'.		
EA7	Question 1 - key issues	The mitigation hierarchy is a key issue for the NPS: impacts on biodiversity and nature should firstly be avoided, minimised, mitigated and as a last resort compensated. This applies in addition to BNG requirements	Noted, the mitigation hierarchy is now referred to in the AoS Framework.	See Chapter 4, Table 4-1.
EA8	Question 1 - key issues	We agree that biodiversity net gain (BNG) is a key issue, and there are additional references that could usefully build on what has been drafted: • Reference to prioritising the onsite delivery of BNG, in line with the Biodiversity Gain Hierarchy set out in Planning Practice Guidance • The inclusion of 'reporting' in addition to maintenance and monitoring	Noted, key issues and opportunities for biodiversity and nature conservation have been updated to reflect this comment.	See table 3-2 and Appendix A.
EA9	Question 1 - key issues	The risks of invasive non-native species in port environments and the importance of robust biosecurity considerations at the outset of port design and during construction and operation should be recognised as a key issue.	Noted, key issues and opportunities for biodiversity and nature conservation have been updated to reflect this comment.	See table 3-2 and Appendix A.

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
EA10	Question 1 - key issues	Environmental effects from port construction and ongoing operation can impact habitats and species, which needs reflecting as a key issue. Emissions to air and water, noise (including underwater noise), release of contaminants in sediments disturbed by dredging, etc.	Noted, the biodiversity and nature conservation objective in the AoS Framework seeks to protect, restore and enhance biodiversity.	N/A
EA11	Question 1 - key issues	Environmental conditions are a key determinant of health (see <u>'The state of the environment: health, people and the environment'</u> , Environment Agency, 2020). Access to high quality natural green and blue spaces can deliver health benefits. This, and the need to protect and improve environmental conditions to safeguard and improve public health, including addressing health disparities, should be included in the final bullet referring to environmental effects.	Noted, key issues and opportunities for population and human health have been updated to reflect this comment.	See table 3-2 and Appendix A.
EA12	Question 1 - key issues	Biodiversity as a cross cutting theme should be recognised here as land use change and subsequent fragmentation of natural habitats are recognised as a threat to biodiversity on site, and to species ability to adapt to the changing climate from the loss of habitat networks. This is relevant for all biodiversity and not just habitats and species on designated sites.	The cross-cutting nature of the land use, geology and soils topic with the biodiversity and nature conservation topic is recognised in Table 3-2.	See Table 3-2.

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
EA13	Question 1 - key issues	Loss of soil through erosion is mentioned in the 7th bullet point, but the significant issue of the subsequent impacts on the receiving watercourses and habitats should also be considered.	The cross-cutting nature of the land use, geology and soils topic with the biodiversity and nature conservation and water resources topics are recognised in Table 3-2.	See Table 3-2.
EA14	Question 1 - key issues	The impact of changes in water temperature and sedimentation should be included in the bullets on climate change and pressures on waterbodies.	Noted, key issues and opportunities for water resources have been updated to reflect this comment.	See table 3-2 and Appendix A.
EA15	Question 1 - key issues	The 1 st bullet point regarding pressures on water resources should include reference to the impacts on biodiversity and availability for sustainable supplies.	Noted, key issues and opportunities for water resources have been updated to reflect this comment.	See table 3-2 and Appendix A.
EA16	Question 1 - key issues	We strongly recommend that explicit reference is made to flood risk and coastal change as a key issue. Flood risk and coastal change are major risks to port infrastructure that will be exacerbated by climate change, but these are not specifically referred to as key issues.	Noted, key issues and opportunities for climate change have been updated to reflect this comment.	See table 3-2 and Appendix A.

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
EA17	Question 1 - key issues	The list of climate impacts is incomplete and should reflect a wider range of issues that ports will need to specifically plan for: • Rising average temperatures and more frequent/ severe extreme heat events • Flooding, changes in wind patterns, higher wind speeds, changes in wave height/frequency, more extreme storms and storm surges, extreme high/low flows impacting navigability, potential for increased fog, proliferation of underwater plant growth impacting navigability, higher water temperatures. • Resilience of infrastructure that ports depend on, e.g. roads and railways that could flood or overheat. Planning for new port infrastructure should be aware of the interdependencies with wider infrastructure resilience.	Noted, key issues and opportunities for climate have been updated to reflect this comment.	See table 3-2 and Appendix A.
EA18	Question 1 - key issues	These impacts have already been shown to be capable of significantly disrupting port operations, such as at the Port of Immingham during a tidal storm in 2013.	Noted, see response above.	N/A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
EA19	Question 1 - key issues	Climate Change Reports by Harbour Authorities are key sources of evidence that should be digested and used in the baseline information: <u>Climate change adaptation reporting: third round reports - GOV.UK (www.gov.uk)</u>	Noted, these will inform and can be take into account at the project level through individual proposals for development.	N/A
EA20	Question 1 - key issues	Climate impacts disproportionately impact those experiencing deprivation and can exacerbate existing inequalities. Ensuring climate change mitigation and adaptation measures enable a fair transition should be included as a key issue.	Noted, key issues and opportunities for climate change have been updated to reflect this comment.	See table 3-2 and Appendix A.
EA21	Question 1 - key issues	The move towards a circular economy should be reflected as a key issue.	Noted, key issues and opportunities for climate change have been updated to reflect this comment.	See table 3-2 and Appendix A.
EA22	Question 1 - key issues	The final key issue listed recognises the importance of the shift to greener forms of transport. We suggest that specific reference is included to the role of port development in enabling the decarbonisation of freight and shipping. See <u>decarbonising ports-catalogue of innovative solutions f.pdf (europa.eu)</u>	Noted, key issues and opportunities for traffic and transport have been updated to reflect this comment.	See table 3-2 and Appendix A.

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
EA23	Question 2 - baseline and policy context	The policy context should include reference to The British Standards Institution (BSI) document BS 42020:2013 - Biodiversity Code of practice for planning and development, which gives recommendations and provides guidance primarily for ensuring that actions and decisions taken at each stage of the planning process are informed by sufficient and appropriate ecological information.	The policy context has been updated to reflect this comment.	See Appendix A.
EA24	Question 2 - baseline and policy context	The policy context on Highly Protected Marine Areas should be updated to reflect the first ones were designated in 2023 (<u>Highly Protected Marine Areas - GOV.UK</u> (www.gov.uk)).	The policy context has been updated to reflect this comment.	See Appendix A.
EA25	Question 2 - baseline and policy context	The following regulations and plans provide important context that should be reflected in the policy context: - The Environmental Targets (Biodiversity) (England) Regulations 2023, which establish statutory environmental targets to halt and reverse species decline and restore wildlife-rich habitats. <u>Great Britain Invasive Non-Native Species Strategy 2023-2030</u> (the report currently refers to the outdated 2015 version)	The policy context has been updated to reflect this comment.	See Appendix A.

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		• <u>Chalk Stream Restoration Strategy (2021)</u> and its <u>Implementation Plan (2022)</u>, which includes a comprehensive, up-to-date analysis of the issues threatening chalk streams in England, of the ways in which ecological pressures are assessed and regulated. It includes multiple pragmatic recommendations to bring about the ecological recovery and good health of our chalk streams. • <u>Green Infrastructure Framework</u>, which provides principles, standards, design guidance, case studies and mapping tools to support the planning and delivery of good green-blue infrastructure.		
EA26	Question 2 - baseline and policy context	The baseline information should include reference to the state of locally designated sites, such as Local Wildlife Sites (see <u>The Status of England's Local Wildlife Sites 2018</u> , The Wildlife Trusts). Any location-specific policies in the Ports NPS should be supported by more local information and data such as that held in Local Nature Recovery Strategies and by local environmental records centres.	Noted. As stated in Chapter 3 of the Scoping Report, baseline information was considered at a national level for England and Wales to reflect the scope and nature of the revised NPS.	N/A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
EA27	Question 2 - baseline and policy context	Ports are often located within estuaries that are important corridors for migratory fish. Port development can generate direct and indirect impacts on how fish are able to use these corridors. We advise that baseline information is included in the scoping report on this issue.	Noted, key issues and opportunities for biodiversity and nature conservation have been updated to reflect this comment.	See table 3-2 and Appendix A.
EA28	Question 2 - baseline and policy context	Relevant baseline information should be included from the English Indices of Deprivation (not just the Welsh indices of Multiple Deprivation), Office for National Statistics and Office for Health Improvement and Disparities to provide more specific context. The baseline currently provides national context but would be improved by providing more local context that identifies particular issues for port towns and cities. For example, the English Indices of Deprivation 2019 summary report indicates that there are concentrations of deprivation in urban, industrialised and coastal towns. Communities next to some of England's largest ports, such as in Liverpool, Southampton and London are amongst the most income deprived in the country.	Relevant baseline information is included from the English Indices of Deprivation. However, this has been updated to reflect this comment.	Appendix A, baseline information for population and human health
EA29	Question 2 - baseline and policy context	The baseline information could provide more context on environmental disparities. There are stark inequalities in environmental conditions across England's towns and cities. People in low-income neighbourhoods are often more likely to	Noted.	N/A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		have a smaller share of environmental benefits, such as good quality green and blue infrastructure, and a larger share of environmental burdens, such as exposure to pollution, climate shocks and proximity to waste sites. People also experience environmental hazards in different ways, and some social groups are more vulnerable to their impacts. Without action these inequalities will be amplified by climate change.		
EA30	Question 2 - baseline and policy context	Physical Modification should be listed as a known key pressure affecting the water environment in England. As we have outlined in the <u>Physical Modification Pressure Narrative</u> , it is the most significant pressure affecting the status of England's waterbodies. Importantly, new port developments have the potential to increase the physical modification of coasts and estuaries, but may also present opportunities to deliver measures to remedy these pressures, for example through the use of nature-based solutions or as part of the delivery of biodiversity net gain obligations. <u>Estuary Edges</u> provides ecological design guidance for softening heavily modified estuary edges	Noted, physical modifications are referred to as a key issue and also referenced in the AoS Framework	See Table 3-2, Table 4-1 and Appendix A.
EA31	Question 2 - baseline and policy context	The description of policy context around Marine Plans is out of date. Marine Plans are now in place across all of England's coastline, and the Marine Management Organisation (MMO) has recently consulted on a draft Statement of Public	The policy context has been updated to reflect this comment.	See Appendix A.

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		Participation for a replacement East Marine Plan. It's likely other marine plans will be reviewed in the lifespan of the next National Policy Statement for Ports. It is worth referring to the duty in the Planning Act 2008 for the Secretary of State to have regard to the Marine Plans when determining Development Consent Orders. It would also be worth referring to the marine licensing regime, which may also apply to new port schemes and associated works. We advise seeking updated information on these matters from the MMO.		
EA32	Question 2 - baseline and policy context	The following regulations and plans provide important context that should be reflected in the policy context: <u>Plan for Water: our integrated plan for delivering clean and plentiful water</u> (2023), which sets out a blueprint for how government will achieve its goal for clean and plentiful water. <u>Meeting our future water needs: a national framework for water resources</u> (2020), which explores England's long term water needs, setting out the scale of action needed to ensure resilient supplies and an improved water environment. A refresh of the framework is expected to be published in 2025. <u>National Policy Statement for Water Resources Infrastructure</u> (2023)	The policy context has been updated to reflect this comment.	See Appendix A.

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		Water Resources Management Plans and emerging regional water resources plans which are water company plans that set out their approach to managing water resources to meet long term demands, including non-household demand forecasting and efficiency (see https://www.gov.uk/government/publications/water-resources-planning-guideline)		
EA33	Question 2 - baseline and policy context	Baseline information is missing on shellfish protected areas, their status and economic importance.	The baseline information has been updated to reflect this comment.	See Appendix A.
EA34	Question 2 - baseline and policy context	Baseline information should be included about the use of, and emissions from, non-road mobile machinery (NRMM) and generators at ports. There are opportunities for reducing port-related non-shipping emissions for example by specifying a minimum emissions standard for NRMM, electrification of NRMM and electrification of generators.	Noted, the AoS Framework includes guide questions relating to the low carbon design in the construction and operation of port development to minimise GHG emissions.	N/A
EA35	Question 2 - baseline and policy context	There is a lack of recognition of the significance of coastal change alongside sea level rise and other impacts of climate change, and the particular vulnerability of ports to them. The	Noted, the key issues have been updated to reflect this comment.	See Table 3-2, Table 4-1 and Appendix A.

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		scoping report identifies in generic terms the different impacts climate change will have on the UK, without recognising that some of these, particularly higher winds/storms – including storm surges (which are not mentioned at despite being a significant risk to ports), sea level change and increased coastal erosion, pose an especially high risk to ports. Climate change is expected to alter the physical form of many of our coasts and estuaries, as well as the processes which control their functioning. For example, elevated sea levels and the potential for increasingly frequent severe winter storms presents a heightened risk of erosion to many locations, whilst it is thought that sea level rise may also alter the tidal range of some estuaries (e.g. Haigh et al., 2019). Such changes to the physical form and functioning of coasts and estuaries have potentially significant implications for the movement of water, sediment and biota, and human activities including navigation and shipping.		
EA36	Question 2 - baseline and policy context	Shoreline Management Plans (SMP) are a key part of the policy context on coastal flood risk and erosion currently missing from the Climate Change section of Appendix A. SMPs set out a planned approach to managing flood and coastal erosion risk around the entire coast of England throughout this century. There are therefore important planning documents when considering new and expanded port infrastructure. The	The policy context has been updated to include Shoreline Management Plans.	See Appendix A.

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		<u>Shoreline Management Plan Explorer</u> is a digital tool that makes SMPs more accessible. National Coastal Erosion Risk Mapping data is being updated and expected to be available on SMP Explorer later in 2024.		
EA37	Question 2 - baseline and policy context	The <u>Third National Adaptation Programme (NAP3)</u> has been published, so this should be referred to instead of NAP2.	References to NAP2 have been updated to reflect NAP3.	See Appendix A.
EA38	Question 2 - baseline and policy context	‘Areas of Outstanding Natural Beauty’ are now called ‘National Landscapes’ (see <u>Implementing the Landscapes Review: summary of responses</u> - GOV.UK (www.gov.uk)).	References to AONBs have been amended to ‘National Landscapes’.	See Appendix A.
EA39	Question 3 - AoS Framework	Specifying a minimum 10% biodiversity net gain in the guide question referring to BNG delivery would help align the AoS framework with the level of ambition established by the Environment Act 2021. This would be a useful benchmark for the AoS, ahead of a relevant Biodiversity Gain Statement being published.	The AoS Framework has been updated to reflect this comment.	See Table 4-2.

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
EA40	Question 3 - AoS Framework	The reference to outcomes envisaged through the Environment Act should be edited to refer to those legislated through the Act, to reflect that statutory environmental targets have now been set out in regulations.	The AoS Framework has been updated to reflect this comment.	See Table 4-2.
EA41	Question 3 - AoS Framework	A guide question should be included to test whether the NPS prioritises consideration of nature-based solutions and green-blue infrastructure in scheme design.	The AoS Framework has been updated to reflect this comment.	See Table 4-1
EA42	Question 3 - AoS Framework	A guide question should be included to test whether the NPS will maintain the biodiversity mitigation hierarchy – which requires development to firstly seek to avoid impacts on habitats and species.	The AoS Framework has been updated to reflect this comment.	See Table 4-1
EA43	Question 3 - AoS Framework	A guide question should be included to test whether the NPS will ensure port schemes deliver improved local environment and infrastructure to those communities impacted by develop for local communities, including improved recreational access to high quality blue spaces.	The AoS Framework has been updated to reflect this comment.	See Table 4-1

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
EA44	Question 3 - AoS Framework	References to 'WFD' or 'WFD regulations' should be replaced by references to the 'Water Environment Regulations', to reflect that the UK has left the EU.	Noted, reference to WFD or WFD Regulations updated to 'Water Environment Regulations'	See Appendix A
EA45	Question 3 - AoS Framework	The guide question referring to contributing to achieving Water Environment Regulations Protected Areas objectives should be edited to 'Will the revised NPS for Ports support the achievement of Water Environment regulations objectives, including protected area objectives and mitigation measures in heavily modified waterbodies?' . This would reflect that port developments have a wider contribution to make to helping get to Good Status, not just for protected areas.	The AoS Framework has been updated to reflect this comment.	See Table 4-1
EA46	Question 3 - AoS Framework	A guide question should be included to refer to sustainable water supplies: 'Will the revised NPS for Ports protect and enhance the quantity of surface and groundwater?'	Noted, this is already included within an existing guide question.	N/A
EA47	Question 3 - AoS Framework	The baseline information provided on climate change identifies the important legal and economic context of the UK moving towards a net zero economy. The AoS objective for climate change should reflect the role of ports in enabling this, as well	The objective and guide questions for Climate Change in the AoS	See Table 4-1

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		as the need for adaptation to take into account the uncertainty around future climate impacts. We suggest the following amendments to the objective: - To minimise GHG emissions as a contribution to climate change and support the transition to a net zero economy, and ensure ports and associated places and infrastructure are resilient to the consequences of climate change, anticipating a range of future climate scenarios and impacts. - A guide question should be included to test whether the NPS will contribute to ensuring climate mitigation and adaptation measures support a fair transition to a net zero economy and climate resilient places. This is particularly important considering the socioeconomic context of many port towns and cities.	Framework have been updated accordingly.	
EA48	Question 3 - AoS Framework	The guide question on climate adaptation would provide a more complete way of testing the draft NPS against the AoS objective if it referred to 'promote climate change adaptation to the full range of climate impacts that will affect ports, taking into account a range of climate scenarios (including rising average temperatures, more extreme weather events, sea level rise, wind, storm surges, coastal erosion, wave height/frequency, etc).	The AoS Framework has been updated to reflect this comment.	See Table 4-1

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
EA49	Question 3 - AoS Framework	Two of guide questions on climate resilience appear to be effectively the same, and could possibly be combined: 'increase resilience to the effects of climate change?' and 'promote climate change adaptation?'	The guide questions have been combined as suggested.	See Table 4-1
Historic England (HE)				
HE1	General comment	Further to the email and the attached NPS for Ports AoS Scoping Consultation document, received on 23rd January 2024, from Alastair Peattie (Technical Director, Assessment and Appraisal, WSP), we hereby offer the following response. As you might be aware, the Historic Buildings and Monuments Commission for England (HBMCE), known as Historic England, is the Government's adviser on all aspects of the historic environment in England including historic buildings and areas, archaeology and historic landscape with a duty to promote public understanding and enjoyment. Historic England is an executive Non-Departmental Public body sponsored by the Department for Digital, Culture, Media and Sport and we answer to Parliament through the Secretary of State for Digital, Culture, Media and Sport. Historic England's general powers under section 33 of the National Heritage Act 1983 were extended (via the National	Noted	N/A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		Heritage Act 2002) to modify our functions to include securing the preservation of monuments in, on, or under the seabed within the seaward limits of the UK Territorial Sea adjacent to England. We also provide our advice in reference to National Policy Statements and the objectives and policies of published Marine Plans for the English Inshore and Offshore areas, as defined by the Marine and Coastal Access Act 2009.		
HE2	Question 1 - key issues	We agree with the key issues identified and the inclusion of the historic environment i.e. Cultural Heritage, including architectural and archaeological heritage (as included in Tables 3-1 and 3-2). We also take this opportunity to highlight inclusion of the risk that port development projects could encounter presently unknown elements of the historic environment which could be of significant archaeological interest vis. heritage assets as defined by national policy.	Noted.	N/A
HE3	Question 2 - baseline and policy context	Sufficient information has been provided in this scoping report. However, we note the attention given to the UK Government 25 Year Environment Improvement Plan and indicator G2 (Natural Beauty, Heritage & Engagement): “Condition of heritage features including designated geological sites and scheduled monuments”. We therefore highlight the attention given to other elements of the historic environment in Table 4-1 (11. Cultural heritage), which includes consideration of non-	Noted.	N/A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		designated heritage assets and historic buildings, places or spaces that contribute to local distinctiveness, character and appearances. Any subsequent AoS Report will need to give equal attention to these aspects in addition to the specific attention stated by Indicator G2 and nationally designated sites, places and areas.		
HE4	Question 3 - AoS Framework	We do not specifically identify objectives for amendment, but we recommend that referral, as relevant, is made to how the onshore and offshore historic environment is included within the energy related National Policy Statements (e.g. EN-1 and EN-3), published in November 2023, to support a consistent approach to consideration of the historic environment.	Noted.	N/A
Natural England				
NE 1	Question 3 - AoS Framework	Regarding the AoS, we have been taking soundings with colleagues dealing with the EIA reforms in Natural England and consider that the methodology used is perhaps a little too pre-emptive of the change of approach which has yet to be set out. We consider this unhelpful as there is a danger of guessing the future when the targets are not fully known, and there are gaps so they are not as complete as the current approach. There is then a danger of challenge or creating further confusion. The issues around how they relate across	Noted, we have removed the list of outcome indicators in the AoS Framework but retained reference to helping deliver the outcomes envisaged through the Environment Act and the 25 Year Environment Plan.	See Table 4-1

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		topics and cumulative impacts are yet to be fully described. Other NPSs in development such as the EN-7 new nuclear NPS HYPERLINK "https://www.gov.uk/government/consultations/approach-to-siting-new-nuclear-power-stations-beyond-2025"Approach to siting new nuclear power stations beyond 2025 - GOV.UK (www.gov.uk) take a more comprehensive standard approach in line with the current system and is worth looking at – we are currently commenting on that one. It should be noted that there will be a transition period too and it is going to be some time before the new approach is adopted. So, the references in the Themes below are just not comprehensive enough and don't reflect the cross-cutting nature of the indicators. Just one example added in the water resources section		
NE2	Question 3 - AoS Framework	HPMAs missing in in the guide questions for biodiversity and nature conservation.	The AoS Framework has been updated to reflect this comment.	See Table 4-1

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
NE3	Question 3 - AoS Framework	- The topic title varies from one NPS to the next. - The AoS objective should be updated form 'To conserve and enhance soil and geology and contribute to the sustainable use of land.' to 'To conserve and enhance soil health and geology and contribute to the sustainable use of land.' - Guide questions – update 'soil quality' to 'soil health'. - The 25YEP recognise the synergies and dependencies on soil health such as use of natural flood management solutions, SUDS, climate change mitigation and adaptation. Similarly, the 25YEP aim that development is in the right places, avoiding our best agricultural land and in embedding the 'environmental net gain' principle reflects a natural capital approach in spatial planning which aims to minimise the impact of development on finite land and soil resources.	Noted, the AoS Framework has been updated to reflect this comment.	See Table 4-1
NE4	Question 3 - AoS Framework	Misses all the issues around impacts on protected sites and also that there are designated sensitive catchment areas dues to nutrient issues. https://www.gov.uk/government/publications/notice-of-designation-of-sensitive-catchment-areas-2024/notice-of-designation-of-sensitive-catchment-areas-2024	Noted, AoS framework has been updated to reflect this comment.	Table 4-1

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
NE5	Question 1 - key issues	As these would be coastal developments this section is light on impacts and issues that are specific to a coastal location. This includes impacts on habitats and species directly, coastal squeeze in conjunction with climate change effects, as well as coastal access.	Noted, the key issues have been updated to reflect this.	See Table 3-2 and Appendix A
NE6	Question 3 - AoS Framework	Multiple overlapping protected sites and also doesn't highlight the constrained nature of estuarine locations	Noted.	N/A
NE7	Question 1 - key issues	Should there be more emphasis here on protected species as well as habitats - as species are not well captured by BNG	Noted, key issues have been updated to reflect this comment.	See Table 3-2 and Appendix A
NE8	Question 1 - key issues	An issue to consider is the combined impact on biodiversity from development and climate change. This will be a particularly relevant on coastal locations where coastal squeeze is an issue	Noted	N/A
NE9	Question 1 - key issues	Strengthen the wording to 'contribute' and/or 'deliver' multi-functional GI and NBS. Given the landscape scale of these projects similarly ambitious mitigation / enhancement should be used.	Noted, key issues have been updated to reflect this comment.	See Table 3-2 and Appendix A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
NE10	Question 1 - key issues	Add and resilience to the key issue relating to delivery of NBS and climate change adaptation.	Noted, key issues have been updated to reflect this comment.	See Table 3-2 and Appendix A
NE11	Question 1 - key issues	This is more of a policy ambition? Shouldn't the approach here to be setting opportunities for protection or maximising benefits for biodiversity - rather than setting the need for 'balance' from the outset of NPS prep?	Noted, ultimately this will be for the decision-maker to decide based on the revised NPS and wider evidence and policy.	N/A
NE12	Question 1 - key issues	Wording to highlight general principle of impacts on protected habs/species from construction and operation of ports needed	Noted, key issues have been updated to reflect this comment.	See Table 3-2 and Appendix A
NE13	Question 1 - key issues	Possible additional considerations: * Protect, maintain and where possible enhance natural habitat networks and green infrastructure, to avoid fragmentation and isolation of networks; * Protect and enhance endangered or important species and habitats, including those considered irreplaceable such as Ancient Woodland and Ancient and Veteran trees; • Contribute to the delivery of biodiversity strategies and plans inc 30 by 30	Noted, updates have been made to the key issues.	See Table 3-2 and Appendix A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		• Contribute to the achievement of Environment Net Gain		
NE14	Question 1 - key issues	Additional point should bring in access to nature, including protecting National Trails and the King Charles III England Coastal Path	Noted, updates have been made to the key issues.	See Table 3-2 and Appendix A
NE15	Question 1 - key issues	Should also reference the ambition for Green in 15 -see https://designatedsites.naturalengland.org.uk/GreenInfrastructure/Home.aspx https://www.gov.uk/government/news/natural-england-unveils-new-green-infrastructure-framework	Noted	N/A
NE16	Question 1 - key issues	Pg 31 'it is not expected that previously developed land will be able to fully deliver the UK's future needs'. Has a land use assessment been undertaken to confirm this? As per other NPSSs, the Ports NPS should promote development on Brownfield site, away from agricultural land (particularly BMV). Pg 31 'much of the land in the UK is low grade, rendering it unusable for farming' This statement is incorrect. The total utilised agricultural area in England accounts for 68% of the total England area. Agricultural land use in England at 1 June 2023 - GOV.UK (www.gov.uk) Within England 42.2% of agricultural land is estimated to be 'best and most versatile land' (ALC Grades 1-3a) (Estimates	A land use assessment has not been undertaken to confirm this. The AoS Framework includes a guide question relating to the efficient use of land. Key issue relating to low grade agricultural land has been deleted.	See Table 3-2 and Appendix A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		based on soil and site data obtained from the National Soil Inventory which describes soil characteristics at 5 km intervals across England and Wales. (see Revised Statistics for the Proportions of ALC Grades. Unpublished work for MAFF undertaken by ADAS under the 1993/4 MOU) The ALC grades are: Grade 1 - excellent quality agricultural land; Grade 2 - very good quality agricultural land; Grade 3 - good to moderate quality agricultural land (Sub-grade 3a - good quality agricultural land and Sub-grade 3b - moderate quality agricultural land); Grade 4 - poor quality agricultural land; and Grade 5 - very poor-quality agricultural land		
NE17	Question 1 - key issues	Soils and geology could be separate topics to enable each to be dealt with more fully.	Noted	N/A
NE18	Question 1 - key issues	Does this reference BMV? Also, lower grade soils can be used for agriculture.	Key issue now deleted as per response above.	See Table 3-2 and Appendix A
NE19	Question 1 - key issues	Pg32. Future infrastructure growth will also put more pressure on agricultural land, including our best and most versatile (BMV) agricultural land.	Noted, key issues updated to reflect this comment.	See Table 3-2 and Appendix A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		soil is a non-renewable resource and is also vulnerable to sealing. Soil sealing reduces the area of land able to water to infiltrate. This links back to the statement in the 25YEP highlighting the need to recognise the synergies and dependencies on soil health such as use of natural flood management solutions, SUDS, climate change mitigation and adaptation [25YEP]. Similarly, the 25YEP aim that development is in the right places, avoiding our best agricultural land and in embedding the ‘environmental net gain’ principle reflects a natural capital approach in spatial planning which aims to minimise the impact of development on finite land and soil resources. The sustainable management and use of soils and sediments		
NE20	Question 1 - key issues	Are micro-plastics also considered?	Not at this stage.	N/A
NE21	Question 1 - key issues	Opportunity for soils to help mitigate and adapt to climate change through improved soil health (inc increases in organic carbon). This would increase their resilience to changes and improve ecosystem service delivery	Noted.	N/A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
NE22	Question 1 - key issues	This section is missing information on coastal geology. Geodiversity & Coastal processes are important issues for port planning. Coastal squeeze etc. This could also cover: • Protection of sites designated for geodiversity importance. • Improve access to sites of geodiversity interest. • Maintenance of natural shoreline processes / management of shorelines.	Noted, key issues updated to reflect this comment.	See Table 3-2 and Appendix A
NE23	Question 1 - key issues	Should the importance of protecting peat be included here?	Noted, peat soils are referenced in the key issues.	N/A
NE24	Question 1 - key issues	Opportunity: healthy soils are more resilient, and contribute to natural flood management solutions, SUDS, climate change mitigation and adaptation [25YEP]. Therefore, soils need to be sustainable used and managed	Noted, key issues updated to reflect this comment.	See Table 3-2 and Appendix A
NE25	Question 1 - key issues	Worth noting the issues around nutrients and the designation of sensitive catchments and rivers - see below. There could be increased pressure on sewage systems in these catchments and increased shipping activity too could contribute to impacts on protected sites	Noted, key issues updated to reflect this comment.	See Table 3-2 and Appendix A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		https://www.gov.uk/government/publications/nutrient-pollution-reducing-the-impact-on-protected-sites/nutrient-pollution-reducing-the-impact-on-protected-sites https://www.gov.uk/government/publications/notice-of-designation-of-sensitive-catchment-areas-2024/notice-of-designation-of-sensitive-catchment-areas-2024		
NE26	Question 1 - key issues	This section is not identifying the issues and opportunities as for others - such as the impact of poor air quality on habitats. Is this sufficiently clear that new ports will lead to increased road travel by HDV - a principal source of air pollution	Noted, air quality interacts with a number of other AoS Topics and this is covered under the biodiversity and nature conservation topic. The AoS Framework includes guide questions relating to minimising traffic volumes and encouraging alternative means of transporting freight, waste and minerals.	N/A
NE27	Question 1 - key issues	I can't see reference to lighting - this could be impactful for protected sites and species? On top of the noise impacts referenced here	Light pollution is referred to under landscape, townscape and seascape.	N/A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
NE28	Question 1 - key issues	Additional issues could include: * The carbon storage of existing sites, e.g. peat and woodland (mitigation) * Nature-based solutions to help adapt to changes in climate, including sea level rise. * Need to plan for worst case scenarios for sea level rise including the impacts on the natural environment.	Noted, key issues updated to reflect this comment.	See Table 3-2 and Appendix A
NE29	Question 1 - key issues	When developing the appraisal framework having separate objectives for mitigation and adaptation will make the identification of impacts in the AoS easier, as the measures needed to address these two issues are assessment are quite distinct.	Noted.	N/A
NE30	Question 1 - key issues	Add Objective 4 - land use, geology and soils to the AoS objective link column for climate change.	NE's suggested objective has been included.	See Table 3-2
NE31	Question 1 - key issues	There is no reference here to increased levels of marine transport - shipping/general vessel movements and numbers of berths which may result from port development? How emissions from that sector can be made more sustainable? Greener fuels? Use of inland waterways?	Noted, the key issues have been updated to reflect this comment.	See Table 3-2 and Appendix A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
NE32	Question 1 - key issues	Other matters to consider: * the importance of considering maritime heritage * Increase awareness of buried archaeology / unknown heritage – and recognition that some historic assets can be offshore	Noted, the key issues have been updated to reflect this comment.	See Table 3-2 and Appendix A
NE33	Temporal scope	Impacts at construction stages can be irreversible permanent, not short term or temporary. For example, loss of soils, habitats etc. Therefore, it will be necessary to consider full impacts at construction stages and how these can be minimised. This may include consideration of the larger area of land that may be required at construction vs. operational size of devt.	Noted.	N/A
NE34	Question 3 - AoS Framework	Should reference HPMAs- Highly Protected Marine Areas	Reference to HPMAs has been added to the AoS Framework.	See Table 4-1
NE35	Question 3 - AoS Framework	and/or environmental gain might be better here? As biodiversity net gain can be read as specific for BNG when currently there is no equivalent for the marine environment. The term environmental net gain is a broader fit	The AoS Framework has been updated to reflect this comment.	See Table 4-1

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
NE36	Question 3 - AoS Framework	Revise the guide question relating to providing opportunities to deliver biodiversity net gain, to also include environmental net gain.	The AoS Framework has been updated to reflect this comment.	See Table 4-1
NE37	Question 3 - AoS Framework	Others to consider: * affect access to the coast and the route of the King Charles III England Coastal Path (KCIIIIECP)? * help deliver green infrastructure and opportunities for access to nature?	The AoS Framework has been updated to reflect this comment.	See Table 4-1
NE38	Question 3 - AoS Framework	Suggest 'soil health' included in AoS objective for land use, geology and soils.	The AoS Framework has been updated to reflect this comment.	See Table 4-1
NE39	Question 3 - AoS Framework	See comments on pg 6 <i>"The topic title varies from one NPS to the next.</i> <i>-The AoS objective should be updated form 'To conserve and enhance soil and geology and contribute to the sustainable use of land.' to 'To conserve and enhance soil health and geology and contribute to the sustainable use of land.'</i> <i>Guide questions – update 'soil quality' to 'soil health'.</i>	Please refer to previous response on this matter.	N/A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		<i>25YEP recognise the synergies and dependencies on soil health such as use of natural flood management solutions, SUDS, climate change mitigation and adaptation. Similarly, the 25YEP aim that development is in the right places, avoiding our best agricultural land and in embedding the ‘environmental net gain’ principle reflects a natural capital approach in spatial planning which aims to minimise the impact of development on finite land and soil resources.”</i>		
NE40	Question 3 - AoS Framework	Others to consider for soil: * protect BMV land, protect peat and carbon store, manage the long-term value of soil For geology: * impact on coastal processes and the effect this will have on coastal habitats, including consideration of coastal squeeze	The AoS Framework has been updated to reflect this comment.	See Table 4-1
NE41	Question 3 - AoS Framework	Others to consider: * protect habitats from adverse air quality impacts including eutrophication, direct toxicity, acidification and accumulation	The AoS Framework has been updated to reflect this comment.	See Table 4-1
NE42	Question 3 - AoS Framework	Lighting impacts too	See response to NE27.	N/A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
NE43	Question 3 - AoS Framework	Impacts on wildlife including protected species and lighting should be considered	See response to NE27.	N/A
NE44	Question 3 - AoS Framework	Other considerations: * coastal process and sea level rise; * help deliver NBS and GI to allow adaptation to climate change * consider carbon storage potential of existing sites including woodlands and peat, seagrass and saltmarsh and other coastal margin habitats "Carbon Storage and Sequestration by Habitat 2021 (NERR094)	The AoS Framework has been updated to reflect this comment.	See Table 4-1
NE45	Question 3 - AoS Framework	As comments earlier highlighted this should apply to shipping/vessel movements as well e.g. greener shipping options, movement of freight through inland water ways.	The AoS Framework includes guide questions relating to minimising traffic volumes and encouraging alternative means of transporting freight, waste and minerals.	N/A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
NE46	Question 3 - AoS Framework	Other considerations: * importance of offshore archaeology designated and non-designated.	The AoS Framework has been updated to reflect this comment.	See Table 4-1
NE47	Significance key	Not sure if this is worded correct as it implies that beneficial and negative effects can be balanced out. Where negative effects are identified a negative effect should be recorded.	Noted, description of the neutral effect amended.	Table 4-3
NE48	Cumulative effects	When considering cumulative effects will the cumulative or in-combination effects with other plans and strategies be considered. For example the allocations in Local Plans, NSIP projects the other NPS (for example the emerging new NPS for nuclear power siting).	The cumulative effects of the revised NPS with other plans, programmes and projects will be considered.	N/A
NE49	Question 2 - baseline and policy context	Worth checking the Nuclear AoS to check there is consistency across the broad policies that apply specifically to the Ports Sector	Noted.	N/A
NE50	Question 2 - baseline and policy context	What about the broad principle within the Harbours Act 1964: Harbours Act 1964: Section 48A Duty to exercise their functions with regard to nature conservation & related environmental considerations.	Noted, this will be a consideration for the port industry when preparing and submitting an	N/A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
			application for port related development.	
NE51	Question 2 - baseline and policy context	Plus the offshore regulations: The Conservation of Offshore Marine Habitats and Species Regulations 2017	Noted, policy context updated for biodiversity and nature conservation to reflect this comment.	Appendix A
NE52	Question 2 - baseline and policy context	Also mention HPMAs in policy context.	Noted, policy context updated for biodiversity and nature conservation to reflect this comment.	Appendix A
NE53	Question 2 - baseline and policy context	MPAs is a generic term, but includes internationally designated sites- so confusing here when offshore sites are also in the section above- perhaps move to the section above as helpful to highlight the designations in marine space but under misleading title for the section.	Noted, section moved.	Appendix A
NE54	Question 2 - baseline and policy context	mentioned here so should be in earlier tables	Noted.	N/A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
NE55	Question 2 - baseline and policy context	Additional policies to consider The Town and Country Planning and Infrastructure Planning (Environmental Impact Assessment) (Amendment) Regulations 2018. These new regulations set out the procedures to be followed in relation to environmental impact assessment linked to nationally significant infrastructure projects in England and Wales. The objective is to provide a high level of protection of the environment and to help integrate environmental considerations into the preparation of proposals for development to reduce their impact on the environment.	Noted, this will be relevant for any nationally significant port infrastructure that comes forward.	N/A
NE56	Question 2 - baseline and policy context	NPPF updated para reference is 180. Also include ref to para 180, b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland. And ref to footnote 62: Where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality. The availability of agricultural land used for food production should be considered, alongside the other policies in this Framework, when deciding what sites are most appropriate for development	Noted, policy context updated to reflect this comment.	Appendix A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
NE57	Question 2 - baseline and policy context	Ref should be updated to 2019. Explains key issues in implementing policy to protect and enhance the natural environment, including local requirements covering: • Agricultural land, soil and brownfield land of environmental value. A local planning authority must consult Natural England before granting planning permission for large-scale non-agricultural development on best and most versatile land that is not in accord with the development plan. Natural England has published guidance on development on agricultural land.	Noted, policy context updated to reflect this comment.	Appendix A
NE58	Question 2 - baseline and policy context	including the appropriate restoration to agriculture	Noted, policy context updated to reflect this comment.	Appendix A
NE59	Question 2 - baseline and policy context	soil mapping should also form part of the baseline. Natural England would promote the use of the NATMAP soils data given its increased detail. This will also identify peat soil (noted that peat soils have been discussed in the context of Wales, but not England, despite the presence of upland and lowland peat in England)	Noted, maps/ figures have not been provided to align with the scope and nature of the revised NPS, which does not set a quantum nor identify location for development.	Appendix page 35

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
NE60	Question 1 - key issues	this is incorrect, 'Much of the land in the UK is low grade, rendering it unusable for farming..	Noted, this has been removed.	Appendix A
NE61	Question 2 - baseline and policy context	Water resources and Quality- this should also reference pollution prevention policies for shipping/ports sector: Merchant Shipping (OPRC): Oil Spill Plan and any other associated legislation	Noted, the plans and programmes included in the policy context sections in Appendix A are considered proportionate/ appropriate at this stage.	N/A
NatureScot				
NS1	General comment	Thank you for your consultation on the above Scoping Report received in the Scottish Government SEA Gateway on 31 January 2024. We note that this is a revision of the 2012 National Policy Statement for Ports and that it relates to ports and port infrastructure in England and Wales only. It sets out the Government's conclusions on the need for new port infrastructure and the considerations that are needed to ensure that future development is fully sustainable.	Noted	N/A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
NS2	General comment	We also note that the Policy is non-spatial but that in terms of reasonable alternatives, consideration could be given to site-specific revised NPSP. It will be interesting to see how this is developed through the AoS.	Noted	N/A
NS3	General comment	We acknowledge that it is considered that transboundary effects are unlikely and accordingly have no further comments at this stage. Please note that Scottish Natural Heritage is now known as NatureScot. I hope these comments prove useful and please do not hesitate to contact me if you require further clarification – sea_gateway@nature.scot	Noted	N/A
Scottish Environment Protection Agency (SEPA)				
SEPA 1	General comment	Thank you for your Scoping consultation submitted under the above Act. This was received by SEPA via the Scottish Government SEA Gateway on 31 January 2024 in relation to the above application. We have reviewed the scoping report in our role as a Consultation Authority under the above Regulations. It is noted that the geographical scope of the revised NPS for Ports will cover all suitable locations for port developments in England and reserved trust ports in Wales. It is therefore	Noted	N/A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		considered that transboundary effects are unlikely due to the nature and scope of the plan. We agree with this assessment and have no further comments to make. If you have queries relating to this letter, please contact us via our SEA Gateway at sea.gateway@sepa.org.uk including our reference number.		
CADW				
CADW 1	Question 3 - AoS Framework	In general, Cadw are happy with the document but in our opinion the relevant outcome indicators from the 25 year environmental plan in section 11 Cultural Heritage in Table NTS1 should specifically mention listed buildings, as these are likely to be the most numerous designated historic assets that will be affected by changes to a port and their condition is regularly reported in surveys by Cadw and Historic England.	Noted, reference to specific outcome indicators have been removed in response to Natural England. Designated heritage assets, included listed buildings, are considered through the AoS Framework.	See Table 4-1
Natural Resource Wales (NRW)				
NRW 1	General comment	Thank you for consulting us on the Scoping Report for the Appraisal of Sustainability (AoS) of the revised National Policy	Noted.	N/A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		Statement (NPS) for Ports, which we received on 23 January 2024. We note that the Scoping Report has been prepared for consultation with the statutory Strategic Environmental Assessment consultation bodies, as required by regulation 4 of the Environmental Assessment of Plans and Programmes Regulations 2004. We also recognise the purpose of the Scoping Report is to provide sufficient information to consultees in England and Wales to enable them to comment on the proposed scope of the AoS.		
NRW 2	General comment	We welcome the opportunity to provide comments on the scoping report. While we recognise that the draft Scoping Report has relevancy to the position in Wales, we found that there are several areas of omission or out-of-date information: • A number of plans, policies and programmes, which provide a Wales context should be included to inform the AoS and consequently the revised NPS. • Notably the 25-year Environment Plan and its revision support the indicators for outcomes in the AoS framework. However this Plan only applies to England, and relevant indicators must be provided in a Wales context.	Noted, please see responses below.	See below.

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		The assessment methodology should ensure the development of policy aspirations which are specific to Wales e.g. ecosystem resilience, and net benefit for biodiversity (terrestrially) and for the marine environment. We recommend that the AoS should address these issues or explain why you consider these matters are not relevant to the AoS.		
NRW 3	General comment	We note that the draft Scoping Report has been produced and is attached for review and comment with the statutory bodies in England and Wales, under the Environmental Assessment of Plans and Programmes Regulations 2004 and that the NPS for Ports provides planning policy guidance against which a development consent order (DCO) application for any nationally significant new port infrastructure in England or at a reserved trust port in Wales are examined. It also applies, wherever relevant, to associated development, such as road and rail links, for which consent is sought alongside that for the principal development. We note that responses are sought to the following questions: Do you agree with the key issues identified within the topic areas? If not, what issues should be removed from	Noted	N/A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		the scope of the appraisal and which relevant issues should be included in the proposed scope of the appraisal? - Do you think the AoS Scoping Report sets out sufficient information to establish the context for the appraisal? If not, which areas do you think have been missed and where is information on these topics available from? - Do you agree that the AoS objectives and guide questions cover the breadth of issues appropriate for appraising the effects of the draft revised NPS? If not, which objectives should be amended and which other objectives do you believe should be included?		
NRW 4	Question 2 - baseline and policy context	The 25 Year Environment Plan (2018) and its first revision the Environmental Improvement Plan (2023) are only relevant in England. We recommend that you refer to the Well-Being of Future Generations Act 2015, Environment (Wales) Act 2016, the Welsh Government Natural Resource Policy, NRW's State of Natural Resources Report and Area Statements so that the NPS for Ports is informed by and recognises Welsh Government legislation, aspirations and policies.	Noted, the scoping information has been updated to reflect this comment.	See Table 4-1 and Appendix A
NRW 5	General comment	We note that a Habitats Regulations Assessment is being undertaken in parallel to the AoS and NRW must be consulted	Noted	N/A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		as the relevant Statutory Nature Conservation Body. Please submit your consultation to: EPP.Planning@cyfoethnaturiolcymru.gov.uk		
NRW 6	General comment	The AoS Scoping Report correctly states that the NPS currently only relates to a reserved trust port in Wales at Milford Haven. However, the potential establishment of further trust ports in Wales in the future cannot be ruled out, and also the NPS could apply to applications for activities within ports in England, which may have the potential to incur a significant effect on environmental features in Wales. Our comments are made on this basis.	Noted	N/A
NRW 7	Question 2 - baseline and policy context	We recommend the consideration of sectoral plans that are important in a Welsh ports context. These include Crown Estates 'Round 5' Plans for offshore wind in the Celtic Sea, UK Government Oil and Gas Storage Plans, UK and Welsh Hydrogen Strategies.	Noted, the review of plans and programmes is considered appropriate at this stage given the scope and nature of the revised NPS.	N/A
NRW 8	Question 1 - key issues	Biodiversity Net Gain (second bullet) is a concept and process that is relevant only to England (and currently only through their terrestrial planning system, down to Mean Low Water, although policy development around Marine Net Gain is underway).	Noted, the key issues have been updated to reflect this comment.	See Table 3-2

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		In Wales, it would be more appropriate to refer to the need to “maintain and enhance” ecosystem resilience as part of the objective to secure sustainable management of natural resources (SMNR) in accordance with Section 6 Environment Wales Act 2016 and relate these to the relevant policy e.g. for marine, the Welsh National Marine Plan (WNMP) includes policy ENV_01: Resilient marine ecosystems, that requires x and encourages proposals that contribute to the protection restoration and enhancement of marine ecosystems. Through Planning Policy Wales (PPW) there is the requirement for Net Benefit for Biodiversity, and this is relevant at the coast to mean low water. This part of PPW has recently been updated, we refer you to section 6.4.5 .		
NRW 9	Question 1 - key issues	Regarding the sixth bullet under the column key issues and opportunities, we recommend that additional wording (as shown in bold is included), “ <i>Where ports intersect with or are adjacent to or otherwise likely to affect designated sites including those with significant geodiversity, protected habitats (including irreplaceable habitats) and species, there is a need to balance infrastructure needs with protection and enhancement of those sites. In addition, there is a need for effective protection measures to be in place for the soils that support these designated and protected sites.</i> ”	Noted, key issues updated to reflect this comment.	See Table 3-2 and Appendix A.

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
NRW 10	Question 1 - key issues	Under the column AoS objective links, links between Topic 1 for Biodiversity and Nature Conservation and Topic 5 for Water Resources are identified. However, no direct links, key issues and opportunities are identified, and this should be addressed in the AoS.	Noted, amendments made to the key issues to reflect this comment.	See Table 3-2 and Appendix A
NRW 11	Question 1 - key issues	We refer you to the seventh bullet which states “ <i>Over 50% of land in England is designated as a Nitrate Vulnerable Zone.</i> ” And in Appendix A it states, “ <i>In Wales, NVZs have historically accounted for around 2.3% of total land, however these were revoked in 2021 due to changing of the regulations as the Water Resources (Control of Agricultural Pollution) (Wales) Regulations were introduced.</i> ” We recommend that these sections clarify that the designated Nitrate Vulnerable Zone applies to all holdings in Wales.	Noted, a clarification added to address this comment.	See Appendix A
NRW 12	Question 1 - key issues	Regarding key issues and opportunities we recommend the inclusion of potential issues with water availability for construction works and the need for efficient use of water from design stage.	Noted, an additional key issue has been added to address this comment.	See Table 3-2 and Appendix A
NRW 13	Question 1 - key issues	We recommend that clarity is provided that demonstrates how the identified key issues and opportunities inform Objectives 5 Water Resources, and Objective 6 Water Quality.	Noted, there is only one objective relating to the water environment so assume the reference to	N/A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
			Objective 6 relates to the air quality topic. The baseline and policy context informed the identification of the key issues, which then informed the development of the AoS Objectives.	
NRW 14	Question 1 - key issues	We recommend that clarity is provided that demonstrates how the identified key issues and opportunities inform Objective 5 Water Resources and Objective 9 Materials and Waste.	Noted, the baseline and policy context informed the identification of the key issues, which then informed the development of the AoS Objectives.	N/A
NRW 15	Question 1 - key issues	We refer you to the fourth bullet point, <i>“Changes in temperature and rainfall patterns, along with more frequent extreme weather events creates the situation where a greater degree of resilience will have been incorporated into plans and proposals.”</i> We seek clarity on what is meant by <i>“...creates the situation where a greater degree of resilience will have been incorporated into plans and proposals.” This is something that needs to be done as plans and proposals do not have this built</i>	Noted, key issues updated to reflect this comment.	See Table 3-2 and Appendix A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		<i>in already. Adaptation should be included explicitly here as it is too vague to state “a greater degree of resilience.”</i> We recommend changes in wording i.e. <i>“adaptation actions can lead to a greater degree of resilience and must be incorporated into plans and proposals.”</i>		
NRW 16	Question 1 - key issues	We refer you to the fifth bullet point, <i>“The UK’s Climate Projections (UKCP18) show that the UK as a whole is likely to experience hotter, drier summers, warmer, wetter winters and rising sea levels, range of environmental conditions.”</i> While changes in weather and sea level rise are acknowledged, we recommend that there is also a reference to flood risk and how flood risk is expected to increase as a result of climate change.	Noted, key issues updated to reflect this comment.	See Table 3-2 and Appendix A
NRW 17	Question 3 - AoS Framework	We refer you to earlier comments made in our response about Net Benefit for Biodiversity (refer to page 29, Table 3.2, Topic 1 Biodiversity and Nature Conservation of the scoping report). We recommend that you update the guide questions to include Net Benefit for Biodiversity (as set out in PPW (Edition 12, Chapter 6). We also recommend that the AoS Framework should include guide questions and outcome indicators for ecosystem	Noted, the AoS Framework has been updated to reflect this comment.	See Table 4-1

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		resilience as part of the Environment (Wales) Act 2016 Section 6 Duty and the objective to secure SMNR and make suitable reference to the policies in the WNMP.		
NRW 18	Question 3 - AoS Framework	We recommend an additional guide question and outcome indicator is included: protecting and enhancing the resilience of water resources from the risk of flooding and drought.	Noted, the AoS Framework has been updated to reflect this comment.	See Table 4-1
NRW 19	Question 3 - AoS Framework	The third guide question asks, <i>‘will the revised NPS for Ports promote climate change adaptation (including for rising temperatures, more extreme weather events and sea level rise)?’</i> To ensure active consideration in the design of schemes, we recommend that the guide question is amended as follows: embed adaptation to climate change in development projects to increase resilience to rising temperatures, more extreme weather events and sea level rise.	Noted, the AoS Framework has been updated to reflect this comment.	See Table 4-1
NRW 20	Question 3 - AoS Framework	We recommend that the fourth guide question is amended as follows:	Noted, the AoS Framework has been updated to reflect this comment.	See Table 4-1

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		help to reduce flood risk and consequence, help to mitigate and adapt to climate change, thereby build resilience into development proposals?		
NRW 21	General comment	The AoS Scoping Report comments that the location, timing, delivery, detailed design and future changes for port infrastructure is uncertain, however this report identifies the location of reserved trust ports in Wales. i.e. the port at present at Milford Haven and therefore some of the uncertainties should be identifiable.	Noted.	N/A
NRW 22	Question 2 - baseline and policy context	Please refer to earlier comments i.e. Section 1.3.3 page 17. The section on policy context for the United Kingdom lists the Environment Act (2021), the Green Future: Our 25 Year Plan to Improve the Environment (2018) and the Environmental Improvement Plan (2023). Please note that these are applicable to England only. We recommend that you refer to the Well-Being of Future Generations Act 2015, Environment (Wales) Act 2016, the Welsh Government Natural Resource Policy, NRW State of Natural Resources Report and Area Statements so that the NPS for Ports is informed by and recognises Welsh Government legislation, aspirations and policies.	Noted, some of these plans and programmes were already referenced but the policy context has been updated where necessary.	Appendix A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
NRW 23	Question 2 - baseline and policy context	The AoS should refer to the 12th edition of PPW and note the updated policy in relation to: Special Sites of Scientific Interest, irreplaceable habitat, and the stepwise approach (we refer you to PPW and section 6.4.5). The AoS should also refer to the Welsh Government's Natural Resources Policy. The AoS should refer to Future Wales The National Plan 2040, and in particular Policy 9 - Resilient Ecological Networks and Green Infrastructure. We recommend that the AoS also considers: • the Welsh National Marine Plan. This sets out Welsh Government's policy for the next 20 years for the sustainable use of Welsh seas. • Nature Recovery Action Plan GOV.WALES • Biodiversity deep dive: recommendations [HTML] GOV.WALES • The Environmental Strategy for Wales (2006)	Noted, the policy context has been updated to reflect this comment where necessary.	Appendix A
NRW 26	Question 2 - baseline and policy context	We refer you to the State of Natural Resources Report for Wales as a source of information.	Noted.	N/A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
NRW 27	Question 2 - baseline and policy context	We refer you to the baseline information for Designated Sites and Special Areas of Conservation (SACs). It is unclear whether the information is referring to marine or terrestrial SACs or both. We recommend that consideration is given to the spatial extent of SACs relative to the size of country. (The section on Marine Protected Areas and Marine Conservation Zones includes relevant information)	Noted, this will be considered further at the next stages of the AoS.	N/A
NRW 28	Question 2 - baseline and policy context	We recommend that you amend the AoS Scoping Report so that Marine Protected Areas are recognised in the section for internationally designated sites.	Noted, the scoping information has been amended to reflect this comment.	Appendix A
NRW 29	Question 2 - baseline and policy context	As already commented, Biodiversity Net Gain is a concept and process that is relevant only to England. Net Benefit for Biodiversity applies in Wales (Biodiversity (relevant at the coast to mean low water). In Wales, it would be more appropriate to refer to the need to “maintain and enhance” ecosystem resilience as part of the objective to secure SMNR in accordance with Section 6 Environment Wales Act 2016 and relate these to the relevant policy e.g. for marine, the WNMP includes policy ENV_01: Resilient marine ecosystems, that requires x and encourages proposals that contribute to the protection restoration and enhancement of marine ecosystems.	Noted, amendments have been made to the key issues and AoS Framework to reflect this comment.	See Table 3-2, Table 4-1 and Appendix A.

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
NRW 30	Question 2 - baseline and policy context	Please be advised that the Welsh Government, with support from NRW and the Joint Nature Conservation Committee, are currently working with a task and finish group of marine stakeholders to identify a small number of possible Marine Conservation Zones (MCZs), in addition to the existing Skomer MCZ within Welsh waters.	Noted.	N/A
NRW 31	Question 1 - key issues	We refer you to the section on key issues and opportunities: Ports should explore the use of nature-based solutions and green infrastructure, to deliver climate change adaptation and other environmental and social outcomes, such as encouraging greater active travel for employees. There does not appear to be any incentives, or encouragement to include nature-based solutions and green infrastructure. Developers can just “explore” the options and choose not to implement. Nature based solutions and green infrastructure should be mandatory unless deemed not feasible (e.g. technically not developed).	Noted, this is a matter for plan-making and wider Government policy.	N/A
NRW 32	Question 1 - key issues	We refer you to the section on key issues and opportunities: Where ports intersect with designated sites, including those with significant geodiversity, protected habitats	Noted, this is an issue for plan-making and ultimately a judgment for the decision-maker based on	N/A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		(including irreplaceable habitats) and species, there is a need to balance infrastructure needs with protection and enhancement of those sites. In addition, there is a need for effective protection measures to be in place for the soils that support these designated and protected sites. We recommend that you provide clarity on the following: - What matrix is used to balance between needs and protection measures, and - What rule is followed that ensures one does not supersede the other without valid reasons.	available evidence, the revised NPS and wider policy.	
NRW 33	Question 2 - baseline and policy context	The reference to PPW should be updated as edition 12 has been published (February 2024). The policy context for Wales should include the WNMP, which has social policies focused on “<i>ensuring a strong, healthy and just society</i>,” e.g. well-being of coastal communities, access to the marine environment, heritage, and coastal change and flooding. Consideration should also be given to the Public Health (Wales) Act 2015 and priorities set out in the Welsh Government’s document ‘Building Better Places’ (2020).	Noted, the scoping information has been updated to reflect this comment.	Appendix A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
NRW 34	Question 1 - key issues	We refer you to the section on key issues and opportunities: Environmental effects from port development (e.g. emissions to air, noise and visual disturbance) can reduce the quality of living environments of local communities. We recommend that section includes the environmental impact on water quality from port development and its use e.g. emissions from sea vessels, dredging activities, surface water runoff from hard surfaces including roads and car parks.	Noted, the key issues have been updated to reflect this comment.	Table 3-2 and Appendix A
NRW 35	Question 2 - baseline and policy context	The AoS should refer to the extent and purpose of Geological Conservation Review Sites in Wales. The AoS should be amended to recognise that Geoparks in Wales are UNESCO Global Geoparks. UNESCO consider these areas to be of international importance for geological heritage that should be safeguarded and sustainably managed and include strong local involvement. In Appendix A, references to ‘Parc Cenedlaethol’ should be amended to refer to ‘Parc Cenedlaethol Eryri.’ While we support the reference to Regionally Important Geodiversity Sites (RIGS) (section Key issues and opportunities) it would be useful to explain what RIGS are, their importance for education, and the number of RIGS in Wales.	Noted, the baseline information has been updated to reference UNESCO in relation to Global Geoparks.	Appendix A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
NRW 36	Question 1 - key issues	We refer you to the section on key issues and opportunities: Much of the land in the UK is low grade, rendering it unusable for farming. This issue considers the land from a monetary perspective only, which is in contradiction to achieving the enhancement and Net Gain for Biodiversity and tackling Climate Change, and its consequences through the ecosystem services these areas may provide. Our view is that undeveloped land should be seen as a biodiversity haven with a significant monetary, social and environmental value.	Noted.	N/A
NRW 37	Question 2 - baseline and policy context	While the policy context for the UK refers to the Flood and Water Management Act 2010 and for England the National Planning Policy Framework (2023) there is nothing specific to flood risk management and this omission should be addressed. We recommend that you consider other sources applicable for Wales including Technical Advice Note 15 Development and Flood Risk (2004) and the national Flood and Coastal Erosion Risk Management strategies.	Flood risk and these plans and programmes are considered under the climate change section.	N/A
NRW 38	Question 2 - baseline and policy context	The Catchment Abstraction Management Plans have not been updated since 2015.	Noted.	N/A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		NRW will determine an application for proposed water abstraction for port development. The applicant will need to submit water availability assessments and assess the likely impacts to the environment. Water efficiency should be built in at the design stage and meet Building Regulations 2018 Part G.		
NRW 39	Question 2 - baseline and policy context	The reference to the WNMP states that it is currently being developed. This is incorrect as the WNMP was published in 2019.	Noted, the policy context has been updated to reflect this comment.	Appendix A
NRW 40	Question 1 - key issues	The third bullet point should also explain the likelihood of sea level rise and the likely increase of flood risk from all sources.	Noted, key issues have been updated to reflect this comment.	Table 3-2 and Appendix A
NRW 41	Question 1 - key issues	The third bullet point notes climate change is likely to have a significant impact. However, reference should also be made to sea level rise and the likely increase in flood risk from all sources. Consideration of the increase of intense storms inundating freshwater resources as another risk.	Noted, key issues have been updated to reflect this comment.	Table 3-2 and Appendix A
NRW 42	Question 1 - key issues	We recommend that this section refers to opportunities to reduce pressures on water resources e.g. sustainable drainage schemes that includes rainwater harvesting and water recycling. There is also no mention that an increase in	Noted the key issues already identify the potential for increased pressure on water	Table 3-2 and Appendix A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		population and traffic that will require an increase in infrastructure to support the growth, which in effect will increase pressure on water resources. We recommend that opportunities are identified to reduce potential water resource pressures.	resources. They have been updated to include a reference to encouraging the efficient use of water.	
NRW 43	Question 1 - key issues	We recommend that you consider the impact of noise from port development and its operation on terrestrial and marine ecosystems and environmental receptors.	Noted	N/A
NRW 44	Question 2 - baseline and policy context	The reference to the Welsh Assembly Government should be amended to read the Welsh Government. We recommend that the policy context for Wales refers to Chapter 6 in PPW (Edition 12) and explains the inter-relationship between the need to protect, maintain and enhance the resilience of ecosystems and their ability to adapt to challenges presented by the climate change emergency. The policy context should include Prosperity for All: A Climate Conscious Wales (Prosperity for All: A Climate Conscious Wales (gov.wales)). This is a climate change adaptation plan for Wales. Please be aware that this Plan is being reviewed in 2024 and likely to be called the 'Resilience Strategy'.	Noted and amended.	Appendix A

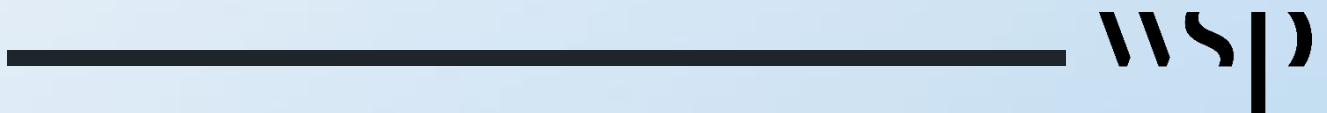
Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		The reference to Climate Change Strategy for Wales is out of date and should be replaced with Climate Conscious Wales and the Net Zero Strategic Plan. Information in 'Part 2 of the Environment (Wales) Act...', and 'Low Carbon Wales (2019)' sections are out of date.		
NRW 45	Question 2 - baseline and policy context	The topic heading is Climate Change (Mitigation and Adaptation) and whilst there is a section on mitigation very little attention is given to adaptation (planning, implementing etc), which should be addressed in the AoS.	Noted.	N/A
NRW 46	Question 2 - baseline and policy context	We refer to the weather trends set out in the baseline information. There narrative is about changes in weather patterns, but only Storm Eunice is referenced. We recommend that you consider other significant flood events over the past decade, which has led to wide-spread flooding across Wales.	Noted,	N/A
NRW 47	Question 1 - key issues	We refer you to the section on key issues and opportunities for the topic on Climate Change (Mitigation and Adaption): Fossil fuel dependency remains high and is likely to continue. We recommend that you consider opportunities to generate location appropriate renewable energy on site during both	Noted	N/A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
		development and its operation as a port. We also recommend that you consider opportunities to encourage the use of Electric Vehicle technology for port operation.		
NRW 48	Question 1 - key issues	The AoS notes: Changes in temperature and rainfall patterns, along with more frequent extreme weather events creates the situation where a greater degree of resilience needs to be incorporated into plans and proposals. We advise that greater resilience would include thermally efficient buildings that would require minimal heating or cooling, which will reduce energy use and reduce greenhouse gas emissions. There is no mention of green infrastructure (except the initial mention of “explore” green infrastructure. Ensuring buildings and other supporting infrastructures (e.g. roads and car parks) are green will likely increase, or at least support biodiversity and should be highlighted through the AoS to inform the NPS.	Noted, updates have been made to the key issues.	Table 3-2 and Appendix A
NRW 49	Question 1 - key issues	We recommend that the opportunity for adaptation and resilience measures is identified in the AoS.	Noted, updates have been made to the key issues.	Table 3-2 and Appendix A

Ref	Consultation Question	Consultation Response	Commentary/ Action Taken	Location of changes in this AoS Report
NRW 50	Question 1 - key issues	We note: There is a need for investment in transportation infrastructure to meet future demand and support economic growth. We recommend including an opportunity for new transport infrastructure being green where feasible.	Noted.	N/A
NRW 51	Question 1 - key issues	We note: There is a need to reduce the need to travel and facilitate a shift towards more sustainable modes of transport. Port and traffic infrastructure has to be built with sustainable transport in mind at the outset and before seeking a shift towards A&ST. Biodiversity enhancement and climate change mitigation and adaptation and A&ST must be included at the earliest design phase.	Noted.	N/A

Appendix C

Appraisal of the draft revised NPS for Ports and Reasonable Alternative



Introduction

This appendix presents the appraisal of the likely significant effects of the draft revised NPS and the reasonable alternative.

Methodology

The methodology is presented in detail in Chapter 4 of the main report; however, the significance guide/ key is provided again below for reference in **Table C-1**.

Table C-1 - Guide for the assessment of significance

Effect	Description	Score
Major Positive (Significant)	Effects on relevant receptors that fully support the achievement of sustainability targets and objectives relevant to ports. For example, the effect: - Substantially accelerates an improving/ positive trend. - Substantially decelerates a declining/ negative trend. - Substantially supports the delivery of a government objective/ target/ outcome.	++
Minor Positive	Effects on relevant receptors that partly support the achievement of sustainability targets and objectives relevant to ports. For example, the effect: - Accelerates an improving/ positive trend, in a marginal way. - Decelerates a declining/ negative trend, in a marginal way. - Supports the delivery of a government objective/ target/ outcome but in a marginal way.	+
Neutral	No effects or a neutral contribution.	0
Uncertain	The potential for an effect is unclear. This may be due to lack of clarity on how the policy will be applied, and/or data gaps in the baseline. Uncertain effects will be treated as significant effects (in order to present a precautionary approach).	?
Minor Negative	Effects on relevant receptors that could conflict with the achievement of sustainability targets and objectives relevant to ports. For example, the effect: - Decelerates an improving/ positive trend, but in a marginal way - Accelerates a declining/ negative trend, but in a marginal way - Detracts from the delivery of government objective/ target/ outcome but in a marginal way	-

Major Negative (Significant)	Effects on relevant receptors that actively works against the achievement of sustainability targets and objectives relevant to ports. For example, the effect: ▪ Substantially decelerates an improving/ positive trend ▪ Substantially accelerates a declining/ negative trend ▪ Substantially detracts from the delivery of a government objective/ target/ outcome	--
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An appraisal table is presented in the following section for each of the twelve AoS Topics. The performance of the draft revised NPS and the reasonable alternative are scored accordingly, with a narrative provided in the appraisal commentary column. Proposed mitigation and/ or enhancement measures are also provided at the end of each appraisal table.

Appraisal of the Revised National Policy Statement and Reasonable Alternative

Biodiversity and Nature Conservation

Table C-2 - Appraisal of the draft revised NPS and reasonable alternative for biodiversity and nature conservation

AoS Objective - To protect, restore and enhance biodiversity (habitats, species and ecosystems) working within environmental capacities and limits to contribute to ecosystem resilience and habitat connectivity and deliver a net biodiversity/ environmental gain.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
+	+	Draft revised NPS The key receptors that could be affected by nationally significant port infrastructure are set out in the baseline information presented in Appendix A. The draft revised NPS takes account of the potential direct and indirect effects, including cumulative effects, of port infrastructure and associated development on biodiversity and nature conservation in a number of areas. These include: ▪ Government policy in Chapter 2 states that all proposed development should be delivered in line with/ satisfy the relevant legal, environmental and social constraints and objectives as set out in national regulations. That development should: • preserve, protect and improve marine and terrestrial biodiversity, in situ where possible; • be well designed, functionally and environmentally; and • provide high standards of protection for the natural environment. Assessment principles in Chapter 3 states that the applicant's assessment should be conducted in a manner that is consistent with statutory requirements under UK legislation (this includes the Habitats Regulations). It should also be conducted in a way that meets the need to improve the environmental performance of ports and associated development (including transport). Section 3.5

AoS Objective - To protect, restore and enhance biodiversity (habitats, species and ecosystems) working within environmental capacities and limits to contribute to ecosystem resilience and habitat connectivity and deliver a net biodiversity/ environmental gain.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		sets out the general approach to environmental impacts and Environmental Impact Assessment, recommending early engagement with statutory environmental bodies at the pre-application stage. References are made to the duties under the Environment Act 2021 and the policies set out in the Government's Environmental Improvement Plan for improving the natural environment. It states that applicants should look for opportunities to take a holistic approach to avoiding, reducing or mitigating impacts on the natural environment by using nature-based solutions. It also makes reference to the requirements under the Environmental Impact Assessment (EIA) Regulations. ▪ Generic impacts in Chapter 4 provides guidance on generic impact types often relevant to ports applications and/ or associated development on biodiversity and geological conservation. It states that: • the applicant should consider the full range of potential impacts on ecosystems and they should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests as well as deliver BNG. References are made to the key biodiversity designations, including international, national, regional and local sites as well as other habitats and species. • the applicant should include appropriate mitigation measures as an integral part of the proposed development. • appropriate weight should be given to designated sites and wider biodiversity, including irreplaceable habitats.

AoS Objective - To protect, restore and enhance biodiversity (habitats, species and ecosystems) working within environmental capacities and limits to contribute to ecosystem resilience and habitat connectivity and deliver a net biodiversity/ environmental gain.

Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		if an HRA is required then the applicant must provide sufficient information with the application to enable the Secretary of State to make an Appropriate Assessment of these likely effects in view of the site’s conservation objectives. Given the policy and guidance for applicants and the decision-maker set out above and the nature of the draft revised NPS, i.e. not setting the quantum, location or timing for the delivery of infrastructure, it is considered that the draft revised NPS is likely to have a long-term minor positive effect on biodiversity and nature conservation. It will help to decelerate the declining trend in biodiversity and supports the delivery of Government objectives and targets. The draft revised NPS seeks to avoid and then minimise the potential impacts of port infrastructure on biodiversity as well as require enhancements where possible. It also references the key relevant legal and environmental constraints and objectives as set out in national regulations. There are some areas where the draft revised NPS could be strengthened and these are set out in the summary below; however, their inclusion is not considered likely to alter the predicted nature or significance of effects for biodiversity and nature conservation. The HRA Report found that the potential for adverse effects on integrity of Habitat Sites cannot be discounted at this stage and it concluded that the draft revised NPS is necessary for Imperative Reasons of Overriding Public Interest. It notes that individual NSIPs must still seek to avoid adverse effects on the integrity of Habitats Sites and it is possible that no NSIPs brought forward under the revised draft NPS in future would trigger adverse effects on integrity, including after consideration of mitigation. If an individual NSIP cannot avoid adverse effects on integrity of one or

AoS Objective - To protect, restore and enhance biodiversity (habitats, species and ecosystems) working within environmental capacities and limits to contribute to ecosystem resilience and habitat connectivity and deliver a net biodiversity/ environmental gain.

Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		more Habitats Sites, project-specific consideration of alternative solutions, IROPI, and compensatory measures would be required. Alongside wider national planning policy, legislation and regulatory regimes, the draft revised NPS will provide a positive framework that helps to ensure the potential adverse effects of port infrastructure are identified, appropriately assessed and, where necessary, avoided, minimised, mitigated or compensated. The likely significant effects arising as a result of proposals for nationally significant port infrastructure, along with cumulative effects, will be considered through the accompanying project-level EIA and HRA.
		Reasonable Alternative The inclusion of specific quantum of growth to meet forecasted demands is not likely to result in any differences to the predicted nature and significance of the effect identified for the draft revised NPS above. While identifying a specific quantum of growth could help the port industry to understand the scale of infrastructure needed to meet forecasted demands, it is unlikely to result in the delivery of more or less infrastructure than the draft revised NPS. The decision on the scale, location and timing of nationally significant port infrastructure will be made by the port industry on a case-by-case basis. It is assumed that the alternative would still take account of the potential direct and indirect effects, including cumulative effects, of port infrastructure and associated development on biodiversity and nature conservation. It would also set out the same Government policy, assessment principles and generic impact guidance as presented above for the draft revised NPS.

AoS Objective - To protect, restore and enhance biodiversity (habitats, species and ecosystems) working within environmental capacities and limits to contribute to ecosystem resilience and habitat connectivity and deliver a net biodiversity/ environmental gain.

Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		The HRA Report also considered this alternative approach and predicted that it would not have lesser effects on Habitats Sites relative to the preferred approach.

Recommendations for mitigation and/ or enhancement:

- In Chapter 3 (Assessment principles) there is potential to strengthen the text in paragraphs 3.2.3 to 3.2.6 to highlight potential benefits to biodiversity and nature conservation through the delivery of net gain. A proposal for national significant port infrastructure might have the potential to deliver a significant level of biodiversity net gain and this should be highlighted in this section for the planning decision-maker to consider.
- In Chapter 3 (Assessment principles) under Section 3.6 (Alternatives) and guidance for the decision maker, it could include an additional principle that relates to the ability of/ potential for alternatives to deliver greater enhancements (either through an increased quantity or the delivery of a unique opportunity).
- In Chapter 3 (Assessment principles) under Section 3.8 (Criteria for good design for port infrastructure) there is an opportunity to expand the definition of ‘good design’ to include biodiversity net gain (in England)/ net benefit (in Wales) and nature-based solutions. There is also an opportunity to state that they should be considered early in the design stage and that early and effective engagement with statutory environmental bodies can help to facilitate this.
- While the draft revised NPS refers to the protection and improvement of the green infrastructure network, there is the opportunity to make it clearer that the green infrastructure network also includes the connectivity of habitats.
- In Chapter 4 (Biodiversity and geological conservation) a reference should be included to the introduction and increased spread of invasive non-native species (INNS), the importance of considering robust biosecurity measures at the outset of the design-stage.

Population and Human Health

Table C-3 - Appraisal of the draft revised NPS and reasonable alternative for population and human health

AoS Objective - To minimise disturbance to local communities, maximise positive social impacts and protect and enhance the health, safety and wellbeing of workers and communities.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
0	0	Draft revised NPS The key receptors that could be affected by nationally significant port infrastructure are set out in the baseline information presented in Appendix A. The draft revised NPS takes account of the potential direct and indirect effects, including cumulative effects, of port infrastructure and associated development on population and human health in a number of areas. These include: ▪ Government policy in Chapter 2 states that all proposed development should be delivered in line with/ satisfy the relevant legal, environmental and social constraints and objectives as set out in national regulations. It states that new port infrastructure should contribute to local employment, regeneration, and development, and enhance connectivity and access to ports and to the jobs, services and social networks they create, including for the most disadvantaged. ▪ Assessment principles in Chapter 3 states that the applicant's assessment should be conducted in a manner that is consistent with statutory requirements under UK legislation. It also states that the applicant's assessment should be conducted in a way that takes into account all of the Government's broad objectives for transport, including the need to contribute to cohesion of local communities in port hinterlands. ▪ In Chapter 3, Socio-economic impacts: Applicant's assessment, where the project is likely to have socio-economic impacts at local or regional levels, the applicant should undertake an

AoS Objective - To minimise disturbance to local communities, maximise positive social impacts and protect and enhance the health, safety and wellbeing of workers and communities.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		assessment of these impacts in the Environmental Statement. The applicant's assessment should include in their application an assessment of all relevant socio-economic impacts, which may include the provision of additional local services and improvements to local infrastructure, the impact of a changing influx of workers during the different phases of the development which could change the local population dynamics and the demand of services, and cumulative effects. ■ In Chapter 3, Socio-economic impacts: Guidance for the decision-maker, it states that the decision-maker should consider whether mitigation measures are necessary to mitigate any adverse socio-economic impacts of the development. ■ Section 3.5 sets out the general approach to environmental impacts and Environmental Impact Assessment. It states that to consider the potential effect, including benefits of a proposal for a project, the decision-maker will find it helpful if the applicant sets out information on the likely significant social and economic effects (in addition to environmental 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. Section 3.11 Health and nuisances acknowledges that ports have the potential to affect the health, well-being and quality of life of the population, including the potential for statutory nuisances. It recognises that ports can have direct impacts on health, through impacts such as air pollution, but can also affect the composition, size and proximity of the local population, and therefore may have indirect health impacts, if affecting the population's ability to access public services, transport or open space. The applicant must identify any adverse health impacts and

AoS Objective - To minimise disturbance to local communities, maximise positive social impacts and protect and enhance the health, safety and wellbeing of workers and communities.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		measures to avoid, reduce or compensate for these impacts as appropriate. Cumulative impacts on health, including statutory nuisances, should be considered. Generic impacts in Chapter 4 provides guidance on generic impact types often relevant to ports applications and/or associated development. • Section 4.4 (Pollution control and other environmental regulatory regimes) states that the planning and pollution control systems are separate but complimentary, this includes separate regulations relating to discharges that can disturb local communities or affect health, such as dust, noise and water pollution. • Several other sections within Chapter 4 such as Section 4.10 air quality and emissions, Section 4.11 Dust, odour, artificial light, smoke, steam and insect infestation, and Section 4.12 noise and vibration contain guidance on factors from ports development that may lead to disturbance or health and safety impacts. Given the policy and guidance for applicants and the decision-maker set out above and the nature of the draft revised NPS, i.e. not setting the quantum, location or timing for the delivery of infrastructure, it is considered that the draft revised NPS is likely to have a long-term neutral effect on population and human health. It requires applicants to consider and set out the impacts of the proposed development on the population and provide appropriate mitigation where necessary. It also requires the consideration of cumulative effects. The emphasis appears to be on minimising harm through the provision of mitigation for adverse effects rather than enhancing existing health. However, it does not explicitly look to enhance the health, safety and well-being of the workers and

AoS Objective - To minimise disturbance to local communities, maximise positive social impacts and protect and enhance the health, safety and wellbeing of workers and communities.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		the community, albeit the overarching policy states “social improvement” as an aim. It also does not address any risk or consequences of major accidents. There are some areas where the draft revised NPS could be strengthened and these are set out in the summary below; however, their inclusion is not considered likely to alter the predicted nature or significance of effects on population and human health. Alongside wider national planning policy, legislation and regulatory regimes, the draft revised NPS will provide a framework that helps to ensure the potential adverse effects of port infrastructure are identified, appropriately assessed and, where necessary, avoided, minimised or mitigated. The likely significant effects arising as a result of proposals for nationally significant port infrastructure, along with cumulative effects, will be considered through the accompanying project-level EIA.
		Reasonable Alternative The inclusion of specific quantum of growth to meet forecasted demands is not likely to result in any differences to the predicted nature and significance of the effect identified for the draft revised NPS above. While identifying a specific quantum of growth could help the port industry to understand the scale of infrastructure needed to meet forecasted demands, it is unlikely to result in the delivery of more or less infrastructure than the draft revised NPS. The decision on the scale, location and timing of nationally significant port infrastructure will be made by the port industry on a case-by-case basis. It is assumed that the alternative would still take account of the potential direct and indirect effects, including cumulative effects, of port infrastructure and associated development

AoS Objective - To minimise disturbance to local communities, maximise positive social impacts and protect and enhance the health, safety and wellbeing of workers and communities.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		on population and human health. It would also set out the same Government policy, assessment principles and generic impact guidance as presented above for the draft revised NPS.
Recommendations for mitigation and/ or enhancement: ■ In Section 3.11 Health and nuisances, in the overview of this section, the risk of major accidents should be discussed, as ports have the potential to adversely affect the population, should any risks of major accidents or disasters be realised. The Applicant's assessment section should require that the applicant identify any key risks from accidents or disasters and state how these have been minimised. ■ The current drafting of paragraphs 3.11.1 to 3.11.4 does not emphasise the need to enhance health and wellbeing e.g. through providing a community legacy and it would be beneficial to change the emphasis from minimising harm to enhancement. There is the potential to include, within the Applicant's assessment section, that the applicant should identify measures to enhance the local health and well-being of the community, through access to well-designed sea fronts and seascapes, opportunities for recreation, opportunities to enhance existing local health services and facilities.		

Economy and Skills

Table C-4 - Appraisal of the draft revised NPS and reasonable alternative for economy and skills

AoS Objective - To promote a strong, diverse, and stable economy with opportunities to improve education and skills, and employment.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
+	+	Draft revised NPS The key receptors that could be affected by nationally significant port infrastructure are set out in the baseline information presented in Appendix A. The draft revised NPS takes account of the potential direct and indirect effects, including cumulative effects, of port infrastructure and associated development on economy and skills in a number of areas. These include: ▪ Government policy in Chapter 2 states that all proposed development should contribute to local employment, regeneration and development, ensure competition and security of supply and enhance connectivity and access to ports and to the jobs, services and social networks they create. Wherever possible, port development should “be an engine for economic growth”. ▪ Assessment principles in Chapter 3 states that the applicant’s assessment should be conducted in a way that takes into account all of the Government’s broad objectives for transport, including the need to promote economic growth through improving networks and links for passengers and freight, as well as ensuring an efficient and competitive transport sector both nationally and internationally. The applicant’s assessment should undertake and include in their application an assessment of all relevant socio-economic impacts, which may include the creation of jobs and training opportunities, the provision of additional local services and improvements to local infrastructure, effects on tourism, and cumulative effects.

AoS Objective - To promote a strong, diverse, and stable economy with opportunities to improve education and skills, and employment.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		Consideration of benefits and impacts in Chapter 3 recognises that ports enable international trade, provide opportunities for foreign direct investment, generate tax revenues and can play a role in levelling-up across regions. It recognises ports provide economic benefits including regeneration and employment opportunities, including highly skilled jobs. The potential for agglomeration effects is also acknowledged. In addition, it states that the expansion of the ports sector through market-oriented investment may stimulate extra employment and training benefits which, may be taken into account where relevant. Given the policy and guidance for applicants and the decision-maker set out above and the nature of the draft revised NPS, i.e. not setting the quantum, location or timing for the delivery of infrastructure, it is considered that the draft revised NPS is likely to have a long-term minor positive effect on economy and skills. It supports economic growth of the port sector including job creation. Indeed, in Section 3.2.8, the decision-maker is required to give substantial weight to the positive impacts associated with economic development. There are some areas where the draft revised NPS could be strengthened and these are set out in the summary below; however, their inclusion is not considered likely to alter the predicted nature or significance of effects on economy and skills. Alongside wider national planning policy, legislation and regulatory regimes, the draft revised NPS will provide a positive framework that helps to ensure the potential adverse effects of port infrastructure are identified, appropriately assessed and, where necessary, avoided, minimised or mitigated. The likely significant effects arising as a result of proposals for nationally significant port infrastructure, along with cumulative effects, will be considered through the accompanying project-level EIA.

AoS Objective - To promote a strong, diverse, and stable economy with opportunities to improve education and skills, and employment.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		Reasonable Alternative The inclusion of specific quantum of growth to meet forecasted demands is not likely to result in any differences to the predicted nature and significance of the effect identified for the draft revised NPS above. While identifying a specific quantum of growth could help the port industry to understand the scale of infrastructure needed to meet forecasted demands, it is unlikely to result in the delivery of more or less infrastructure than the draft revised NPS. The decision on the scale, location and timing of nationally significant port infrastructure will be made by the port industry on a case-by-case basis. It is assumed that the alternative would still take account of the potential direct and indirect effects, including cumulative effects, of port infrastructure and associated development on economy and skills. It would also set out the same Government policy, assessment principles and generic impact guidance as presented above for the draft revised NPS.
Recommendations for mitigation and/ or enhancement: ■ In Chapter 3.3 Socio-economic impacts, there is an opportunity to provide more emphasis on education and training provision, such as apprenticeships, to benefit the local community. In the Applicant's assessment (paragraphs 3.3.2 to 3.3.5), there is reference to the creation of jobs and training opportunities, which could be amended to include reference to training and apprenticeships that have a lasting benefit to the local community.		

Land Use, Geology and Soils

Table C-5 - Appraisal of the draft revised NPS and reasonable alternative for land use, geology and soils

AoS Objective - To conserve and enhance soil health and geology and contribute to the sustainable use of land.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
0	0	Draft revised NPS The key receptors that could be affected by nationally significant port infrastructure are set out in the baseline information presented in Appendix A. The draft revised NPS takes account of the potential impacts of port infrastructure and associated development on land use, geology and soils. These include: ▪ Government policy in Chapter 2 states that all proposed development should be delivered in line with/ satisfy the relevant legal, environmental and social constraints and objectives as set out in national regulations. That new port infrastructure should minimise use of greenfield land and provide high standards of protection for the natural environment. ▪ Assessment principles in Chapter 3 states under key considerations that the applicant's assessment should be conducted in a manner that is consistent with statutory requirements under UK legislation. In Section 3.5 it sets out the general approach to environmental impacts and Environmental Impact Assessment, recommending early engagement with statutory environmental bodies at the pre-application stage. A project level EIA would include consideration of land use, geology and soils. ▪ Generic impacts in Chapter 4 provides guidance on generic impact types often relevant to ports applications and/ or associated development.

AoS Objective - To conserve and enhance soil health and geology and contribute to the sustainable use of land.

Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		• Section 4.1 provides guidance on generic impact types often relevant to ports applications and/ or associated development on biodiversity and geological conservation. It states that: – The applicant should show how the project has taken advantage of opportunities to conserve and enhance geological conservation interests. – References Marine Conservation Zones (MCZs) and marine features of geological or geomorphological interest. – References regional and local sites of geological interest. • Section 4.15 (Land use including open space, green infrastructure and Green Belt): – Recognises the development of land will affect soil resources, including physical loss of and damage to soil resources, through land contamination and structural damage. Indirect impacts may also arise from changes in the local water regime, organic matter content, soil biodiversity and soil process. – Refers to the contaminated land statutory guidance where pre-existing land contamination is an issue. – States that applicants should seek to minimise impacts on the best and most versatile agricultural land (defined as land 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. – States that applicants should also identify any effects and seek to minimise impacts on soil quality, taking into account any mitigation measures proposed. For developments on

AoS Objective - To conserve and enhance soil health and geology and contribute to the sustainable use of land.

Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		previously developed land, applicants should ensure that they have considered the risk posed by land contamination. – States that 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. Given the policy and guidance for applicants and the decision-maker set out above and the nature of the draft revised NPS, i.e. not setting the quantum, location or timing for the delivery of infrastructure, it is considered that the draft revised NPS is likely to have a neutral effect on land use, geology and soils. While it requires applicants to conserve and enhance soils and geology (both marine and terrestrial) as well as minimise impacts on high quality agricultural land and references the key relevant legal and environmental constraints and objectives as set out in national regulations, including contaminated land controls - it does not seek to enhance soil health. There are some areas where the draft revised NPS could be strengthened and these are set out in the summary below; however, their inclusion is not considered likely to alter the predicted nature or significance of effects for the historic environment. Alongside wider national planning policy, legislation and regulatory regimes, the draft revised NPS will provide a positive framework that helps to ensure the potential adverse effects of port infrastructure are identified, appropriately assessed and, where necessary, avoided, minimised or mitigated. The likely significant effects arising as a result of proposals for nationally significant port infrastructure, along with cumulative effects, will be considered through the accompanying project-level EIA.

AoS Objective - To conserve and enhance soil health and geology and contribute to the sustainable use of land.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		Reasonable Alternative The inclusion of specific quantum of growth to meet forecasted demands is not likely to result in any differences to the predicted nature and significance of the effect identified for the draft revised NPS above. While identifying a specific quantum of growth could help the port industry to understand the scale of infrastructure needed to meet forecasted demands, it is unlikely to result in the delivery of more or less infrastructure than the draft revised NPS. The decision on the scale, location and timing of nationally significant port infrastructure will be made by the port industry on a case-by-case basis. It is assumed that the alternative would still take account of the potential direct and indirect effects, including cumulative effects, of port infrastructure and associated development on the water environment. It would also set out the same Government policy, assessment principles and generic impact guidance as presented above for the draft revised NPS.
Recommendations for mitigation and/ or enhancement: ■ In Chapter 2 (Government policy and the need for new infrastructure) under Section 2.2 (Government policy for ports) when discussing Government policy to ensure sustainable development and providing high standards of protection for the natural environment, there is an opportunity to reference the Natural Environment Planning Practice Guidance. This could help to provide clarity that the natural environment also includes agricultural land, soil and brownfield land of environmental value as per the Planning Practice Guidance.		

Water Resources

Table C-6 - Appraisal of the draft revised NPS and reasonable alternative for water resources

AoS Objective - To protect, enhance and increase resilience of water quantity and quality.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
+	+	Draft revised NPS The key receptors that could be affected by nationally significant port infrastructure are set out in the baseline information presented in Appendix A. The draft revised NPS takes account of the potential impacts of port infrastructure and associated development on water resources (including quality). These include: ▪ Government policy in Chapter 2 states that all proposed development should be delivered in line with/ satisfy the relevant legal, environmental and social constraints and objectives as set out in national regulations. ▪ Assessment principles in Chapter 3 states under key considerations that the applicant's assessment should be conducted in a manner that is consistent with statutory requirements under UK legislation (this includes legislation relating to the protection of the water environment). It also states in Chapter 3: In Section 3.5 it sets out the general approach to environmental impacts and Environmental Impact Assessment, recommending early engagement with statutory environmental bodies at the pre-application stage. A project level EIA would include consideration of the water environment. References are made to the duties under the Environment Act 2021 and the policies set out in the Government's Environmental Improvement Plan for improving the natural environment. It states

AoS Objective - To protect, enhance and increase resilience of water quantity and quality.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		that applicants should look for opportunities to take a holistic approach to avoiding, reducing or mitigating impacts on the natural environment by using nature-based solutions. Generic impacts in Chapter 4 provides guidance on generic impact types often relevant to ports applications and/ or associated development. • Section 4.4 (Pollution control and other environmental regulatory regimes) states that the planning and pollution control systems are separate but complimentary, this includes separate regulations relating to discharges that can affect water quality. • Section 4.9 (Water quality and resources) states that: – Where the project is likely to have 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 of the water environment as part of the Environmental Statement or equivalent. This should include consideration of impacts on water bodies or protected areas under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 and source protection zones around potable groundwater abstractions. This also includes consideration of cumulative effects on the water environment. It also specifically states that the Environmental Statement should describe the 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. – The decision-maker should consider whether mitigation measures over and above those proposed in the application are required and that the risk of impacts on the water

AoS Objective - To protect, enhance and increase resilience of water quantity and quality.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		environment can be reduced through careful design. It recognises that role planning can play in the design for efficient use of water which can help to minimise impacts on local water resources. – The decision-maker will need to give more weight to impacts on the water environment where a project would have adverse effects on the achievement of environmental objectives established under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017. A reference is also made to River Basin Management Plans. Given the policy and guidance for applicants and the decision-maker set out above and the nature of the draft revised NPS, i.e. not setting the quantum, location or timing for the delivery of infrastructure, it is considered that the draft revised NPS is likely to have a long-term minor positive effect on the water environment. It requires applicants to consider and set out the impacts of the proposed development on the environment and appropriate mitigation where necessary. It also requires the consideration of cumulative effects. It references the key relevant legal and environmental constraints and objectives as set out in national regulations, including complimentary pollution controls. There are some areas where the draft revised NPS could be strengthened and these are set out in the summary below; however, their inclusion is not considered likely to alter the predicted nature or significance of effects for the historic environment. Alongside wider national planning policy, legislation and regulatory regimes, the draft revised NPS will provide a positive framework that helps to ensure the potential adverse effects of port infrastructure are identified, appropriately assessed and, where necessary, avoided, minimised or

AoS Objective - To protect, enhance and increase resilience of water quantity and quality.

Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		mitigated. The likely significant effects arising as a result of proposals for nationally significant port infrastructure, along with cumulative effects, will be considered through the accompanying project-level EIA.
		Reasonable Alternative The inclusion of specific quantum of growth to meet forecasted demands is not likely to result in any differences to the predicted nature and significance of the effect identified for the draft revised NPS above. While identifying a specific quantum of growth could help the port industry to understand the scale of infrastructure needed to meet forecasted demands, it is unlikely to result in the delivery of more or less infrastructure than the draft revised NPS. The decision on the scale, location and timing of nationally significant port infrastructure will be made by the port industry on a case-by-case basis. It is assumed that the alternative would still take account of the potential direct and indirect effects, including cumulative effects, of port infrastructure and associated development on the historic environment. It would also set out the same Government policy, assessment principles and generic impact guidance as presented above for the draft revised NPS.

Recommendations for mitigation and/ or enhancement:

- In Chapter 2 (Government policy and the need for new infrastructure) under Section 2.2 (Government policy for ports) when discussing Government policy to ensure sustainable development and providing high standards of protection for the natural environment, there is an opportunity to specifically reference the water environment and/ or make it clear that the natural environment includes the water

AoS Objective - To protect, enhance and increase resilience of water quantity and quality.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
environment. While the Natural Environment Planning Practice Guidance does not refer to the water environment, the Government’s Environmental Improvement Plan includes a goal relating to clean and plentiful water.		

Table C-7 - Appraisal of the draft revised NPS and reasonable alternative for air quality

AoS Objective - To minimise emissions of pollutant gases and particulates and enhance air quality.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
0	0	Draft revised NPS The key receptors that could be affected by nationally significant port infrastructure are set out in the baseline information presented in Appendix A. The draft revised NPS takes account of the potential direct and indirect effects, including cumulative effects, of port infrastructure and associated development on air quality in a number of areas. These include: ▪ Government policy in Chapter 2 states that all proposed development should be delivered to satisfy the relevant legal, environmental and social constraints and objectives, as set out in national regulations including those implementing the UK's international treaty obligations. That development should: • be well designed, functionally and environmentally; and • provide high standards of protection for the natural environment. ▪ Assessment principles in Chapter 3 states that the applicant's assessment should be conducted in a manner that is consistent with statutory requirements under UK legislation. It should also be conducted in a way that takes into account all of the Government's broad objectives for transport, including the need to improve the environmental performance of ports and associated developments, including transport.

AoS Objective - To minimise emissions of pollutant gases and particulates and enhance air quality.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		• Section 3.5 sets out the general approach to environmental impacts and Environmental Impact Assessment, recommending early engagement with statutory environmental bodies at the pre-application stage. References are made to the duties under the Environment Act 2021, including the four priority areas which include “air” and the policies set out in the Government’s Environmental Improvement Plan for improving the natural environment. It states that applicants should look for opportunities to take a holistic approach to avoiding, reducing or mitigating impacts on the natural environment by using nature-based solutions and highlights that a Green Infrastructure approach can be used to plan multifunctional networks of natural features to integrate the various benefits and solutions. It also makes reference to the requirements under the EIA Regulations. • Section 3.11 requires an applicant to identify any health impacts, including the potential for increasing air pollution and identify measures to avoid, reduce or compensate for these impacts as appropriate. ▪ Generic impacts in Chapter 4 provides guidance on generic impact types often relevant to port applications and/or associated development on air quality. • It acknowledges that ports can contribute to local air pollutions from HGV traffic, emissions from ships entering the port and using coastal routes, estuaries and inland waterways, and from dust created by certain cargoes such as cements and aggregates. It also mentions the potential adverse effects on air quality from the construction, operation and decommissioning of infrastructure development. The consideration of odour is also included due to the potential

AoS Objective - To minimise emissions of pollutant gases and particulates and enhance air quality.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		to have a detrimental impact on amenity or cause a nuisance, in particular from the storage and processing of waste. • In terms of mitigation, the provision of “reasonable advance provisions” for shore-side electrical power should be provided within all proposals although alternatively, reasons may be given as to why it would not be economically and environmentally worthwhile to make such a provision. • In conjunction with shore-side power, reasonable advance provisions for electric vessel charging for maritime should be made wherever there is a realistic possibility of usage. • Where significant effects on air quality are expected from a development, the Environmental Statement must include a description of any significant air emissions, their mitigation and residual effects, the predicted absolute emission levels from the proposed project, after mitigation measures have been applied; and existing air quality levels and the relative change in air quality from existing levels. The guidance for the decision-maker states that they should generally give air quality considerations substantial weight where a project would lead to deterioration in air quality in an area, or leads to a new area where the air quality breaches any national air quality limits. It also states that air quality considerations will 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. However, it also states that “any increase at all in air pollutant emissions is not a reason in itself to refuse development consent, though any deterioration in air quality should be given appropriate weight in coming to the decision.”

AoS Objective - To minimise emissions of pollutant gases and particulates and enhance air quality.

Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		Given the policy and guidance for applicants and the decision-maker set out above and the nature of the draft revised NPS, i.e. not setting the quantum, location or timing for the delivery of infrastructure, it is considered that the draft revised NPS is likely to have a neutral effect on air quality. The draft revised NPS references the key relevant legal and environmental constraints and objectives as set out in national regulations and breaches of any limits are a reason for refusal. However, as increases in air pollutants that do not lead to a breach are not grounds for refusal, it is considered that the draft revised NPS does not accelerate the improving trend in air quality, nor does it seek to enhance air quality, but it does seek to minimise the potential impacts of port infrastructure on air quality, leading to the conclusion of a neutral effect. The likely significant effects arising as a result of proposals for nationally significant port infrastructure, along with cumulative effects, will be considered through the accompanying project-level EIA.
		Reasonable Alternative The inclusion of specific quantum of growth to meet forecasted demands is not likely to result in any differences to the predicted nature and significance of the effect identified for the draft revised NPS above. While identifying a specific quantum of growth could help the port industry to understand the scale of infrastructure needed to meet forecasted demands, it is unlikely to result in the delivery of more or less infrastructure than the draft revised NPS. The decision on the scale, location and timing of nationally significant port infrastructure will be made by the port industry on a case-by-case basis. It is assumed that the alternative would still take account of the potential direct and indirect effects, including cumulative effects, of port infrastructure and associated development

AoS Objective - To minimise emissions of pollutant gases and particulates and enhance air quality.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		on air quality. It would also set out the same Government policy, assessment principles and generic impact guidance as presented above for the draft revised NPS.
Recommendations for mitigation and/ or enhancement: ■ In Chapter 3 (Assessment principles) under Section 3.5.6 air quality could be added to the list of benefits provided by planting trees. Although carbon sequestration is mentioned, there is currently no mention of local air quality benefits. ■ Section 4.11.8 references lay-out, administrative and engineering measures as potential mitigation in respect of odour (and other statutory nuisances) but it may be helpful to specify these measures within the air quality section at 4.10, as these can also positively influence local air quality.		

Noise

Table C-8 - Appraisal of the draft revised NPS and reasonable alternative for noise

AoS Objective - To minimise noise pollution and the effects of vibration.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
+	+	Draft revised NPS The key receptors that could be affected by nationally significant port infrastructure are set out in the baseline information presented in Appendix A. The draft revised NPS takes account of the potential direct and indirect effects, including cumulative effects, of port infrastructure and associated development on noise and vibration in a number of areas. These include: - Government policy in Chapter 2 states that all proposed development should be delivered to satisfy the relevant legal, environmental and social constraints and objectives, as set out in national regulations including those implementing the UK's international treaty obligations. That development should: - be well designed, functionally and environmentally; and - provide high standards of protection for the natural environment. Assessment principles in Chapter 3 states that the applicant's assessment should be conducted in a manner that is consistent with statutory requirements under UK legislation. It should also be conducted in a way that takes into account all of the Government's broad objectives for transport, including the need to improve the environmental performance of ports and associated developments, including transport.

AoS Objective - To minimise noise pollution and the effects of vibration.

Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		Section 3.5 sets out the general approach to environmental impacts and Environmental Impact Assessment, recommending early engagement with statutory environmental bodies at the pre-application stage. References are made to the duties under the Environment Act 2021 and the policies set out in the Government’s Environmental Improvement Plan for improving the natural environment. It states that applicants should look for opportunities to take a holistic approach to avoiding, reducing or mitigating impacts on the natural environment by using nature-based solutions and highlights that a Green Infrastructure approach can be used to plan multifunctional networks of natural features to integrate the various benefits and solutions. It also makes reference to the requirements under the Environmental Impact Assessment (EIA) Regulations. • Section 3.8 requires that every effort be made to embed the principles of good design in the development of port schemes, acknowledging that good design and the appropriate technologies can help mitigate adverse impacts such as noise. • Section 3.11 requires an applicant to identify any health impacts, including potential for statutory nuisances and identify measures to avoid, reduce or compensate of these impacts as appropriate. ■ Generic impacts in Chapter 4 provides guidance on generic impact types often relevant to ports applications and/or associated development on noise and vibration. It states that the applicant should include in the noise assessment consideration of the noise-generating aspects of the development proposal leading to noise impacts on the marine and terrestrial environment, including identification of noise sensitive premises and areas, and noise sensitive species that may be affected. This must include shorter term impacts during construction

AoS Objective - To minimise noise pollution and the effects of vibration.

Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		as well as longer term impacts during operation. The noise assessment must state the measures to be employed in mitigating the effects of noise. The noise impact of ancillary activities associated with the development, such as increased road and rail traffic movements, or other forms of transportation, should be considered. Mitigation measures may include engineering measures, lay-outs using good design to minimise noise transmission through natural barriers or screening, and keeping as large a distance as possible between the noise source and the noise-sensitive receptors, as well as administrative measures such as limiting times of operation for noise-generating activities. Given the policy and guidance for applicants and the decision-maker set out above and the nature of the draft revised NPS, i.e. not setting the quantum, location or timing for the delivery of infrastructure, it is considered that the draft revised NPS is likely to have a minor positive effect on noise and vibration. The draft revised NPS seeks to minimise the potential impacts of port infrastructure on noise and vibration. It also references the key relevant legal and environmental constraints and objectives as set out in national regulations. There are some areas where the draft revised NPS could be strengthened and these are set out in the summary below; however, their inclusion is not considered likely to alter the predicted nature or significance of effects for noise and vibration. Alongside wider national planning policy, legislation and regulatory regimes, the draft revised NPS will provide a positive framework that helps to decelerate the negative trend of noise increases, ensuring the potential adverse impacts of port infrastructure are identified, appropriately assessed and, where necessary, avoided, minimised or mitigated. The likely significant effects arising as a

AoS Objective - To minimise noise pollution and the effects of vibration.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		result of proposals for nationally significant port infrastructure, along with cumulative effects, will be considered through the accompanying project-level EIA.
		Reasonable Alternative The inclusion of specific quantum of growth to meet forecasted demands is not likely to result in any differences to the predicted nature and significance of the effect identified for the draft revised NPS above. While identifying a specific quantum of growth could help the port industry to understand the scale of infrastructure needed to meet forecasted demands, it is unlikely to result in the delivery of more or less infrastructure than the draft revised NPS. The decision on the scale, location and timing of nationally significant port infrastructure will be made by the port industry on a case-by-case basis. It is assumed that the alternative would still take account of the potential direct and indirect effects, including cumulative effects, of port infrastructure and associated development on noise and vibration. It would also set out the same Government policy, assessment principles and generic impact guidance as presented above for the draft revised NPS.
Recommendations for mitigation and/ or enhancement: ■ Although noise impacts are mentioned in relation to biodiversity and the marine environment, there is no mention of impacts from noise in the dredging section specifically (Section 4.3), and this is likely to be one of the main sources of underwater noise. Indeed section 4.3 only includes limited reference to the effects of the activity (unlike other topic sections) and therefore it is recommended that this text describes the possible activities more completely to provide the reader, applicant and decision-maker with a more rounded appreciation of the issues, such as indirect effects relating to noise, the transport of dredged material, water quality effects, etc. At present the text is focused on direct loss only.		

AoS Objective - To minimise noise pollution and the effects of vibration.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
In Chapter 3 (Assessment principles) under Section 3.5 (General approach to environmental impacts and Environmental Impact Assessment) there is an opportunity to suggest that where noise mitigation may be required, nature-based solutions should be considered alongside traditional engineering-based mitigation approaches, for example landscape bunds also acting as noise attenuation. It currently states that a Green Infrastructure approach can be used to plan multifunctional networks of natural features to integrate the various benefits and solutions. The text at 4.12.3 should be revised to include reference to ambient noise levels when determining likely effects, as this is an important factor that determines the likely noise impact. Also there is reference to designated sites but no acknowledgement that protected species may be impacted outside of designated sites, and therefore the proximity of the proposed development to protected species which could be impacted by noise should be included in the factors listed in 4.12.3.		

Climate Change (Mitigation and Adaptation)

Table C-9 - Appraisal of the draft revised NPS and reasonable alternative for climate change

AoS Objective - To minimise GHG emissions as a contribution to climate change and support the transition to a net zero economy, and ensure ports and associated places and infrastructure are resilient to the consequences of climate change, anticipating a range of future climate scenarios and impacts.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
+	+	Draft revised NPS The key receptors that could be affected by nationally significant port infrastructure are set out in the baseline information presented in Appendix A. The draft revised NPS takes account of the potential direct and indirect effects, including cumulative effects, of port infrastructure and associated development on climate change, in terms of both mitigation and adaptation, in a number of areas. These include: ▪ Government policy in Chapter 2 states that all proposed development should be delivered in line with/ satisfy the relevant legal, environmental and social constraints and objectives as set out in national regulations. It states that new port infrastructure should minimise emissions of greenhouse gases from port related development and contribute to wider emissions policy in the transport network, as well as being adapted to the impacts of climate change. In addition, it is government policy to support the development, operation and maintenance of offshore sources of renewable energy. ▪ Assessment principles in Chapter 3 states that the applicant's assessment should include information on its likely impact on and vulnerability to climate change.

AoS Objective - To minimise GHG emissions as a contribution to climate change and support the transition to a net zero economy, and ensure ports and associated places and infrastructure are resilient to the consequences of climate change, anticipating a range of future climate scenarios and impacts.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		Section 3.5 sets out the general approach to environmental impacts and Environmental Impact Assessment, recommending early engagement with statutory environmental bodies at the pre-application stage. References are made to the duties under the Environment Act 2021 and the policies set out in the Government’s Environmental Improvement Plan for improving the natural environment. It states that applicants should look for opportunities to take a holistic approach to avoiding, reducing or mitigating multiple impacts on the natural or built environment by using nature-based solutions to deliver multiple benefits for climate, biodiversity and people. It also makes reference to the requirements under the EIA Regulations. Section 3.9 (Climate change mitigation) states that measures to address emissions from ships on international journeys are currently being taken forward on an international basis. Therefore the decision-maker does not need to consider the impact of port development on greenhouse gas (GHG) emissions from ships transiting to and from the port. However, it identifies that emissions can be minimised by good design in terms of fuel efficiency in the operation of buildings and of outdoor plant and machinery, as well as with the maximum use of renewable energy sources. Therefore the decision-maker needs to consider the extent to which the applicant has considered renewable energy on the port estate. The applicant also needs to set out measures taken to minimise the local effects of emissions and how these might affect GHG. The decision-maker only needs to attach limited weight to the likely net carbon emissions from the development; however, consent might be withheld if the applicant refuses to accept reasonable and affordable requirements related to design or operations, or arising from the transport assessment.

AoS Objective - To minimise GHG emissions as a contribution to climate change and support the transition to a net zero economy, and ensure ports and associated places and infrastructure are resilient to the consequences of climate change, anticipating a range of future climate scenarios and impacts.

Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		Section 3.10 (Climate change adaptation) states that the third Climate Change Risk Assessment identified a number of risks relevant to the ports sector including risks to infrastructure services from coastal flooding and erosion, and risks to transport from high and low temperatures, high winds and lightning. Applicants should consider whether nature-based solutions could provide a basis for adaptation. In addition, the ES should set out how the proposal will take account of the projected impacts of climate change. Any adaptation measures promoted should themselves also be assessed for any resulting impacts. The decision-maker should satisfy itself that applicants for new port infrastructure have taken into account the potential impacts of climate change using the latest UK Climate Projections and in consultation with the Environment Agency. Adaptation measures can be required to be implemented at the time of construction where necessary and appropriate to do so. Given the policy and guidance for applicants and the decision-maker set out above and the nature of the draft revised NPS, i.e. not setting the quantum, location or timing for the delivery of infrastructure, it is considered that the draft revised NPS is likely to have a long-term minor positive effect on climate change (both mitigation and adaptation). It requires applicants to consider and set out the impacts of the proposed development on climate change and appropriate mitigation where necessary, as well as to consider climate change adaptation required, using the latest UK Climate Projections. It references the key relevant legal and environmental constraints and objectives as set out in national regulations, including complimentary pollution controls.

AoS Objective - To minimise GHG emissions as a contribution to climate change and support the transition to a net zero economy, and ensure ports and associated places and infrastructure are resilient to the consequences of climate change, anticipating a range of future climate scenarios and impacts.

Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		Alongside wider national planning policy, legislation and regulatory regimes, the draft revised NPS will provide a positive framework that helps to ensure the potential adverse effects of port infrastructure are identified, appropriately assessed and, where necessary, avoided, minimised or mitigated. The likely significant effects arising as a result of proposals for nationally significant port infrastructure, along with cumulative effects, will be considered through the accompanying project-level EIA.
		Reasonable Alternative The inclusion of specific quantum of growth to meet forecasted demands is not likely to result in any differences to the predicted nature and significance of the effect identified for the draft revised NPS above. While identifying a specific quantum of growth could help the port industry to understand the scale of infrastructure needed to meet forecasted demands, it is unlikely to result in the delivery of more or less infrastructure than the draft revised NPS. The decision on the scale, location and timing of nationally significant port infrastructure will be made by the port industry on a case-by-case basis. It is assumed that the alternative would still take account of the potential direct and indirect effects, including cumulative effects, of port infrastructure and associated development on climate change. It would also set out the same Government policy, assessment principles and generic impact guidance as presented above for the draft revised NPS.

Recommendations for mitigation and/ or enhancement:

AoS Objective - To minimise GHG emissions as a contribution to climate change and support the transition to a net zero economy, and ensure ports and associated places and infrastructure are resilient to the consequences of climate change, anticipating a range of future climate scenarios and impacts.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
■ In Chapter 3 (Assessment principles) under Section 3.9 ‘Climate change mitigation’, there should be a reference to material design and the selection where appropriate of materials with low embodied carbon, as much of the current text relates to mitigating operational effects, as opposed to the design and construction stage. It is noted that paragraph 4.8.6 within Waste Management, it encourages applicants to use low carbon materials, sustainable sources, and local suppliers; however, it could be stronger and clearly articulated in the climate change mitigation section.		

Materials and Waste

Table C-10 - Appraisal of the draft revised NPS and reasonable alternative for materials and waste

AoS Objective - To minimise waste arisings, promote reuse, recovery and recycling, minimise the impact of wastes on the environment and communities and contribute to the sustainable use of natural and material assets.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
+	+	Draft revised NPS The key receptors that could be affected by nationally significant port infrastructure are set out in the baseline information presented in Appendix A. The draft revised NPS takes account of the potential direct and indirect effects, including cumulative effects, of port infrastructure and associated development on materials and waste in a number of areas. These include: ▪ Government policy in Chapter 2 states that all proposed development should be delivered in line with/ satisfy the relevant legal, environmental and social constraints and objectives as set out in national regulations. It states that new port infrastructure should provide high standards of protection for the natural environment. ▪ Assessment principles in Chapter 3 states that the applicant's assessment should be conducted in a manner that is consistent with statutory requirements under UK legislation. References are made to the duties under the Environment Act 2021, including the four priority areas which include "resource efficiency and waste reduction" and the policies set out in the Government's Environmental Improvement Plan for improving the natural environment. It also states. It also makes reference to the requirements under the EIA Regulations. ▪ Generic impacts in Chapter 4 provides guidance on generic impact types often relevant to ports applications and/or associated development.

AoS Objective - To minimise waste arisings, promote reuse, recovery and recycling, minimise the impact of wastes on the environment and communities and contribute to the sustainable use of natural and material assets.

Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		• Section 4.4 (Pollution control and other environmental regulatory regimes) states that the planning and pollution control systems are separate but complimentary, this includes separate regulations relating to operational waste management for certain activities, including cargo handling. • Section 4.8 (Waste Management) requires an applicant to adhere to the waste hierarchy, minimising waste produced and maximising reuse and recycling for waste that cannot be avoided. Where possible, applicants are encouraged to use low carbon materials, sustainable sources, and local suppliers. Consideration to circular economy principles should be given wherever practicable. A Site Waste Management Plan is required to accompany the application which provides detail on the system to be used for managing any waste produced by the development, as well as an assessment of waste management facilities to deal with those waste arisings for at least five years of operation. • Infrastructure projects should look to use legal and sustainable timber and other Modern Methods of Construction (alternative techniques of construction that deliver improvements in productivity, efficiency and quality), where possible. Given the policy and guidance for applicants and the decision-maker set out above and the nature of the draft revised NPS, i.e. not setting the quantum, location or timing for the delivery of infrastructure, it is considered that the draft revised NPS is likely to have a long-term minor positive effect on waste management and resources. It requires applicants to consider and set out the impacts of the proposed development from the generation and management of waste and the use

AoS Objective - To minimise waste arisings, promote reuse, recovery and recycling, minimise the impact of wastes on the environment and communities and contribute to the sustainable use of natural and material assets.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		of resources, demonstrating appropriate mitigation where necessary. It also requires the consideration of cumulative effects. It references the key relevant legal and environmental constraints and objectives as set out in national regulations. There are some areas where the draft revised NPS could be strengthened and these are set out in the summary below; however, their inclusion is not considered likely to alter the predicted nature or significance of effects on waste management and resources. Alongside wider national planning policy, legislation and regulatory regimes, the draft revised NPS will provide a positive framework that helps to ensure the potential adverse effects of port infrastructure are identified, appropriately assessed and, where necessary, avoided, minimised or mitigated. The likely significant effects arising as a result of proposals for nationally significant port infrastructure, along with cumulative effects, will be considered through the accompanying project-level EIA.
		Reasonable Alternative The inclusion of specific quantum of growth to meet forecasted demands is not likely to result in any differences to the predicted nature and significance of the effect identified for the draft revised NPS above. While identifying a specific quantum of growth could help the port industry to understand the scale of infrastructure needed to meet forecasted demands, it is unlikely to result in the delivery of more or less infrastructure than the draft revised NPS. The decision on the scale, location and timing of nationally significant port infrastructure will be made by the port industry on a

AoS Objective - To minimise waste arisings, promote reuse, recovery and recycling, minimise the impact of wastes on the environment and communities and contribute to the sustainable use of natural and material assets.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		case-by-case basis. It is assumed that the alternative would still take account of the potential direct and indirect effects, including cumulative effects, of port infrastructure and associated development on waste management and resources. It would also set out the same Government policy, assessment principles and generic impact guidance as presented above for the draft revised NPS.
Recommendations for mitigation and/ or enhancement: In Chapter 2 (Government policy and the need for new infrastructure) under Section 2.2 (Government policy for ports) when discussing Government policy to ensure sustainable development and providing high standards of protection for the natural environment, there is an opportunity to specifically reference waste management and resource efficiency and/ or make it clear that this is a key element in providing high standards of protection for the natural environment. This would then align with Goal 5 of the Government’s Environmental Improvement Plan (2023): “Maximise our resources, minimise our waste”.		

Traffic and Transport

Table C-11 - Appraisal of the draft revised NPS and reasonable alternative for traffic and transport

AoS Objective - To minimise the volume of traffic and promote more sustainable transport choices.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
+	+	Draft revised NPS The key receptors that could be affected by nationally significant port infrastructure are set out in the baseline information presented in Appendix A. The draft revised NPS takes account of the potential direct and indirect effects, including cumulative effects, of port infrastructure and associated development on traffic and transport in a number of areas. These include: ▪ Government policy in Chapter 2 states that all proposed development should be delivered to satisfy the relevant legal, environmental and social constraints and objectives, as set out in national regulations including those implementing the UK's international treaty obligations. That development should: • be well designed, functionally and environmentally; and • provide high standards of protection for the natural environment. ▪ Assessment principles in Chapter 3 states that the applicant's assessment should be conducted in a manner that is consistent with statutory requirements under UK legislation. It should also be conducted in a way that takes into account all of the Government's broad objectives for transport, including the need to improve the environmental performance of ports and associated developments, including transport.

AoS Objective - To minimise the volume of traffic and promote more sustainable transport choices.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		• Section 3.5 sets out the general approach to environmental impacts and Environmental Impact Assessment, recommending early engagement with statutory environmental bodies at the pre-application stage. References are made to the duties under the Environment Act 2021 and the policies set out in the Government’s Environmental Improvement Plan for improving the natural environment. • Section 3.11 requires an applicant to identify any health impacts, including the potential for increasing traffic and identify measures to avoid, reduce or compensate for these impacts as appropriate. ▪ Generic impacts in Chapter 4 provides guidance on generic impact types often relevant to ports applications and/ or associated development on traffic and transport. • It states that the balance of modes used by goods, passengers, and employees to enter and leave the port can have a variety of impacts on the surrounding road, rail, and water infrastructure and consequently on the users of this infrastructure. If a project is likely to have significant transport implications, an Environmental Statement must include a transport appraisal, considering the construction, operation and decommissioning of any proposal. The appraisal may need to be accompanied by a Travel Plan to mitigate transport impacts through demand management and monitoring measures. • Mitigation for traffic impacts is considered in detail, including the requirement to first consider demand management (measures to reduce the need for travel in the first place, consolidating trips, travelling outside of peak times, etc.) before considering the provision of inland transport infrastructure. It promotes sustainable travel modes and active travel as well as stating that

AoS Objective - To minimise the volume of traffic and promote more sustainable transport choices.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		opportunities for modal shift should be considered, including any opportunities offered by innovations in transport technologies. Rail and coastal or inland shipping should be encouraged over road transport, where cost-effective but target modal shares for rail or coastal shipping are not mandatory, and the main emphasis should be on incentive mechanisms rather than target-setting. The draft revised NPS states that where a development is likely to generate or attract substantial HGV traffic, either in construction or operation, the decision-maker may attach requirements to a consent that control HGV numbers during specified times of day or on specified routes, and that provide sufficient HGV parking and facilities for drivers, either on the port estate or dedicated facilities elsewhere, in order to reduce impacts on the wider road network. Given the policy and guidance for applicants and the decision-maker set out above and the nature of the draft revised NPS, i.e. not setting the quantum, location or timing for the delivery of infrastructure, it is considered that the draft revised NPS is likely to have a minor positive effect on traffic and transport. The draft revised NPS seeks to minimise the potential impacts of port infrastructure on traffic and transport. It also references the key relevant legal and environmental constraints and objectives as set out in national regulations. There are some areas where the draft revised NPS could be strengthened and these are set out in the summary below; however, their inclusion is not considered likely to alter the predicted nature or significance of effects for traffic and transport.

AoS Objective - To minimise the volume of traffic and promote more sustainable transport choices.

Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		Alongside wider national planning policy, legislation and regulatory regimes, the draft revised NPS will provide a positive framework that helps to ensure the potential adverse impacts of port infrastructure are identified, appropriately assessed and, where necessary, avoided, minimised or mitigated. The likely significant effects arising as a result of proposals for nationally significant port infrastructure, along with cumulative effects, will be considered through the accompanying project-level EIA.
		Reasonable Alternative The inclusion of specific quantum of growth to meet forecasted demands is not likely to result in any differences to the predicted nature and significance of the effect identified for the draft revised NPS above. While identifying a specific quantum of growth could help the port industry to understand the scale of infrastructure needed to meet forecasted demands, it is unlikely to result in the delivery of more or less infrastructure than the draft revised NPS. The decision on the scale, location and timing of nationally significant port infrastructure will be made by the port industry on a case-by-case basis. It is assumed that the alternative would still take account of the potential direct and indirect effects, including cumulative effects, of port infrastructure and associated development on traffic and transport. It would also set out the same Government policy, assessment principles and generic impact guidance as presented above for the draft revised NPS.

Recommendations for mitigation and/ or enhancement:

AoS Objective - To minimise the volume of traffic and promote more sustainable transport choices.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
Marine traffic (including recreational vessels) and navigation should be given consideration within the Applicant’s assessment at 4.7.5 and the potential requirement for a Navigation Risk Assessment should be mentioned.		

Cultural Heritage

Table C-12 - Appraisal of the draft revised NPS and reasonable alternative for cultural heritage

AoS Objective - To conserve and where appropriate enhance the historic environment including cultural heritage resources, historic buildings and archaeological features and their settings.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
+	+	Draft revised NPS The key receptors that could be affected by nationally significant port infrastructure are set out in the baseline information presented in Appendix A. The draft revised NPS takes account of the potential impacts of port infrastructure and associated development on the historic environment. These include: ▪ Government policy in Chapter 2 states that all proposed development should be delivered in line with/ satisfy the relevant legal, environmental and social constraints and objectives as set out in national regulations. That new port infrastructure should ensure that access to and condition of heritage assets are maintained and improved where necessary. ▪ Assessment principles in Chapter 3 states under key considerations that the applicant's assessment should be conducted in a manner that is consistent with statutory requirements under UK legislation (this includes legislation relating to the protection of the historic environment). It also states in Chapter 3: • In Section 3.3 the applicant's assessment should consider all relevant socio-economic impacts, which includes effects on tourism. As part of this, it states that any additional benefits should be identified through promoting the historical legacy of working ports, which is

AoS Objective - To conserve and where appropriate enhance the historic environment including cultural heritage resources, historic buildings and archaeological features and their settings.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		important in terms of the changing economic life of ports and how such change is compatible with conserving heritage assets. • In Section 3.5 it sets out the general approach to environmental impacts and Environmental Impact Assessment, recommending early engagement with statutory environmental bodies at the pre-application stage. A project level EIA would include consideration of the historic environment. • In Section 3.8 the conservation of heritage assets is referenced in relation to principles of good design for port infrastructure. ■ Generic impacts in Chapter 4 and in Section 4.14 (Historic Environment) provides guidance on generic impact types often relevant to ports applications and/ or associated development on the historic environment. It recognises that port infrastructure has the potential to result in adverse effects on the historic environment and the significance of designated heritage assets. It states that: • As part of the project level EIA and Environmental Statement, 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 possibility of damage to buried features from underwater disposal of dredged material should be taken into account.

AoS Objective - To conserve and where appropriate enhance the historic environment including cultural heritage resources, historic buildings and archaeological features and their settings.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		- 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. - The absence of designation for heritage assets does not indicate lower significance. - The decision-maker should consider the significance of heritage assets, the desirability of sustaining and enhancing the significance of heritage assets and impacts on other non-designated heritage assets. - 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. - 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. Given the policy and guidance for applicants and the decision-maker set out above and the nature of the draft revised NPS, i.e. not setting the quantum, location or timing for the delivery of infrastructure, it is considered that the draft revised NPS is likely to have a long-term minor positive effect on the historic environment. It seeks to protect and conserve the significance of heritage assets and their setting as well as deliver enhancements where possible. It also references the key relevant legal and environmental constraints and objectives as set out in national regulations. There are some areas where the draft revised NPS could be strengthened and these are set out in

AoS Objective - To conserve and where appropriate enhance the historic environment including cultural heritage resources, historic buildings and archaeological features and their settings.

Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		the summary below; however, their inclusion is not considered likely to alter the predicted nature or significance of effects for the historic environment. Alongside wider national planning policy, legislation and regulatory regimes, the draft revised NPS will provide a positive framework that helps to ensure the potential adverse effects of port infrastructure are identified, appropriately assessed and, where necessary, avoided, minimised or mitigated.
		Reasonable Alternative The inclusion of specific quantum of growth to meet forecasted demands is not likely to result in any differences to the predicted nature and significance of the effect identified for the draft revised NPS above. While identifying a specific quantum of growth could help the port industry to understand the scale of infrastructure needed to meet forecasted demands, it is unlikely to result in the delivery of more or less infrastructure than the draft revised NPS. The decision on the scale, location and timing of nationally significant port infrastructure will be made by the port industry on a case-by-case basis. It is assumed that the alternative would still take account of the potential direct and indirect effects, including cumulative effects, of port infrastructure and associated development on the historic environment. It would also set out the same Government policy, assessment principles and generic impact guidance as presented above for the draft revised NPS.

Recommendations for mitigation and/ or enhancement:

AoS Objective - To conserve and where appropriate enhance the historic environment including cultural heritage resources, historic buildings and archaeological features and their settings.

Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		■ In Chapter 4 (Generic impacts) under Section 4.14 (Historic environment) there is an opportunity make a reference to cumulative effects on heritage assets. ■ In Chapter 4 (Generic impacts) under Section 4.14 (Historic environment) there is an opportunity to reference the need to consider impacts on both onshore and offshore heritage assets and the wider historic environment.

Landscape, Townscape and Seascape

Table C-13 - Appraisal of the draft revised NPS and reasonable alternative for landscape, townscape and seascape

AoS Objective - To conserve, protect and enhance landscape, townscape and seascape quality and visual amenity.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
+	+	Draft revised NPS The key receptors that could be affected by nationally significant port infrastructure are set out in the baseline information presented in Appendix A. The draft revised NPS takes account of the potential direct and indirect effects, including cumulative effects, of port infrastructure and associated development on the landscape. These include: ▪ Government policy in Chapter 2 states that all proposed development should be delivered in line with/ satisfy the relevant legal, environmental and social constraints and objectives as set out in national regulations. That new port infrastructure should provide high standards of protection for the natural environment. It also states that to ensure sustainable development the new port infrastructure should well designed (functionally and environmentally) and provide high standards for protection of the natural environment. ▪ Assessment principles in Chapter 3 states under key considerations that the applicant's assessment should be conducted in a manner that is consistent with statutory requirements under UK legislation (this includes legislation relating to the protection of designated landscapes). It also states in Chapter 3: • In Section 3.5 it sets out the general approach to environmental impacts and Environmental Impact Assessment, recommending early engagement with statutory environmental bodies at the pre-application stage. A project level EIA would include consideration of the landscape,

AoS Objective - To conserve, protect and enhance landscape, townscape and seascape quality and visual amenity.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		townscape and seascape. References are made to the duties under the Environment Act 2021 and the policies set out in the Government's Environmental Improvement Plan for improving the natural environment. It states that applicants should look for opportunities to take a holistic approach to avoiding, reducing or mitigating impacts on the natural environment or built environment, on landscapes and on people by using nature-based solutions. It also makes reference to the requirements under the Environmental Impact Assessment (EIA) Regulations. Reference is also made to a Green Infrastructure approach that can be used to plan multifunctional natural features to integrate the various benefits and solutions. • In Section 3.8 relates to good design and states every effort should be made to embed the principles of good design in the development of port schemes. The decision-maker should satisfy itself that the applicant has taken into account the aesthetics (including contribution to the quality of the area) and demonstrates good design relating to existing landscape character, landform and vegetation. ▪ Generic impacts in Chapter 4 and in Section 4.13 (Landscape and visual impacts) provides guidance on generic impact types often relevant to ports applications and/ or associated development on the landscape. It states: • References to landscape should also be taken as covering seascape and townscape. • As part of the project level EIA and Environmental Statement, the applicant should carry out a landscape and visual assessment.

AoS Objective - To conserve, protect and enhance landscape, townscape and seascape quality and visual amenity.		
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		• The assessment should consider the effects during construction and operation on landscape components and character. • 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. • 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. • The aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate. • The decision-maker should only grant development consent in nationally designated areas for landscape in exceptional circumstances and that if granted the projects should be carried out to high environmental standards. • 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. Given the policy and guidance for applicants and the decision-maker set out above and the nature of the draft revised NPS, i.e. not setting the quantum, location or timing for the delivery of infrastructure, it is considered that the draft revised NPS is likely to have a long-term minor positive

AoS Objective - To conserve, protect and enhance landscape, townscape and seascape quality and visual amenity.

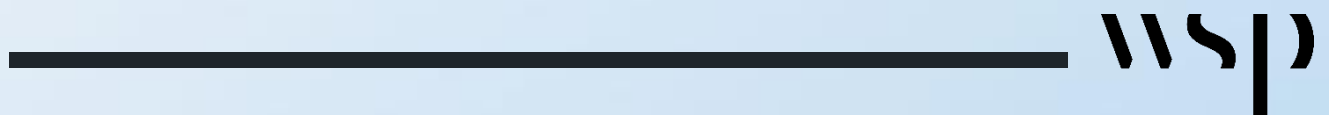
Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
		effect on the landscape, townscape and seascape. It encourages good design and minimising the impacts of proposed development on the landscape, townscape and seascape. It also references the key relevant legal and environmental constraints and objectives as set out in national regulations. There are some areas where the draft revised NPS could be strengthened and these are set out in the summary below; however, their inclusion is not considered likely to alter the predicted nature or significance of effects for landscape, townscape and seascape. Alongside wider national planning policy, legislation and regulatory regimes, the draft revised NPS will provide a positive framework that helps to ensure the potential adverse effects of port infrastructure are identified, appropriately assessed and, where necessary, avoided, minimised or mitigated.
		Reasonable Alternative The inclusion of specific quantum of growth to meet forecasted demands is not likely to result in any differences to the predicted nature and significance of the effect identified for the draft revised NPS above. While identifying a specific quantum of growth could help the port industry to understand the scale of infrastructure needed to meet forecasted demands, it is unlikely to result in the delivery of more or less infrastructure than the draft revised NPS. The decision on the scale, location and timing of nationally significant port infrastructure will be made by the port industry on a case-by-case basis. It is assumed that the alternative would still take account of the potential direct and indirect effects, including cumulative effects, of port infrastructure and associated development on the historic environment. It would also set out the same Government policy, assessment principles and generic impact guidance as presented above for the draft revised NPS.

AoS Objective - To conserve, protect and enhance landscape, townscape and seascape quality and visual amenity.

Draft revised NPS residual effect	Reasonable Alternative residual effect	Appraisal Commentary
Recommendations for mitigation and/ or enhancement: ■ In Chapter 2 (Government policy and the need for new infrastructure) under Section 2.2 (Government policy for ports) when discussing Government policy to ensure sustainable development and providing high standards of protection for the natural environment, there is an opportunity to reference the Natural Environment Planning Practice Guidance. This could help to provide clarity that the natural environment also includes the landscape as per the Planning Practice Guidance. ■ In Chapter 4 (Generic impacts) under Section 4.13 (Landscape and visual impacts) there is an opportunity to require applicant’s assessments to consider cumulative effects on landscape as well as cumulative effects on nationally designated areas. The potential cumulative effects of development on the landscape should also be taken into account by the decision-maker.		

Appendix D

Quality Assurance Checklist



The Government's Guidance on SEA contains a quality assurance checklist to help ensure that the requirements of the SEA Regulations are met. This checklist has been adapted to highlight the requirements below and a signpost provided to where they are addressed in this AoS Report.

Table D-1 - Quality Assurance Checklist

Requirement	Where is the requirement met in this AoS Report?
Objectives and Context	
The plan's purpose and objectives are made clear.	Presented in Chapter 2 .
Environmental issues, including objectives, are considered in developing objectives and targets.	Chapter 3 and Appendix A identify the sustainability baseline issues and set out the environmental protection objectives and targets and how these are linked to the AoS objectives. Chapter 3 and Appendix A identify relevant plans and programmes. Chapter 4 presents the AoS objectives and guide questions.
Scoping	
The environmental consultation bodies are consulted in appropriate ways and at appropriate times on the content and scope of the Scoping Report.	Consultation on the Scoping Report with the relevant statutory environmental bodies took place in Jan to March 2024. Please refer to Section 1.3 . Appendix B contains a schedule of consultation responses and how they have been taken into account.
The SEA focuses on significant issues.	The key issues and opportunities that could arise from implementation of the draft revised NPS have been identified in Chapter 3 and Appendix A .
Technical, procedural and other difficulties encountered are discussed; assumptions and uncertainties are made explicit	Section 4.6 in Chapter 4 sets out the key difficulties encountered during the preparation of this AoS Report.
Alternatives	
Realistic alternatives are considered for key issues, and the reasons for choosing them are documented.	Potential alternatives are explored and identified in Chapter 2 and Section 2.4 to 2.5 . The appraisal of this alternative is

Requirement	Where is the requirement met in this AoS Report?
	presented in Appendix C and summarised in Chapter 5 . The reasons for the selection of draft revised NPS (as proposed) and the rejection of the reasonable alternative are set out in Chapter 6 .
The environmental effects (both adverse and beneficial) of each alternative are identified and compared.	The reasonable alternative to the draft revised NPS has been assessed in Appendix C . A summary of this assessment is provided in Chapter 5 .
Inconsistencies between the alternatives and other relevant plans, programmes or policies are identified and explained	The reasonable alternative to the draft revised NPS has been assessed in Appendix C . A summary of this assessment is provided in Chapter 5 .
Reasons are given for selection or elimination of alternatives.	Potential alternatives are identified in Section 2 . The reasons for the selection of the draft revised NPS (as proposed) and the rejection of the reasonable alternative is set out in Section 6 .
Baseline information	
Relevant aspects of the current state of the environment and their likely evolution without the plan or programme are described.	Refer to Chapter 3 and Appendix A .
Environmental characteristics of areas likely to be significantly affected are described, including areas wider than the physical boundary of the plan area where it is likely to be affected by the plan.	Refer to Appendix A .
Difficulties such as deficiencies in information or methods are explained.	These are stated throughout the report where appropriate and Chapter 4 .
Prediction and evaluation of likely significant effects	
Effects identified include the types listed in the Directive (biodiversity, population, human health, fauna, flora, soil, water, air, climate factors, material assets, cultural heritage and landscape), as relevant; other	These are set out in Appendix C and summarised in Chapter 5 .

Requirement	Where is the requirement met in this AoS Report?
likely environmental effects are also covered, as appropriate	
Both positive and negative effects are considered, and the duration of effects (short, medium or long-term) is addressed.	These are set out in Appendix C and summarised in Chapter 5 .
Likely secondary, cumulative and synergistic effects are identified where practicable.	These are set out in Appendix C and summarised in Chapter 5 .
Inter-relationships between effects are considered where practicable.	These are set out in Appendix C and summarised in Chapter 5 .
The prediction and evaluation of effects makes use of relevant accepted standards, regulations, and thresholds.	These are set out in Appendix C and summarised in Chapter 5 .
Methods used to evaluate the effects are described	These are described in Chapter 4 .
Mitigation measures	
Measures envisaged to prevent, reduce and offset any significant adverse effects of implementing the plan or programme are indicated.	These are set out in Appendix C and summarised in Chapter 5 .
Issues to be taken into account in project consents are identified	If relevant, these are set out in Appendix C and summarised in Chapter 5 .
The Environmental Report	
Is clear and concise in its layout and presentation.	Yes, the layout of the AoS is set out in Chapter 1 .
Uses simple, clear language and avoids or explains technical terms.	The AoS has been written in plain English as far as the technical nature of the report allows.
Uses maps and other illustrations where appropriate.	Tables have been used throughout the AoS Report and in the appendices where appropriate.
Explains the methodology used.	This is presented in Chapter 4 .

Requirement	Where is the requirement met in this AoS Report?
Explains who was consulted and what methods of consultation were used.	This is covered in Chapter 1.
Identifies sources of information, including expert judgement and matters of opinion.	References to information sources are provided throughout the report and appendices where appropriate.
Contains a non-technical summary covering the overall approach to the SEA, the objectives of the plan, the main options considered, and any changes to the plan resulting from the SEA.	A Non-Technical Summary has been provided.
Consultation	
The SEA is consulted on as an integral part of the plan-making process	Consultation on the Scoping Report with the relevant statutory environmental bodies took place in Jan to March 2024. Please refer to Section 1.3. Appendix B contains a schedule of consultation responses and how they have been taken into account. This AoS Report will be published for consultation alongside the draft revised NPS.
Consultation Bodies and the public likely to be affected by, or having an interest in, the plan or programme are consulted in ways and at times which give them an early and effective opportunity within appropriate time frames to express their opinions on the draft plan and Environmental Report.	Consultation on the Scoping Report with the relevant statutory environmental bodies took place in Jan to March 2024. Please refer to Section 1.3. Appendix B contains a schedule of consultation responses and how they have been taken into account. This AoS Report will be published for consultation alongside the draft revised NPS.
Decision-making and information on the decision	
The environmental report and the opinions of those consulted are taken into account in finalising and adopting the plan or programme.	This will be included in the Post Adoption Statement (to be issued following consultation on this AoS Report).
An explanation is given of how they have been taken into account.	This will be included in the Post Adoption Statement (to be issued following consultation on this AoS Report).

Requirement	Where is the requirement met in this AoS Report?
Reasons are given for choosing the plan or programme as adopted, in the light of other reasonable alternatives considered.	This will be included in the Post Adoption Statement (to be issued following consultation on this AoS Report).
Monitoring measures	
Measures proposed for monitoring are clear, practicable and linked to the indicators and objectives used in the SEA.	Measures are presented in Chapter 6 .
Monitoring is used, where appropriate, during implementation of the plan or programme to make good deficiencies in baseline information in the SEA	Measures are presented in Chapter 6 .
Monitoring enables unforeseen adverse effects to be identified at an early stage. (These effects may include predictions which prove to be incorrect.)	Measures are presented in Chapter 6 .
Proposals are made for action in response to significant adverse effects.	This will be set out in the Post Adoption Statement (to be published following consultation).



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