

Intended for

Department for Transport

Project

1620013852

Date

January 2023

NATIONAL NETWORKS NATIONAL POLICY STATEMENT HABITATS REGULATIONS ASSESSMENT

VERSION 1.0



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NON-TECHNICAL SUMMARY

The National Networks National Policy Statement (NN NPS), hereafter referred to as 'NPS', sets out the need for, and Government's policies to deliver, development of nationally significant infrastructure projects (NSIPs) on the national road and rail networks in England. For the purposes of this NPS these developments are referred to as national road, rail, and Strategic Rail Freight Interchange (SRFI) developments.

The NPS also provides planning guidance for promoters of NSIPs on the road and rail networks, and forms the basis for the examination by the Examining Authority and decisions by the Secretary of State. The Secretary of State for Transport has concluded that the existing NPS should be reviewed, to reflect changes to policy and legislation relevant to transport planning since the 2015 NPS was published.

The main purpose of Habitats Regulations Assessment (HRA) is to consider the potential effects of a plan or project on European Sites. It is a legal requirement that this assessment must take place prior to that plan or project being authorised to proceed. As a new plan, the potential effects of a revised NPS on European Sites therefore must be assessed. This requirement is driven by the Conservation of Habitats and Species Regulations (2017, as amended).

Sites designated in England under the Habitats Regulations include Special Protection Areas (SPAs) and Special Areas of Conservation (SACs). It is also government policy that Ramsar sites, potential SPAs, possible SACs and sites used to compensate for adverse effects on European Sites are considered in the HRA process. This is described in paragraph 181 of the National Planning Policy Framework. The term 'European Sites' is used to refer collectively to such sites throughout this document, in addition to SACs and SPAs.

The revised NPS does not contain spatial proposals or any nominated sites for strategic road or rail projects and could form the basis for decision-making for projects anywhere in England. As such, it is impossible to determine which European Sites may or may not be affected by projects brought forward under the revised NPS. As such, it is necessary to assume that adverse effects to the integrity of European Sites could occur, that could not be mitigated.

This HRA has considered alternative solutions to adoption of a revised NPS, and determined that no suitable alternative solutions exist (see Section 6). Adoption of the revised NPS is deemed necessary for Imperative Reasons of Overriding Public Interest (IROPI; see Section 7).

This HRA Report and the revised NPS sets out that individual NSIPs brought forward following adoption of the revised NPS, must complete project-level HRA as appropriate to their potential to cause Likely Significant Effects (LSE) to European Sites. The findings of this HRA of the revised NPS should not be taken to

predetermine the potential for individual NSIPs to lead to effects on any European Site, or to predetermine the outcome of any individual project HRA.

1. INTRODUCTION

1.1 The Revised National Networks National Policy Statement

- 1.1.1 The National Networks National Policy Statement (NN NPS), hereafter referred to as 'NPS', sets out the need for, and Government's policies to deliver, development of nationally significant infrastructure projects (NSIPs) on the national road and rail networks in England. For the purposes of this NPS these developments are referred to as national road, rail, and Strategic Rail Freight Interchange (SRFI) developments.
- 1.1.2 The NPS also provides planning guidance for promoters of NSIPs on the road and rail networks, and forms the basis for the examination by the Examining Authority and decisions by the Secretary of State.
- 1.1.3 The Secretary of State for Transport has concluded that the existing NPS should be reviewed. The revised NPS is required in order to update the current NPS, which was published in 2015. There have been a series of changes to policy and legislation relevant to transport planning since the 2015 NPS was published. These include the legally binding target to achieve Net Zero by 2050¹, publication of the Transport Decarbonisation Plan, and wider changes to the policy framework for example publication of the Environment Act (2021) and updates to the National Adaptation Programme for climate change.
- 1.1.4 A review of the NPS also provides an opportunity to update other aspects of the document, to reflect more recent, post-pandemic conditions. This will ensure that it continues to provide a relevant policy framework for decisions on Development Consent Orders for road and rail NSIPs.
- 1.1.5 Revision of the NPS needs to be subject to an Appraisal of Sustainability (AoS) and Habitats Regulations Assessment (HRA), in line with relevant legislation. This HRA report will be consulted upon at the same time as any proposed revisions to the NPS.

1.2 Purpose and Background to the Report

- 1.2.1 The main purpose of HRA is to consider the potential effects of a plan or project on European Sites (these are defined fully in section 2.1). It is a legal

¹ Climate Change Act 2008 (2050 Target Amendment) Order 2019.

requirement that this assessment must take place prior to that plan or project being authorised to proceed.

- 1.2.2 As a new plan, the potential effects of a revised NPS on European Sites must be assessed.
- 1.2.3 The need to complete HRA for the NPS arises from its status as a strategic plan and the requirements of regulations 105 and 110 of the Conservation of Habitats and Species Regulations 2017 (as amended) (hereafter referred to as 'the Habitats Regulations'). The NPS will provide a strategic framework for assessing individual NSIPs as these come forward.
- 1.2.4 The revised NPS does not have any associated spatial components. It could be used to support decision-making for rail and road NSIPs anywhere in England, the locations of which are not yet known. As such, this HRA for the revised NPS is necessarily completed at a strategic level. It does not consider potential effects that could arise from projects brought forward under a revised NPS in detail, as the necessary information for such an assessment is not yet available. It will be necessary for individual NSIP schemes brought forward under the revised NPS to complete project level HRA, commensurate with their potential for effects on European Sites.
- 1.2.5 This NPS HRA Report sets out the policy elements of the NPS that could lead to likely significant effects (LSE) on European Sites. Where LSE are identified, Appropriate Assessment and, if necessary, subsequent stages of the HRA process are included.

1.3 Report Structure

- 1.3.1 The Non-Technical Summary sets out the context of the report and summarises the HRA process and assessment findings. The remainder of the report is structured as follows:
- Chapter 1 provides an introduction to the NPS, why it is being updated, and why HRA is required;
 - Chapter 2 provides further background to the HRA process and the staged approach to assessment that is used;
 - Chapter 3 sets out key case law and guidance used to inform the HRA;
 - Chapter 4 sets out the findings of screening for Likely Significant Effects;
 - Chapter 5 sets out the findings of the information to inform Appropriate Assessment;

- Chapter 6 sets out the findings of the assessment of alternative solutions;
- Chapter 7 sets out the findings in relation to Imperative Reasons of Overriding Public Interest (IROPI) and compensatory measures; and
- Chapter 8 provides a summary of the overall findings of the report.

2. HABITATS REGULATIONS ASSESSMENT BACKGROUND

2.1 Key Underpinning Legislation and Policy

- 2.1.1 The Habitats Regulations transposed the requirements of European Council Directive 92/43/EEC ('the Habitats Directive') into English law. The Habitats Regulations apply to plans and projects that may have significant effects on the Natura 2000 ecological network (sites designated under the Habitats Directive and the Wild Birds Directive (Council Directive 2009/147/EC, which codified 79/409/EEC)). Sites designated in England under the Habitats Regulations include Special Protection Areas (SPAs) and Special Areas of Conservation (SACs).
- 2.1.2 There have been changes made to the Habitats Regulations (as amended) by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Following these changes, SACs and SPAs in the UK no longer form part of the EU's Natura 2000 ecological network and now form part of the 'UK National Site Network'. In this document, they are referred to as European Sites.
- 2.1.3 It is also government policy that Ramsar sites, potential SPAs, possible SACs and sites used to compensate for adverse effects on European Sites are considered in the HRA process. This is described in paragraph 181 of the National Planning Policy Framework. The term 'European Sites' is used to refer collectively to such sites throughout this document, in addition to SACs and SPAs.
- 2.1.4 Prior to authorising any plan or project, 'Competent Authorities²' must consider the potential for Likely Significant Effects (LSE)³ on European Sites.

² Competent Authorities are defined under regulation 7 of the Habitats Regulations. They include bodies responsible for providing authority for the undertaking of plans or projects, and include such bodies as Secretaries of State, joint planning boards, and statutory undertakers.

³ A plan or project may give risk to 'Likely Significant Effects' if it would involve activities which carry an objective possibility of causing harm to European Site(s), both alone or in-combination with other plans and projects.

- 2.1.5 Should LSE be identified, it is necessary to further consider the effects by way of an 'Appropriate Assessment'⁴.
- 2.1.6 The Appropriate Assessment must consider whether identified LSE could lead to adverse effects to any European Sites. Any plan or project leading to adverse effects on the integrity of European Sites can only be permitted if strict additional tests are met.
- 2.1.7 Overall, this process of assessment is known as Habitats Regulations Assessment. Further details of the relevant legislation are set out below.
- 2.1.8 The key parts of the Habitats Regulations that inform the HRA process are set out below.
- 2.1.9 Regulation 63 (1) of the Habitats Regulations states that:

“A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which —

(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 that site,

must make an Appropriate Assessment of the implications of the plan or project for that site in view of that site's conservation objectives”.

- 2.1.10 If a plan or project is not directly connected with or otherwise necessary to the management of any European Sites, it must be subject to screening for likely significant effects. In the event that likely significant effects cannot be ruled out, an Appropriate Assessment will be required.
- 2.1.11 Regulation 64 (1) of the Habitats Regulations states that:

“If the competent authority is satisfied that, there being no alternative solutions, the plan or project must be carried out for imperative reasons of overriding public interest (which, subject to paragraph (2), may be of a social or economic nature), it may agree to the plan or project notwithstanding a

⁴ The Habitats Regulations do not explicitly define what an 'appropriate assessment' must contain. The process must examine the potential LSE identified at the HRA screening stage in sufficient detail, to establish whether or not these would lead to an adverse effect on the integrity of any European Site, both alone or in combination with other plans and projects.

negative assessment of the implications for the European site or the European offshore marine site (as the case may be)”.

2.1.12 In addition to the above, regulation 68 states that:

“Where in accordance with regulation 64 —

(a) a plan or project is agreed to, notwithstanding a negative assessment of the implications for a European site or a European offshore marine site, or

(b) a decision, or a consent, permission or other authorisation, is affirmed on review, notwithstanding such an assessment, the appropriate authority must secure that any necessary compensatory measures are taken to ensure that the overall coherence of Natura 2000 is protected”.

2.2 The HRA Process

2.2.1 Guidance on the Habitats Directive (Department for Environment, Food & Rural Affairs, Natural England, Welsh Government, and Natural Resources Wales, 2021) sets out the stepwise approach which should be followed to enable Competent Authorities to discharge their duties in respect of HRA. The process is usually summarised in four distinct stages of assessment:

- Stage 1: Screening: the process which identifies whether effects upon a European Site(s) of a plan or project are objectively possible. This must consider effects either alone or in combination with other plans or projects, and considers whether these effects are likely to be significant. Following the People Over Wind ruling (People over Wind and Peter Sweetman v Coillte, 2018) (refer to Section 3.3), mitigation designed to avoid or lessen effects on European Sites should not be considered at this stage;
- Stage 2: Information to inform Appropriate assessment: the detailed consideration of the effect on the integrity of European Sites of the plan or project, either alone or in combination with other plans or projects. This stage of the process must be carried out with respect to the site’s conservation objectives and its structure and function. Mitigation measures designed to avoid or lessen effects on European Sites are considered at this stage. The relevant Statutory Nature Conservation Body (SNCB) must be consulted over the findings of an Appropriate Assessment. Natural England were consulted on the HRA Methodology Report that preceded this HRA Report, with a number of comments received back from NE. A summary of these is included in Appendix A, including details of how they have been responded to;

- Stage 3: Assessment of alternative solutions: the process which examines alternative ways of achieving the objectives of the plan or project that avoid adverse effects on the integrity of the European Site(s); and
- Stage 4: Assessment where no alternative solutions exist and where adverse effects remain. This includes an assessment of whether the development is necessary for Imperative Reasons of Overriding Public Interest (IROPI). If it is determined the plan or project should proceed (i.e. IROPI exist), compensatory measures to maintain the overall coherence of the National Site Network must be identified. If a European Site(s) supports Annex 1 priority habitats or Annex 2 priority species, this affects the reasons that can be used to justify IROPI. These must be either:
 - (a) reasons relating to human health, public safety or beneficial consequences of primary importance to the environment; or
 - (b) any other reasons which the plan-making authority, having due regard to the opinion of the Appropriate Authority, considers to be imperative reasons of overriding public interest. This is explored in more detail in Section 7 of this report.

3. RELEVANT POLICY, CASE LAW, AND GUIDANCE

3.1 Overview

- 3.1.1 This section of the HRA Report sets out the policy, case law, and guidance that has been considered during the HRA of the NPS. According to UK EU withdrawal agreements, EU case law relating to the application of the Habitats Directive up to 31st December 2020, remains relevant in the UK in relation to the HRA process. The application of the Habitats Regulations remains functionally the same, with the exception of amendments to capture the replacement of EU functions with the relevant Appropriate Authorities in the UK.
- 3.1.2 As such, European Case law dating up to the 31st December 2020 has been referred to below and applied during this assessment, as appropriate.

3.2 Policy and Guidance

- 3.2.1 The following policy has been referenced as part of the NPS HRA:
- The National Planning Policy Framework (2021), which sets out the government's planning policies for England and how these are expected to be applied;
 - The Environment Act (2021), which provides a legally binding target to halt the decline in species by 2030 and requires new developments to improve or create habitats for nature; and
 - ODPM Circular 06/2005: Biodiversity and Geological Conservation – statutory obligations and their impact within the planning system.
- 3.2.2 Guidance documents have also been consulted through the production of the NPS HRA and referred to for definitions and terminologies applied, as appropriate. Relevant guidance referred to has included:
- Department for Environment, Food, and Rural Affairs (2021), Habitats Regulations Assessments: Protecting a European Site.
 - Department for Levelling Up, Housing and Communities & Ministry of Housing, Communities & Local Government (2019), Appropriate Assessment – Guidance on the use of Habitats Regulations.
 - European Commission (2021), Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC;

- European Commission (2000) Managing Natura 2000 Sites – the Provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC;
- Opinion of the Commission (2007/2012) Guidance Document on Article 6(4) of the Habitats Directive 92/43/EEC – Clarification of the concepts of: Alternative Solutions, Imperative Reasons of Overriding Public Interest, Compensatory Measures; and
- Tyldesley, D. and Chapman, C., (2013) The Habitats Regulations Assessment Handbook, June 2022 edition UK: DTA Publications Limited.

3.3 Case Law and Legal Opinion

People over Wind, Peter Sweetman v Coillte Teoranta (Case C-323/17)

- 3.3.1 The “People over Wind” judgment ruled that any measures added to achieve the purpose of avoiding or reducing harmful effects on a European Site(s) should not be considered at the screening stage. The Competent Authority can only consider such mitigation measures as part of their Appropriate Assessment.
- 3.3.2 The key part of the judgment is summarised in Paragraph 40 as “in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of measures intended to avoid or reduce the harmful effects of the plan or project on that site”.
- 3.3.3 UK Government guidance (Guidance on the use of Habitats Regulations Assessment, July 2019) clarifies that measures which have been specifically added to achieve the purpose of avoiding or reducing its harmful effects on a habitats site should not be considered at the screening stage. However, features that are integral to the design or physical characteristics of the project that is being assessed, for example, the layout and location of a scheme, may be considered at the screening stage.
- 3.3.4 In accordance with UK government guidance on the application of the People over Wind ruling, this HRA of the revised NPS has only considered (at a strategic level) avoidance or mitigation measures, specifically added to avoid or reduce harmful effects on a European Site(s), during the Appropriate Assessment stage. Such measures have not been considered during the HRA screening stage.

Grace and Sweetman (Case C-164/17)

- 3.3.5 The “Grace and Sweetman” ruling clarified the distinction between mitigation and compensation in relation to HRA further from earlier judgments, including *Briels v Minister van Infrastructuur en Milieu (C-521/12)* and *Hilde Orleans & Others v Vlaams Gewest (joined cases C-387/15 and C-388/15)*. It was concluded in *Grace and Sweetman* that the provision of new or improved habitat, even within the same European Site, cannot be taken to mitigate for the loss or damage to habitat that is designated. This is because, as per paragraph 52, “as a general rule, any positive effects of the future creation of a new habitat, which is aimed at compensating for the loss of area and quality of that habitat type in a protected area, are highly difficult to forecast with any degree of certainty or will be visible only in the future”.
- 3.3.6 Published guidance describes three principles in accordance with this relevant case law to support the definitions of mitigation and compensation as used in HRA. These are as follows:
- Any risk of a reduction in, or loss of, habitat within either a SAC, SPA or Ramsar wetland should be judged to be a “likely significant effect”, and the full significance of its impact should be further tested by Appropriate Assessment.
 - A proposal to create new habitat (including habitat translocation, habitat conversion and/or habitat banking) within a European Site’s boundary specifically to mitigate for a predicted loss of SAC or SPA habitat should (with regard to HRA) normally be treated as a compensatory measure, and not mitigation, that should only be taken into account following an Appropriate Assessment and the passing of the no alternatives and IROPI tests.
 - The use of habitat creation/conversion outside of a site’s boundary to avoid a loss of “functionally-linked land” that lies outside of a site’s designated boundary is still a legitimate mitigation measure.
- 3.3.7 The distinction between mitigation and compensation in the revised NPS HRA therefore been informed by this case law and the corresponding principles set out in the referenced guidance from DTA Publications.

Coöperatie Mobilisation for the Environment and Vereniging Leefmilieu v College van gedeputeerde staten van Limburg and College van gedeputeerde staten van Gelderland (Cases C-293/17 and C-294/17)

- 3.3.8 The “Dutch Nitrogen” cases established that: (Paragraph 126) “...it is only when it is sufficiently certain that a measure will make an effective contribution to avoiding harm to the integrity of the site concerned, by guaranteeing beyond all reasonable doubt that the plan or project at issue will not adversely affect the integrity of that site, that such a measure may be taken into consideration in the 'Appropriate Assessment...’ and (Paragraph 130) “The Appropriate Assessment of the implications of a plan or project for the sites concerned is not to take into account the future benefits of such 'measures' if those benefits are uncertain, inter alia because the procedures needed to accomplish them have not yet been carried out or because the level of scientific knowledge does not allow them to be identified or quantified with certainty”.
- 3.3.9 The NPS HRA has therefore considered the existence of conservation and / or preventative measures only where the benefits are certain at the time of the assessment.

Holohan v An Bord Pleanala (Case C-461/17)

- 3.3.10 The Holohan judgment ruled that an Appropriate Assessment must detail the entirety of the habitats and species for which a European Site is designated. In addition, it established that the Appropriate Assessment must examine the implications of the plan or project for habitats and species outside of a European Site(s) boundaries where there may be negative effects on the conservation objectives of a European Site(s).
- 3.3.11 The judgment also clarified that should a competent authority reject the findings of a scientific expert opinion, which recommended additional information was necessary, the Appropriate Assessment must include a detailed statement as to the reasons, which are capable of dispelling all reasonable scientific doubt.
- 3.3.12 In accordance with the ruling, the revised NPS HRA has considered the potential for impacts on the functioning of European Sites as a result of the policy. This has included consideration of offsite impacts to functionally-linked habitats and species.

Wealden DC v SSCLG [2017] EWHC 351 (Admin)

3.3.13 The referenced Wealden case challenged the decision of Local Planning Authorities to adopt a joint core strategy (JCS) covering Ashdown Forest SAC. Natural England (NE) had advised that additional traffic from development planned in the JCS was not likely to have a significant impact on the SAC because less than 1,000 cars per day would use the critical roads. However, the HRA had failed to take into account of the in-combination effect of other projects which additively would exceed 1,000 vehicles per day.

3.3.14 The findings of the Wealden case in relation to the need for a full and proper in-combination assessment, have been considered in relation to the HRA for the revised NPS.

Compton Parish Council, Julian Cranwell and Ockham Parish Council v Guildford Borough Council, SoS for Housing, Communities and Local Government (2019), High Court of Justice, EWHC 3242 (Admin) CO/2173,2174,2175/2019

3.3.15 In the Compton case, the Court ruled in relation to exceedances of nitrogen deposition critical loads and NOx emissions, that, in arriving at a conclusion during Appropriate Assessment, that this: 'could not be answered, one way or the other, by simply considering whether there were exceedances of critical loads or levels, albeit rather lower than currently. What was required was an assessment of the significance of the exceedances for the SPA birds and their habitats...'.

3.3.16 The HRA for the revised NPS has, in accordance with the Compton ruling, considered the effects of likely impacts to the extent that the Competent Authority is able to be certain that there would be no adverse impacts on the integrity of European Sites rather than relying on threshold values as a determinant.

4. HRA STAGE 1 – SCREENING

4.1 HRA Screening Methodology

4.1.1 Guidance from the UK Government (Department for Environment, Food & Rural Affairs, Natural England, Welsh Government, and Natural Resources Wales, 2021) recommends that screening should include the following steps:

- Step 1: Determine whether the plan or project is directly connected with or necessary to the management of the European Site(s);
- Step 2: Describe the plan or project and any other plans or projects which, in combination, could result in significant effects on the European Site(s);
- Step 3: Identify the potential effects on the European Site(s) both alone and in combination with other plans and projects; and
- Step 4: Assess the significance of any effects on the European Site(s).

4.2 Step 1: Determine whether the Plan is Directly Connected with or Necessary to the Management of the European Site

4.2.1 Plans and projects do not require assessment if they are required solely for the purpose of, or in connection with, the management of a European Site(s). The purpose of the NPS is to support decision-making in relation to strategic road and rail infrastructure in England. It is therefore clear that the NPS is neither directly connected with nor necessary for the management of any European Sites.

4.2.2 It is then necessary to confirm that the NPS meets the criteria to be considered as a 'plan' under the Habitats Regulations. Regulation 110 of the Habitats Regulations identifies National Policy Statements as one of the types of plans requiring assessment. Furthermore, once adopted, projects could be brought forward under the revised NPS that trigger LSE on European Sites.

4.2.3 On this basis, the revised NPS has been subject to HRA.

Identifying European Sites for screening

- 4.2.4 As the revised NPS is a relevant 'Plan' for the purposes of HRA, it is necessary to consider how the plan could affect a European Site(s). A useful approach here is to consider the 'impact-pathway' model. A 'pathway' in this context could be tailpipe emissions from petrol and diesel vehicles causing elevated levels of nitrogen in the atmosphere. The 'impact' in this case would be elevated nitrogen levels leading to increased nitrogen deposition onto habitats within a European Site(s). This could result in changes in the condition of those habitats over time. Those changes would be considered the 'effect' in the context of the Habitats Regulations.
- 4.2.5 The revised NPS does not contain spatial proposals or any nominated sites for strategic road or rail projects and could be used to consent projects anywhere in England. As such, it is impossible to determine which European Sites may or may not be affected by projects brought forward under the revised NPS. On balance, effects are most likely to be experienced at European Sites adjacent or close (within up to 30km) to the existing strategic road and rail network.
- 4.2.6 However, effects from individual NSIPs may be further-reaching. It is therefore necessary to assume that any of the English European Sites could be relevant. These presently include 256 SACs, 88 SPAs and 72 Ramsar sites, including sites with onshore and/or offshore components (JNCC, 2021). An additional one candidate SAC (cSAC) and one Site of Community Importance are also going through the process of formal designation as SAC. (Joint Nature Conservation Council, 2022).
- 4.2.7 It is also possible that European Sites in Scotland and Wales could be relevant. Projects brought forward under the NPS could be located in proximity to the Scottish or Welsh borders, and hence their effects could be relevant to European Sites in those countries. In addition, mobile species such as birds and migratory fish associated with European Sites in Scotland and Wales could use habitats outside those European Sites, in England. These could then be subject to effects from NSIPs being delivered under the NPS in England.
- 4.2.8 Transboundary effects on European Sites in Northern Ireland and EU Member States are considered unlikely to occur given the NPS will cover land-based projects in England. It is therefore assumed that impacts on European Sites outside the mainland of the UK do not need to be considered.

4.3 Step 2: Describe the Plan and Any Other Plans or Projects which, in Combination, could Result in Significant Effects

Overview of the revised National Networks National Policy Statement

- 4.3.1 The revised NPS sets out proposed National policy for National Networks. National Networks comprise the strategic road and rail network, including Strategic Rail Freight Interchanges (SRFI). It also provides planning guidance for promoters of NSIPs on the road and rail networks, and the basis for the examination by the Examining Authority and decisions by the Secretary of State.
- 4.3.2 The thresholds for nationally significant road, rail and strategic rail freight infrastructure projects are defined in Part 3 of the Planning Act 2008 ("the Planning Act") as amended (for highway and railway projects) by The Highway and Railway (Nationally Significant Infrastructure Project) Order 2013 ("the Threshold Order").
- 4.3.3 The geographic scope of the revised NPS is limited to England. In Scotland, Wales and Northern Ireland, the planning consent requirements of all national network projects is devolved respectively. As set out previously, projects brought forward under a revised NPS could however lead to transboundary effects on European Sites in Scotland or Wales. Notwithstanding that the revised NPS covers projects in England only, the potential for effects on European Sites in Wales and Scotland is therefore considered.
- 4.3.4 The revised NPS includes provision to support the following broad policy objectives:
- Transport decarbonisation and the path to Net Zero carbon emissions (whilst recognising that continued essential operation of the National Networks will generate residual emissions in the short to medium-term);
 - The conservation and enhancement of UK biodiversity;
 - Climate resilience and adaptation to climate change;
 - Economic growth and wider transport ambitions, including increases in connectivity in support of Levelling Up aspirations;
 - Enhanced accessibility of the National Network for all users;
 - Maintain and enhance performance of the National Networks for private and business users, including freight transport; and
 - Maintain and enhance the safety of National Networks.

- 4.3.5 The revised NPS provides a policy foundation that enables the delivery of a range of transport infrastructure projects. By virtue of the criteria for National Networks projects to be considered NSIPs under sections 22, 25, and 26 of the Planning Act (2008), these will in almost all cases involve land use change, with the potential for large areas to be affected. For example, under section 22 of the Planning Act, highways-related development in relation to a motorway must cover an area greater than 15 hectares to be a NSIP.
- 4.3.6 With the potential for land use change, comes the potential for changes to the physical environment that could affect European Sites. A broad range of projects could come forward, as identified below.
- 4.3.7 Projects on the Strategic Road Network brought forward under the DCO regime could include:
- New and improved junctions and slip roads;
 - improvements to trunk roads, in particular dualling of single carriageway strategic trunk roads and additional lanes on existing dual carriageways;
 - Measures to enhance capacity of the motorway network;
 - New road alignments and corresponding links; and
 - Construction of bridges or tunnels where new or upgraded alignments must cross features such as rivers, estuaries, or other infrastructure.
- 4.3.8 Projects on the Strategic Rail Network brought forward under the DCO regime could include:
- Upgrade and improvement schemes, for example substantial signalling, station, and/or line renewal projects;
 - New rail link alignments and stations;
 - Reopening of previously mothballed rail lines and stations; and
 - New or substantially upgraded maintenance facilities or sidings.
- 4.3.9 SRFI projects brought forward under the DCO regime could include:
- Construction of new SRFI at locations providing good linkages to the strategic road and rail networks; and
 - Upgrading of existing Rail Freight Interchanges (RFI) to achieve SRFI objectives, where existing RFI are suitably located on the road and rail network.

Potential for in-combination effects

4.3.10 In-combination effects may contribute to increased impacts and hence effects on qualifying features. For example, increased traffic flows along a NSIP road improvement scheme could be increased further by additional traffic resulting from growth under a Local Plan. Specific assessment of other plans and projects cannot be completed, due to the lack of a spatial component to a revised NPS. The ways in which other plans and projects could exacerbate road and rail NSIP schemes can however be predicted in broad terms.

4.3.11 In light of the high-level nature of the revised NPS, the in-combination assessment assumes that any of the project types listed under paragraphs 4.3.7 to 4.3.9 could be brought forward. The types of plans and projects that could lead to in-combination effects are identified in **Table 4.3**.

4.4 Step 3: Identify the Potential Effects Both Alone and in Combination with Other Plans and Projects

4.4.1 Road and rail NSIPs could lead to a variety of potential effects on European Sites. The nature of these developments means they could cause relevant effects during both construction and operation. Strategic road and rail infrastructure is rarely decommissioned, although it may be subject to future upgrades and major maintenance work. As such, decommissioning is not expected to lead to effects that would be different or more significant than those arising from construction and operation.

4.4.2 Given the England-wide coverage of the NPS it is not possible to determine which impact pathways will be relevant to which European Sites. It is therefore also not possible to determine which European Sites could experience LSE from projects brought forward under a revised NPS. Detailed information on the construction and operational characteristics of individual projects would be needed for such an assessment, which is not available at the NPS stage.

4.4.3 Based on experience of a number of road and rail projects, the broad types of 'impact-pathways' likely to arise can however be identified.

- 4.4.4 It is therefore possible to use the ‘impact-pathway’ approach to identify types of European Sites and their qualifying features that could experience LSE. Such an assessment cannot be completed on a spatial basis but does provide a useful way to identify potential risks to European Sites. Identification of these impact pathways can help to inform the scope and focus of future project-specific HRAs.
- 4.4.5 There may be impact pathways and corresponding effects on European Sites that have not been identified during this HRA of the revised NPS, that only become evident during detailed assessment of specific NSIP projects. Therefore, whilst all impact pathways and effects that can be identified at this stage have been included (see **Table 4.1**), detailed consideration of LSE can only be completed during HRA screening at the project level.
- 4.4.6 This approach is consistent with the Opinion of Advocate General Kokott (Judgment of The Court (Second Chamber), 2005). This identifies that an assessment of strategic plans cannot consider all possible effects arising from their implementation because *‘Many details are regularly not settled until the time of the final permission’* and, *‘it would also hardly be proper to require a greater level of detail in preceding plans or the abolition of multi-stage planning and approval procedures so that the assessment of implications can be concentrated on one point in the procedure. Rather, adverse effects on areas of conservation must be assessed at every relevant stage of the procedure to the extent possible on the basis of the precision of the plan. This assessment is to be updated with increasing specificity in subsequent stages of the procedure’*.
- 4.4.7 The revised NPS will cover National Networks projects that would be brought forward in England. The majority of LSE that arise from individual projects are therefore likely to relate to European Sites and their qualifying interests in onshore and less frequently coastal locations in England. Projects brought forward under the NPS could be located close to the borders of Wales and Scotland. Mobile species such as fish, bats and birds that are qualifying interests of European Sites in Scotland or Wales, could also rely on habitats outside the boundary of European Sites within England. As such, LSE could also arise in relation to European Sites in Wales and Scotland, although it is not possible to confirm this or to identify which European Sites would be relevant until the details of any such projects are available for assessment.

4.4.8 The following potential impacts have been identified as a result of the construction and operation of likely development scenarios brought forward under the NPS:

- Habitat loss, disturbance and fragmentation within European Sites;
- Species mortality, disturbance (e.g. visual, lighting, noise) and fragmentation within European Sites;
- Loss, disturbance, or fragmentation of habitats or species outside European Sites, that support qualifying interests of those sites (see paragraphs 3.3.10 to 3.3.13), arising from removal or alteration of habitats to facilitate construction;
- Changes to water quality within European Sites or within areas of land supporting qualifying interests arising from construction activities or operational emissions including diffuse pollution;
- Changes to surface, subsurface, and groundwater flows arising from construction activities altering hydrology;
- Changes to air quality arising from earthworks and other construction activities and operational emissions e.g. from motor vehicles and diesel trains;
- Introduction or incidental spreading of Invasive Non-Native Species by construction plant and personnel or via road and rail corridors once operational; and
- Climate change effects on the condition and location of qualifying interest habitats and species.

4.4.9 **Table 4.1** overleaf, assesses the impacts that have been identified in relation to each of the broad types of projects that could come forward under the revised NPS.

Table 4.1 - Potential Impact Pathways that Could Result from Projects Brought Forward under the Revised NPS

Type of Project	Summary Description	Activities Likely to be Required During Construction and Operation (pathway)	Impacts that could Trigger LSE During Construction and Operation
PROJECTS ON THE STRATEGIC ROAD NETWORK			
New and improved junctions and slip roads	Significant improvements to existing motorways and A-roads, with new sections of carriageway and associated infrastructure providing links between existing roads.	<ul style="list-style-type: none"> • Site and vegetation clearance; • Earthworks; • Construction of carriageway, structures, and other infrastructure; • Plant, vehicle, and personnel presence; • Construction and Operational lighting; • Drainage and flood risk management; • Emissions from vehicles and plant; • Vehicle movements; and • Maintenance activities. 	<ul style="list-style-type: none"> • Habitat loss, disturbance, and fragmentation; • Species disturbance; • Loss/fragmentation of habitats used by qualifying interest species (inside or outside European Sites); • Introduction/spread of invasive non-native species; • Changes to surface and subsurface water flows;

Type of Project	Summary Description	Activities Likely to be Required During Construction and Operation (pathway)	Impacts that could Trigger LSE During Construction and Operation
			<ul style="list-style-type: none"> • Air pollution; • Noise and vibration; • Accidental release of pollutants/contaminants changing water quality; • Risk of incidental mortality of mobile species; • Disruption of natural processes; and • Exacerbating the effects of climate change e.g. fragmenting habitats prevents adjustments in range of qualifying interests.

Type of Project	Summary Description	Activities Likely to be Required During Construction and Operation (pathway)	Impacts that could Trigger LSE During Construction and Operation
Improvements to trunk roads	Upgrades to existing strategic trunk roads, potentially to include dualling of single-carriageway roads and provision of additional lanes to existing dual carriageways. This may also include realigned sections in response to environmental constraints and other scheme requirements.	<ul style="list-style-type: none"> • Site and vegetation clearance; • Earthworks; • Construction of carriageway, structures, and other infrastructure; • Plant, vehicle, and personnel presence; • Construction and operational lighting; • Drainage and flood risk management; • Emissions from vehicles and plant; • Vehicle movements; and • Maintenance activities. 	<ul style="list-style-type: none"> • Habitat loss, disturbance, and fragmentation; • Species disturbance; • Loss/fragmentation of habitats that support qualifying interest species (inside or outside European Sites); • Introduction/spread of invasive non-native species; • Changes to surface and subsurface water flows; • Air pollution;

Type of Project	Summary Description	Activities Likely to be Required During Construction and Operation (pathway)	Impacts that could Trigger LSE During Construction and Operation
			<ul style="list-style-type: none"> • Noise and vibration pollution; • Accidental release of pollutants/contaminants changing water quality; • Risk of incidental mortality of mobile species; • Disruption of natural processes; and • Exacerbating the effects of climate change e.g. fragmenting habitats prevents adjustments in range of qualifying interests.

Type of Project	Summary Description	Activities Likely to be Required During Construction and Operation (pathway)	Impacts that could Trigger LSE During Construction and Operation
<p>New road alignments and corresponding links</p>	<p>Construction of new road infrastructure, ancillary development and soft estate on greenfield and/or brownfield land. Operational use of new infrastructure.</p>	<ul style="list-style-type: none"> • Site and vegetation clearance; • Earthworks; • Construction of carriageway, structures, and other infrastructure; • Plant, vehicle, and personnel presence; • Construction and operational lighting; • Drainage and flood risk management; • Emissions from vehicles and plant; • Vehicle movements; and • Maintenance activities. 	<ul style="list-style-type: none"> • Habitat loss, disturbance, and fragmentation; • Species disturbance; • Loss/fragmentation of habitats used by qualifying interest species (inside or outside European Sites); • Introduction/spread of invasive non-native species; • Changes to surface and subsurface water flows; • Air pollution;

Type of Project	Summary Description	Activities Likely to be Required During Construction and Operation (pathway)	Impacts that could Trigger LSE During Construction and Operation
			<ul style="list-style-type: none"> • Noise and vibration pollution; • Accidental release of pollutants/contaminants changing water quality. • Risk of incidental mortality of mobile species; • Disruption of natural processes; and • Exacerbating the effects of climate change e.g. fragmenting habitats prevents adjustments in range of qualifying interests.

Type of Project	Summary Description	Activities Likely to be Required During Construction and Operation (pathway)	Impacts that could Trigger LSE During Construction and Operation
Construction of significant bridges or tunnels	Where new or existing road alignments cross substantial features such as main rivers or the strategic rail network not suitable for standard road construction, these may need to be crossed by bridges or tunnels.	<ul style="list-style-type: none"> • Site and vegetation clearance; • Earthworks; • Major excavations and / or major structures; • Construction of carriageway, structures, and other infrastructure; • Plant, vehicle, and personnel presence; • Construction and operational lighting; • Drainage and flood risk management; • Emissions from vehicles and plant; • Vehicle movements; • Maintenance activities; • Draining of groundwater; and • Presence of structures. 	<p>Construction:</p> <ul style="list-style-type: none"> • Habitat loss, disturbance, and fragmentation; • Species disturbance; • Loss/fragmentation of habitats used by qualifying interest species (inside or outside European Sites); • Introduction/spread of invasive non-native species; • Changes to surface and subsurface water flows including risk of depletion;

Type of Project	Summary Description	Activities Likely to be Required During Construction and Operation (pathway)	Impacts that could Trigger LSE During Construction and Operation
			<ul style="list-style-type: none"> • Air pollution; • Noise and vibration pollution; • Accidental release of pollutants/contaminants changing water quality; • Risk of incidental mortality of mobile species; • Disruption of migration routes; • Disruption of natural processes; and • Species disturbance.

Type of Project	Summary Description	Activities Likely to be Required During Construction and Operation (pathway)	Impacts that could Trigger LSE During Construction and Operation
PROJECTS ON THE STRATEGIC RAIL NETWORK			
Upgrade and improvement schemes	Provision of substantial signalling station, and or line renewal projects on existing parts of the rail network.	<ul style="list-style-type: none"> • Site and vegetation clearance; • Earthworks; • Construction of rail track, structures, and other infrastructure; • Plant, vehicle, and personnel presence; • Construction and operational lighting; • Drainage and flood risk management; • Emissions from vehicles and plant; • Vehicle movements; and • Maintenance activities. 	<p>Construction:</p> <ul style="list-style-type: none"> • Habitat loss or disturbance; • Species disturbance; • Minor loss/fragmentation of habitats used by qualifying interest species (inside or outside European Sites); • Introduction/spread of invasive non-native species; • Changes to surface and subsurface water flows;

Type of Project	Summary Description	Activities Likely to be Required During Construction and Operation (pathway)	Impacts that could Trigger LSE During Construction and Operation
			<ul style="list-style-type: none"> • Air pollution; • Noise and vibration pollution; • Accidental release of pollutants/contaminants changing water quality; • Disruption of natural processes; and • Risk of incidental mortality of mobile species.
New rail line alignments and stations	Provision of new rail alignments and stations on greenfield and/or brownfield land, including new sections of track and associated	<ul style="list-style-type: none"> • Site and vegetation clearance; • Earthworks; • Construction of rail track, structures, and other infrastructure; • Plant, vehicle, and personnel presence; • Construction and operational lighting; 	<ul style="list-style-type: none"> • Habitat loss, disturbance, and fragmentation; • Species disturbance;

Type of Project	Summary Description	Activities Likely to be Required During Construction and Operation (pathway)	Impacts that could Trigger LSE During Construction and Operation
	<p>infrastructure, embankments and cuttings, bridges and tunnels, signalling, electrical and other technology infrastructure, land for landscaping and environmental mitigation.</p>	<ul style="list-style-type: none"> • Drainage and flood risk management; • Emissions from vehicles and plant; • Train movements; and • Maintenance activities. 	<ul style="list-style-type: none"> • Loss/fragmentation of habitats used by qualifying interest species (inside or outside European Sites); • Introduction/spread of invasive non-native species; • Changes to surface and subsurface water flows; • Air pollution; • Noise and vibration pollution; • Accidental release of pollutants/contaminants changing water quality;

Type of Project	Summary Description	Activities Likely to be Required During Construction and Operation (pathway)	Impacts that could Trigger LSE During Construction and Operation
			<ul style="list-style-type: none"> • Risk of incidental mortality of mobile species; • Disruption of natural processes; and • Exacerbating the effects of climate change e.g. fragmenting habitats prevents adjustments in range of qualifying interests.
Reopening of previously mothballed rail lines and stations	Provision of rail alignments and stations that largely follow the routes of non-operational former rail lines. May require new sections	<ul style="list-style-type: none"> • Site and vegetation clearance; • Earthworks; • Construction of rail track, structures, and other infrastructure; • Plant, vehicle, and personnel presence; 	<ul style="list-style-type: none"> • Habitat loss, disturbance, and fragmentation; • Species disturbance; • Loss/fragmentation of habitats used by

Type of Project	Summary Description	Activities Likely to be Required During Construction and Operation (pathway)	Impacts that could Trigger LSE During Construction and Operation
	<p>of track and associated infrastructure, embankments and cuttings, bridges and tunnels, signalling, electrical and other technology infrastructure, land for landscaping and environmental mitigation.</p>	<ul style="list-style-type: none"> • Construction and operational lighting; • Drainage and flood risk management; • Emissions from vehicles and plant; • Train movements; and • Maintenance activities. 	<p>qualifying interest species (inside or outside European Sites);</p> <ul style="list-style-type: none"> • Introduction/spread of invasive non-native species; • Changes to surface and subsurface water flows; • Air pollution; • Noise and vibration pollution; • Accidental release of pollutants/contaminants changing water quality;

Type of Project	Summary Description	Activities Likely to be Required During Construction and Operation (pathway)	Impacts that could Trigger LSE During Construction and Operation
			<ul style="list-style-type: none"> • Risk of incidental mortality of mobile species; • Disruption of natural processes; and • Exacerbating the effects of climate change e.g. fragmenting habitats prevents adjustments in range of qualifying interests.
<p>New or substantially upgraded maintenance facilities or sidings</p>	<p>Use of greenfield and/or brownfield land for construction and operation of largescale maintenance facilities and/or sidings,</p>	<ul style="list-style-type: none"> • Site and vegetation clearance; • Earthworks; • Construction of rail track, structures, and other infrastructure; • Plant, vehicle, and personnel presence; 	<ul style="list-style-type: none"> • Habitat loss, disturbance, and fragmentation; • Species disturbance; • Loss/fragmentation of habitats used by

Type of Project	Summary Description	Activities Likely to be Required During Construction and Operation (pathway)	Impacts that could Trigger LSE During Construction and Operation
	including associated buildings and other infrastructure.	<ul style="list-style-type: none"> • Construction and operational lighting; • Drainage and flood risk management; • Emissions from vehicles and plant; • Train movements; and • Maintenance activities. 	<ul style="list-style-type: none"> • qualifying interest species (inside or outside European Sites); • Introduction/spread of invasive non-native species; • Changes to surface and subsurface water flows; • Air pollution; • Noise and vibration pollution; • Accidental release of pollutants/contaminants changing water quality; • Disruption of natural processes; and

Type of Project	Summary Description	Activities Likely to be Required During Construction and Operation (pathway)	Impacts that could Trigger LSE During Construction and Operation
			<ul style="list-style-type: none"> Exacerbating the effects of climate change e.g. fragmenting habitats prevents adjustments in range of qualifying interests.
STRATEGIC RAIL FREIGHT INTERCHANGES			
Construction of new SRFI	Use of greenfield and/or brownfield land for construction and operation of SRFI, likely to include substantial warehousing and other buildings and associated infrastructure.	<ul style="list-style-type: none"> Site and vegetation clearance; Earthworks; Construction of rail track, roads, structures, and other infrastructure; Plant, vehicle, and personnel presence; Construction and operational lighting; Drainage and flood risk management; Emissions from vehicles and plant; Train movements; and 	<ul style="list-style-type: none"> Habitat loss, disturbance, and fragmentation; Species disturbance; Loss/fragmentation of habitats used by qualifying interest species (inside or

Type of Project	Summary Description	Activities Likely to be Required During Construction and Operation (pathway)	Impacts that could Trigger LSE During Construction and Operation
		<ul style="list-style-type: none"> • Maintenance activities. 	<p>outside European Sites);</p> <ul style="list-style-type: none"> • Introduction/spread of invasive non-native species; • Changes to surface and subsurface water flows; • Air pollution; • Noise and vibration pollution; • Accidental release of pollutants/contaminants changing water quality; and • Risk of incidental mortality of mobile species.

Type of Project	Summary Description	Activities Likely to be Required During Construction and Operation (pathway)	Impacts that could Trigger LSE During Construction and Operation
Upgrading of existing Rail Freight Interchanges	Use of greenfield and/or brownfield land for construction and operation of upgraded SRFI, likely to include substantial warehousing and other buildings and associated infrastructure.	<ul style="list-style-type: none"> • Site and vegetation clearance; • Earthworks; • Construction of rail track, roads, structures, and other infrastructure; • Plant, vehicle, and personnel presence; • Construction and operational lighting; • Drainage and flood risk management; • Emissions from vehicles and plant; • Train movements; and • Maintenance activities. 	<ul style="list-style-type: none"> • Habitat loss, disturbance, and fragmentation; • Species disturbance; • Loss/fragmentation of habitats used by qualifying interest species (inside or outside European Sites); • Introduction/spread of invasive non-native species; • Changes to surface and subsurface water flows; • Air pollution;

Type of Project	Summary Description	Activities Likely to be Required During Construction and Operation (pathway)	Impacts that could Trigger LSE During Construction and Operation
			<ul style="list-style-type: none"> • Noise and vibration pollution; • Accidental release of pollutants/contaminants changing water quality; and; • Risk of incidental mortality of mobile species.

4.4.10 From the above **Table 4.1** it can be seen that the potential impact pathways arising from each project type are similar. The more significant infrastructure interventions with the greatest potential land-take would be likely to generate the greatest number of impact pathways and effects relevant to European Sites e.g. new road or rail alignments. The majority of impact pathways identified could occur as a result of any of the types of projects covered by the revised NPS. The potential for LSE to arise as a result of the identified impact pathways is explored below.

4.5 Step 4: Assess the Significance of Any Effects on European Sites

4.5.1 Potential LSEs are assessed in relation to two main criteria:

- Information on the qualifying interests of European Sites in England (and Scotland/Wales as needed) and their sensitivity to the identified impact pathways; and
- The conservation objectives for each qualifying interest, which if compromised would result in LSE to the qualifying interest(s).

4.5.2 The revised NPS has no spatial component and does not direct development to specific locations, other than to promote avoidance of sensitive features including European Sites. It is therefore not possible to identify which of the European Sites within England, Wales, or Scotland could be relevant to NSIPs brought forward under the revised NPS. Qualifying interests have therefore been grouped together based on broad taxonomic groupings with similar sensitivities to the impacts identified under Step 3 above, and that could reasonably be considered to be at risk of LSE from National Networks NSIPs.

4.5.3 Conservation Objectives for European Site qualifying interests are usually set out as follows:

- Maintain or restore the extent and distribution of qualifying habitats and habitats of qualifying species;
- Maintain or restore the structure and function (including typical species) of qualifying natural habitats;
- Maintain or restore the structure and function of the habitats of qualifying species;
- Maintain or restore the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely;
- Maintain or restore the populations of qualifying species; and
- Maintain or restore the distribution of qualifying species within the site.

- 4.5.4 In England, the Conservation Objectives should be read in conjunction with the Supplementary Advice on Conservation Objectives ('SACO') published by Natural England. The supplementary advice sets out how the Conservation Objective for each qualifying interest can be met, in relation to various different criteria. For example, SACO may set out the population size a qualifying interest species needs to reach in order to meet the Conservation Objective 'maintain or restore the populations of qualifying interest species'.
- 4.5.5 Where a Conservation Objective is being met, SACO provide advice on how the Conservation Objective can be 'maintained'. Where a Conservation Objective is not being met, SACO provide advice on the steps needed to 'restore' the qualifying interest concerned.
- 4.5.6 As the NPS is a strategic policy document with no spatial component, the SACO are of limited applicability to the revised NPS. This is because it is not possible to identify which European Sites, and hence which qualifying interests and SACO may be affected by NSIP schemes brought forward under a revised NPS.
- 4.5.7 **Table 4.2** identifies the taxon groups of European Site qualifying interests and how these could be affected through the identified impact pathways (see **Table 4.1**). Where one or more of the broad Conservation Objectives could be compromised by an impact pathway, this is also set out in **Table 4.2**, overleaf.

Table 4.2 - Likely Significant Effects that may Arise from NSIPs Brought Forward under the Revised NPS

Impact Pathway that could Trigger LSE	Relevant Qualifying Features	Conservation Objectives that could be Compromised
Habitat loss, disturbance, and fragmentation, with and/or outside the boundaries of European Sites	<ul style="list-style-type: none"> • Habitats and plants 	<ul style="list-style-type: none"> • Maintain or restore the extent and distribution of qualifying habitats and habitats of qualifying species; • Maintain or restore the structure and function (including typical species) of qualifying natural habitats; • Maintain or restore the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely; and • Maintain or restore the distribution of qualifying species within the site.
Species disturbance, within and/or outside the boundaries of European Sites	<ul style="list-style-type: none"> • Terrestrial, aquatic, and coastal Invertebrates • Fish • Amphibians • Reptiles • Birds • Mammals 	<ul style="list-style-type: none"> • Maintain or restore the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely; • Maintain or restore the populations of qualifying species; and • Maintain or restore the distribution of qualifying species within the site.

Impact Pathway that could Trigger LSE	Relevant Qualifying Features	Conservation Objectives that could be Compromised
Loss/fragmentation of habitats used by qualifying interest species (inside or outside European Sites)	<ul style="list-style-type: none"> • Habitats • Plants • Terrestrial, aquatic, and coastal Invertebrates • Amphibians • Fish • Reptiles • Birds • Mammals 	<ul style="list-style-type: none"> • Maintain or restore the extent and distribution of qualifying habitats and habitats of qualifying species; • Maintain or restore the structure and function (including typical species) of qualifying natural habitats; • Maintain or restore the structure and function of the habitats of qualifying species; • Maintain or restore the populations of qualifying species; and • Maintain or restore the distribution of qualifying species within the site.
Introduction/spread of invasive non-native species	<ul style="list-style-type: none"> • Habitats • Plants • Terrestrial, aquatic, and coastal Invertebrates 	<ul style="list-style-type: none"> • Maintain or restore the structure and function (including typical species) of qualifying natural habitats; • Maintain or restore the structure and function of the habitats of qualifying species; • Maintain or restore the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely;

Impact Pathway that could Trigger LSE	Relevant Qualifying Features	Conservation Objectives that could be Compromised
	<ul style="list-style-type: none"> • Fish • Amphibians • Reptiles • Birds • Mammals 	<ul style="list-style-type: none"> • Maintain or restore the populations of qualifying species; and • Maintain or restore the distribution of qualifying species within the site.
Changes to surface and subsurface water flows	<ul style="list-style-type: none"> • Groundwater Dependent Terrestrial Ecosystems (GDTE) • Rivers, streams, and other wetlands; • Aquatic and semi-aquatic species, e.g. great crested newt, fish, 	<ul style="list-style-type: none"> • Maintain or restore the extent and distribution of qualifying habitats and habitats of qualifying species; • Maintain or restore the structure and function (including typical species) of qualifying natural habitats; • Maintain or restore the structure and function of the habitats of qualifying species; • Maintain or restore the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely; • Maintain or restore the populations of qualifying species; and • Maintain or restore the distribution of qualifying species within the site.

Impact Pathway that could Trigger LSE	Relevant Qualifying Features	Conservation Objectives that could be Compromised
	wildfowl and waders, otters.	
Air pollution, typically considered up to 200 m from a source of vehicle/train emissions, but may need to be considered at greater distances in some instances ⁵ and less in others.	<ul style="list-style-type: none"> • Habitats sensitive to air pollution impacts. • Species supported by habitats sensitive to air pollution. 	<ul style="list-style-type: none"> • Maintain or restore the structure and function (including typical species) of qualifying natural habitats; • Maintain or restore the structure and function of the habitats of qualifying species; • Maintain or restore the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely; • Maintain or restore the populations of qualifying species; and • Maintain or restore the distribution of qualifying species within the site.
Noise and Vibration (Sensitivity will differ considerably between different qualifying interest groups and species. Targeted	<ul style="list-style-type: none"> • Terrestrial, aquatic, and coastal Invertebrates • Fish 	<ul style="list-style-type: none"> • Maintain or restore the populations of qualifying species; and • Maintain or restore the distribution of qualifying species within the site.

⁵ Natural England (2018). Natural England’s approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations (NEA001).

Impact Pathway that could Trigger LSE	Relevant Qualifying Features	Conservation Objectives that could be Compromised
noise and vibration modelling and assessments may be required, dependent on which qualifying interests could be subject to LSE from each individual NSIP.)	<ul style="list-style-type: none"> • Amphibians • Reptiles • Birds • Mammals 	
Release of pollutants/contaminants and sediment changing water quality.	<ul style="list-style-type: none"> • Groundwater Dependent Terrestrial Ecosystems (GDTE); • Rivers, streams, and other wetlands; • Coastal habitats e.g. estuaries; and 	<ul style="list-style-type: none"> • Maintain or restore the structure and function (including typical species) of qualifying natural habitats; • Maintain or restore the structure and function of the habitats of qualifying species; • Maintain or restore the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely; • Maintain or restore the populations of qualifying species; • Maintain or restore the distribution of qualifying species within the site.

Impact Pathway that could Trigger LSE	Relevant Qualifying Features	Conservation Objectives that could be Compromised
	<ul style="list-style-type: none"> • Aquatic and semi-aquatic species, e.g. great crested newt, fish, wildfowl and waders, otters. 	
<p>Risk of incidental mortality of mobile species – this will be highly specific to project location and type, and proximity of European Sites designated for mobile species</p>	<ul style="list-style-type: none"> • Invertebrates • Amphibians • Reptiles • Birds • Mammals, e.g. otters and bats 	<ul style="list-style-type: none"> • Maintain or restore the populations of qualifying species; and • Maintain or restore the distribution of qualifying species within the site.
<p>Exacerbating the effects of climate change e.g fragmenting habitats prevents</p>	<ul style="list-style-type: none"> • All habitats, plants, and faunal species 	<ul style="list-style-type: none"> • Maintain or restore the extent and distribution of qualifying habitats and habitats of qualifying species; • Maintain or restore the structure and function (including typical species) of qualifying natural habitats;

Impact Pathway that could Trigger LSE	Relevant Qualifying Features	Conservation Objectives that could be Compromised
adjustments in range of qualifying interests.		<ul style="list-style-type: none"> • Maintain or restore the structure and function of the habitats of qualifying species; • Maintain or restore the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely; • Maintain or restore the populations of qualifying species; and • Maintain or restore the distribution of qualifying species within the site.

In-combination assessment at the screening stage

- 4.5.8 During screening, potential LSE on European Sites need to be considered both ‘alone’ and ‘in-combination’. Where LSEs may arise from the revised NPS alone, assessment of in-combination effects can be completed at the Appropriate Assessment stage. No in-combination assessment is required at the screening stage.
- 4.5.9 If an effect is identified that is not predicted to lead to LSE on any European Sites alone, it is necessary to undertake an in-combination assessment at the screening stage. This considers whether the non-significant effect from a revised NPS, may, in-combination with effects from other plans or projects, result in LSE on the European Sites concerned.
- 4.5.10 The way in which effects from a revised NPS and other plans and projects could increase the risk of LSE to European Sites have been considered in this revised NPS HRA. In-combination effects may contribute to increased impacts and hence effects on qualifying features. For example, increased traffic flows along a NSIP road improvement scheme could be increased further by additional traffic resulting from growth under a Local Plan. However, specific assessment of other plans and projects cannot be completed, due to the lack of a spatial component to a revised NPS. The ways in which other plans and projects could exacerbate the effects of road, rail, and SRFI NSIP schemes have therefore been predicted in broad terms. This is set out in **Table 4.3**, below.

Table 4.3 - Other Plans and Projects

Other Plans or Projects	Overview of how other Plan or Projects could contribute to effects in-combination with Revised NPS
NPS for Airports (2018)	Promotes the construction and operation of additional airport capacity at Heathrow. Construction activity required adjacent to SRN, with subsequent effects on flight numbers and traffic accessing airport.
NPS for Ports (2012)	Provides framework for design, construction, and operation of increased ports capacity, with potential for effects on marine and coastal environments including adjacent to the National Networks.
Road Investment Strategy 2020 - 2025 (RIS2)	Provides framework for funding road schemes across the National Networks, enabling delivery of a number of infrastructure interventions with potential for

Other Plans or Projects	Overview of how other Plan or Projects could contribute to effects in-combination with Revised NPS
	associated construction and operation effects on European Sites.
The Wales Transport Strategy, 2021	Provides a framework for the construction and operation of transport infrastructure across Wales with potential for associated construction and operation effects on European Sites.
National Transport Strategy (Scotland) (2020)	Provides a framework for the construction and operation of transport infrastructure across Scotland with potential for associated construction and operation effects on European Sites.
UK Transport Decarbonisation Plan	Government's commitments and the actions needed to decarbonise the entire transport system in the UK. Whilst this may have beneficial effects through reducing climate change effects on European Sites, it also promotes infrastructure interventions for some transport sectors.
Great British Railways: Williams-Shapps Plan for Rail (2021)	Includes some policy elements which promote infrastructure interventions across the UK rail network with potential for associated construction and operation effects on European Sites.
Integrated Rail Plan for the North and Midlands (2021)	Includes some policy elements which promote infrastructure interventions across central parts of the UK rail network with potential for associated construction and operation effects on European Sites.
Local Transport/Highways Plans	May promote the delivery of infrastructure interventions on local road, and potentially rail, networks with potential for associated construction and operation effects on European Sites.
Energy NPS (EN 1 – 6)	Provides a framework for design, construction, and operation of energy infrastructure in England and Wales.
National Planning Policy Framework	Provides an overarching framework in support of the delivery of sustainable development in England, principally in relation to Town and Country Planning Act applications and excluding NSIPs. Includes policy

Other Plans or Projects	Overview of how other Plan or Projects could contribute to effects in-combination with Revised NPS
	controls in relation to managing potential effects on European Sites, but nonetheless may facilitate development with potential for effects on European Sites.
Planning policy Wales	Provides an overarching framework in support of the delivery of sustainable development in Wales, principally in relation to Town and Country Planning Act applications and excluding NSIPs. Includes policy controls in relation to managing potential effects on European Sites, but nonetheless may facilitate development with potential for effects on European Sites.
Scottish Planning Policy	Provides an overarching framework in support of the delivery of sustainable development in Scotland, principally in relation to Town and Country Planning Act applications and excluding NSIPs. Includes policy controls in relation to managing potential effects on European Sites, but nonetheless may facilitate development with potential for effects on European Sites.
Local Development Plans including land use allocations	May include proposals (for example site allocations) which could lead to effects on European Sites.
NPS for Water Resources	Provides framework for design, construction, and operation of water resources and management infrastructure, with potential to facilitate development with effects on European Sites.
NPS for Waste Water (2012)	Provides framework for design, construction, and operation of waste water treatment infrastructure, with potential to facilitate development with effects on European Sites.
Marine Plans / Coastline Management Plans	Provides framework for the management of marine areas, with potential to facilitate development and management strategies with effects on European Sites.

Other Plans or Projects	Overview of how other Plan or Projects could contribute to effects in-combination with Revised NPS
River Basin Management Plans	Provides framework for the management of river basins, with potential to facilitate projects and management strategies with effects on European Sites.
Catchment Abstraction Management Strategies (CAMS)	Set out the approach for sustainable management of water resources across water company areas. May include abstraction proposals with potential for effects on European Sites.
NPS for Geological Disposal Infrastructure	Provides framework for design, construction, and operation of Geological Disposal Infrastructure, with potential to facilitate development with effects on European Sites.
NPS for Hazardous Waste	Provides framework for design, construction, and operation of Hazardous Waste facilities, with potential to facilitate development with effects on European Sites.
Individual NSIP projects	Individual NSIPs may lead to effects on European Sites during their construction and operation.
Other infrastructure and development projects outside the NSIP regime.	Other infrastructure and development projects may lead to effects on European Sites during their construction and operation.
National Infrastructure Strategy (2020)	Provides the Government's strategy for the UK's infrastructure networks, which includes support for infrastructure interventions that could have effects on European Sites.

4.6 Summary of HRA Screening of the Revised NPS

4.6.1 The revised NPS provides a strategic planning policy framework for National Networks in England. It also provides a framework for decision-making and consenting of National Networks NSIPs. It is therefore clear that the revised NPS is neither directly connected with or required for the management of European Sites. It is therefore a relevant 'Plan' subject to the requirements of the Habitats Regulations in relation to Habitats Regulations Assessment.

- 4.6.2 The HRA Screening of the revised NPS has confirmed that projects brought forward under it in future could lead to impacts on European Sites, and that these could lead to LSE. As the revised NPS applies to projects within England, potential LSE could most commonly occur in relation to sites in England. There is however potential for transboundary effects on European Sites in England and Wales.
- 4.6.3 As the revised NPS is a non-spatial strategic planning policy, it is not possible to identify those European Sites or qualifying interests which could be subject to LSE. The broad impact pathways and qualifying features that could be affected have been identified. Detailed assessment of potential LSE will however only be possible during HRA of individual projects as these are brought forward under the revised NPS.
- 4.6.4 The revised NPS has the potential to lead to LSE on European Sites, either alone or in combination with other plans and projects. It is therefore necessary for it to be subject to Appropriate Assessment, the next stage of the HRA process.

5. HRA STAGE 2 - APPROPRIATE ASSESSMENT

5.1 Appropriate Assessment Methodology

5.1.1 Where the potential for likely significant effects (LSE) cannot be excluded, it is necessary to complete an Appropriate Assessment. The purpose of this is to determine if the identified LSE could lead to adverse effects on the integrity of European Sites. As per the HRA screening stage, the potential for adverse effects on integrity must be considered for the revised NPS both alone and in-combination with other plans and projects.

5.1.2 The following impact pathways were identified at the HRA screening stage, that could lead to adverse effects on the integrity of European Sites:

- Habitat loss, disturbance and fragmentation within European Sites;
- Species mortality, disturbance (e.g. visual, lighting, noise) and fragmentation within European Sites;
- Loss, disturbance, or fragmentation of habitats or species outside European Sites, that support qualifying interests of those sites (see paragraphs 3.3.10 to 3.3.13), arising from removal or alteration of habitats to facilitate construction;
- Changes to water quality within European Sites or within areas of land supporting qualifying interests arising from construction activities or operational emissions including diffuse pollution;
- Changes to surface, subsurface, and groundwater flows arising from construction activities altering hydrology;
- Changes to air quality arising from earthworks and other construction activities and operational emissions e.g. from motor vehicles and diesel trains;
- Introduction or incidental spreading of Invasive Non-Native Species by construction plant and personnel or via road and rail corridors once operational; and
- Climate change effects on the condition and location of qualifying interest habitats and species.

5.1.3 At this strategic level, it is not possible to exclude the potential for such impacts and resultant effects to be experienced for any European Site in England. European Sites in remote locations and/or distant from the existing strategic rail and road network and other transport hubs are likely to be at

reduced risk as such locations are less likely to be suitable for National Networks interventions. The potential for effects also extends to European Sites in Scotland and Wales, with (on balance) European Sites closer to the border with England likely to be at increased risk relative to those further away.

- 5.1.4 With recourse to the precautionary principle, it is not possible to discount the potential for adverse effects on integrity to European Site as a result of infrastructure brought forward in line with the revised NPS in future.
- 5.1.5 The appropriate assessment that follows in this section of the HRA Report presents a more involved consideration of how the identified LSE could affect the European Site qualifying interests and their conservation objectives. Due to the non-spatial and strategic nature of the NPS and as per the HRA screening, it is also not possible to identify which European Sites and qualifying interests could be subject to adverse effects on integrity.
- 5.1.6 At this stage of the HRA process it is however possible to consider mitigation measures⁶ that individual NSIPs could bring forward to avoid or lessen their effects on European Sites. It is also possible to consider mitigation measures provided in the revised NPS itself.

5.2 Assessment of Adverse Effects on Integrity

- 5.2.1 European Site integrity is defined as ‘the coherence of the site’s ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the populations of the species for which the site is, or will be designated’. UK government guidance⁷ sets out that the assessment of adverse effect should focus on the achievement or otherwise of a European Site’s conservation objectives.
- 5.2.2 As with the conclusions for HRA screening, it is not possible to assess the potential for adverse effects on the integrity of individual European Sites or their qualifying interests in detail. The impact pathways generated by NSIP road and rail projects are likely to be similar wherever they are located. The effects on European Sites’ qualifying interest arising from those impact

⁶ In accordance with the People over Wind, Peter Sweetman v Coillte Teoranta case (Case C-323/17), ‘it is not appropriate, at the screening stage, to take account of measures intended to avoid or reduce the harmful effects of the plan or project on that site.

⁷ Department for Environment, Food & Rural Affairs, Natural England, Welsh Government, and Natural Resources Wales (2019). Habitats regulations assessments: protecting a European site.

pathways will however differ substantially depending on the characteristics of each individual project, and the European Sites that may be affected by it.

- 5.2.3 The LSE reported in **Table 4.2** could therefore lead to adverse effects on the integrity of any number of European Sites, dependent on the type, scale, and location of National Networks NSIPs under the revised NPS.
- 5.2.4 Policy wording has been included in the revised NPS that directs applicants for individual NSIPs to avoid or lessen effects on European Sites and other biodiversity assets. Measures that may be effective in avoiding, lessening, or otherwise mitigating effects on European Sites at the individual project level are also considered more fully in the mitigation section below.
- 5.2.5 In summary, in the absence of individual NSIP project assessments and consideration of mitigation measures, it is not possible to rule out the potential for adverse effects on the integrity of European Sites in England, Wales, and Scotland.

5.3 In-combination Effects

- 5.3.1 Given the non-spatial and strategic nature of the revised NPS, it is not possible to know where or when individual NSIPs will come forward and be subject to decision-making on the basis of it. It is therefore also not possible to predict which other plans and would need to be considered in detail during project level HRA of National Networks NSIPs.
- 5.3.2 Given this lack of detail and with recourse to the precautionary principle, there is potential for individual NSIPs to come forwards that would not have adverse effects on the integrity of European Sites alone, but which could have adverse effects on the integrity of European Sites in combination. Relevant national-level plans and the types of plans and projects likely to be relevant to in-combination assessment of National Networks NSIPs have been identified in **Table 4.3**. All new National Networks infrastructure development is likely to require a project-level HRA, within which in-combination effects will be assessed on a case-by-case basis.

5.4 Mitigation for Adverse Effects

Mitigation Measures contained in the revised NPS

- 5.4.1 The revised NPS includes a number of policy provisions which support avoidance, reduction, or otherwise mitigating the effects of National Networks projects on European Sites. **Table 5.1** summarises these policy provisions,

with relevant extracts of the revised NPS text included. It should be noted that the policy provisions referred to are not all specifically or entirely targeted at mitigating effects on European Sites. These would either incidentally promote outcomes that are beneficial for European Sites, or support environmental mitigation for European Sites as well as other ecological and/or human receptors.

Table 5.1 - NPS Policy Provisions that Support Avoidance or Mitigation of Effects on European Sites

NPS Section	Relevant Policy Wording and/or Summary	Notes
2.36	<i>...The natural environment is a system rather than a series of unrelated components, and applicants should look for opportunities to take a holistic approach to avoiding, reducing or mitigating multiple impacts on the natural or built environment, on landscapes and on people by using nature-based solutions.</i>	
3.17	<i>Any national network Nationally Significant Infrastructure Project (NSIP) should seek to improve and enhance the environment irrespective of the reasons for developing the scheme. However, there may be instances where infrastructure interventions are required to bring about improvements to environmental outcomes. Such outcomes might include contributing to net zero targets through for example electrification of rail, improvements to air quality through reductions to congestion, or delivering localised environmental improvements to cultural heritage, landscape or biodiversity.</i>	
3.39 – 3.40	<i>Developments on the SRN need to be sensitive to, respond to, and contribute to their environmental context. Changing legislation through for example the Environment Act 2021 has introduced more stringent environmental protection, and opportunities for enhancement of the natural environment.</i>	

NPS Section	Relevant Policy Wording and/or Summary	Notes
	<p><i>Any scheme needs to address this emerging legislative and policy context appropriately. Infrastructure improvements may help to facilitate a reduction in emissions (such as carbon, air pollution, noise or discharges to water resources), improvements to the natural and built environment (such as landscape improvements or cultural heritage) or increase accessibility for non-motorised users and reduce severance. For example, reducing the time vehicles spend in congestion may reduce carbon and air quality emissions at that particular location.</i></p>	
<p>3.71 – 3.72</p>	<p><i>As with roads, any developments on the rail network need to be sensitive to, respond to, and contribute to their environmental context. Changing legislation through for example the Environment Act 2021 has introduced more stringent environmental protection, and opportunities for enhancement of the natural environment.</i></p> <p><i>Chapter 2 has already set out the contribution that rail can play in decarbonising transport and the need to decarbonise rail further. At present, 38% of the rail network is electrified. Further electrification to phase out the use of diesel-only trains by 2040, together with use of alternative technologies such as low-carbon fuels and innovation in battery and hydrogen technologies, will be needed to reduce air and noise pollution and enable a zero-carbon railway. With respect to rail freight specifically, supporting the effective development of strategic rail freight interchanges (and other rail freight interchanges) in the right locations as well as other key enablers, will be a critical element of realising the full range of environmental benefits of rail freight can offer.</i></p>	

NPS Section	Relevant Policy Wording and/or Summary	Notes
3.98	<i>Government is also clear on the need to encourage modal shift from road to rail to realise the full environmental benefits, and continues to provide funding through the Modal Shift Revenue Support grant to enable goods to be moved by rail where other modes have an economic advantage.</i>	
4.10 – 4.12	<p><i>NSIPs applications need to undertake an environmental assessment. This assessment is undertaken under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) framework which requires projects to be accompanied by an Environmental Statement. Regulation 14 of and Schedule 4 to the Environmental Impact Assessment (EIA) Regulations set out the information that should be included in the environmental statement.</i></p> <p><i>A key part of environmental assessment is the consideration of cumulative effects. The applicant should provide information on how the effects of the proposal would combine and interact with the effects of other development, where relevant. For most practical purposes this means that the applicant should consider the impact of other existing and committed developments within an appropriate geographical area, and assess the additional impact of their own development. Other evidence for example, from a Transport Business Case, appraisals of sustainability of relevant NPSs or strategic environmental assessment of development plans, may assist the Secretary of State in reaching decisions on proposals and on mitigation measures that may be required. The Secretary of State should consider how the accumulation of, and interrelationship between, effects identified in the environmental assessment might affect the environment, economy, or community as a</i></p>	<p>Imposes the requirement for reassessment in the event of changes to a NSIP post-consent. This would ensure reassessment of any NSIPs effects on European Sites in the event of a change to a project, as required.</p>

NPS Section	Relevant Policy Wording and/or Summary	Notes
	<p><i>whole, even though they may be acceptable when considered on an individual basis with mitigation measures in place.</i></p>	
<p>4.12 – 4.16</p>	<p><i>Under the Habitats Regulations, the Secretary of State must consider whether it is possible that a plan or project could likely have a significant effect, (either alone or in combination with other plans or projects) on a protected site which forms part of the UK National Site Network (Special Areas of Conservation and Special Protection Areas), or on any site to which the same protection is applied as a matter of policy (i.e. listed or proposed Ramsar sites, potential Special Protection Areas, possible Special Areas of Conservation and sites used to compensate for adverse effects on habitat sites). The term ‘habitat sites’ is used to refer collectively to such sites throughout this NPS. Such an assessment should be made with due regard to the conservation objectives of any relevant habitats site(s).</i></p> <p><i>The applicant should seek the early advice of the appropriate Statutory Nature Conservation Body and provide the Secretary of State with such information as the Secretary of State may reasonably require, to determine whether or not the plan or project should proceed to the Appropriate Assessment stage of HRA.</i></p> <p><i>Where a proposed plan or project is considered likely to have a significant effect on a habitats site, 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. The assessment may consider the effect of any mitigation measures and the Statutory Nature Conservation Body must be</i></p>	<p>Clarifies requirements for provision of HRA for individual NSIPs, and provides advice on provision of information for individual NSIPs, where IROPI, alternatives, and compensatory measures require consideration.</p>

NPS Section	Relevant Policy Wording and/or Summary	Notes
	<p><i>formally consulted on the assessment and its advice considered. The applicant should also consider agreeing an Evidence Plan with the Statutory Nature Conservation Body to help determine the information required.</i></p> <p><i>Such plans or projects may only proceed if the assessment concludes they will not adversely affect the integrity of the site or, notwithstanding a negative assessment, there are no alternative solutions, and they must proceed for imperative reasons of overriding public interest. The applicant must demonstrate that they have sought advice from the Statutory Nature Conservation Body on whether any proposed compensation is appropriate to maintain the overall coherence of the National Sites Network. They must also show that the compensation is secured or provide an indication as to how it can be secured to maintain the overall coherence of the National Sites Network. Provision of such information will not be taken as an acceptance of adverse effects on integrity and if an applicant disputes the likelihood of adverse effects, it can provide this information without prejudice to the Secretary of State’s final decision on the effects of the potential development on the habitats site. If, in these circumstances, an applicant does not supply information required for the assessment of a potential derogation, there will be no expectation that the Secretary of State will allow the applicant the opportunity to provide such information following the examination.</i></p> <p><i>During the pre-application stage, and without prejudice to the formal HRA of the submitted plan or project, if the Statutory Nature Conservation Body gives an early indication that, irrespective of any anticipated mitigation measures, the proposed development is</i></p>	

NPS Section	Relevant Policy Wording and/or Summary	Notes
	<p><i>highly likely to lead to adverse effects on the integrity of one or more habitats sites, the applicant must include with their application such information required to assess a potential derogation under the Habitats Regulations.</i></p>	
4.24	<p><i>Applicants should include design as an integral consideration from the outset of a proposal. Applying “good design” to national network projects should not be limited to general aesthetics, high quality and inclusive design goes far beyond aesthetic considerations, it demonstrates an understanding of context, local needs, history and culture, it enhances local landscape character and is adaptable to future needs and technologies. The National Infrastructure Design Principles describes good design as:</i></p> <ul style="list-style-type: none"> <i>• a key aspect of sustainable development. It includes opportunities to enable decarbonisation, incorporates flexibility, and builds resilience against climate change. The functionality of projects, including fitness for purpose, resilience and sustainability, is equally important.</i> <i>• helping to improve the quality of life for local communities. It promotes inclusion, cohesion and increases accessibility. It creates safe spaces with clean air that improve health and wellbeing.</i> <i>• giving places a strong sense of identity, creating a sense of place, connecting communities, addressing community severance and integrating into its surroundings. It makes a positive contribution to local landscapes within and beyond the project boundary. Good design enhances local culture and character and supports local ecology, delivering net biodiversity gain, while protecting wildlife corridors and irreplaceable natural assets and habitats.</i> 	

NPS Section	Relevant Policy Wording and/or Summary	Notes
	<ul style="list-style-type: none"> • <i>adding value by defining issues clearly from the outset. Good design also finds opportunities to add value beyond the main purpose of the infrastructure to consider the wider benefits savings on cost, the environment, materials and space. It is efficient in the use of natural resources, sustainable materials and energy used in construction.</i> 	
5.2 – 5.5	<p><i>Sufficient relevant information is crucial to good decision-taking, particularly where formal assessments are required (such as Environmental Impact Assessment, Habitats Regulations Assessment and Flood Risk Assessment). To avoid delay, applicants should discuss what information is needed with statutory environmental bodies as early as possible.</i></p> <p><i>Applicants should engage with relevant and statutory bodies regarding their proposal at the pre-application stage.</i></p> <p><i>Note for the purposes of this NPS Environmental Impact Assessment is hereafter referred to as environmental assessment. If replaced with a new framework, relevant plans and projects would have to comply with such regulations, including such environmental assessment as is required by them.</i></p> <p><i>Applicants should look for opportunities to take a holistic approach to avoiding, reducing or mitigating multiple impacts on the natural or built environment, on landscapes and on people by using nature-based solutions. Nature-based solutions can deliver multiple benefits for climate, biodiversity, and people, and can therefore play a critical role in tackling these interrelated impacts in an integrated way...</i></p>	

NPS Section	Relevant Policy Wording and/or Summary	Notes
5.11 – 5.12	<p><i>The assessment should describe:</i></p> <ul style="list-style-type: none"> • <i>any air pollutant emissions that would lead to a deterioration in air quality and their mitigation, distinguishing between the project stages, including construction and operation and taking account of emissions such as from any road traffic generated by the project</i> • <i>the predicted absolute emission levels of the proposed project, after mitigation methods have been applied</i> • <i>existing air quality levels, how they are monitored, and the relative change in air quality from existing levels</i> • <i>any potential impacts on nearby protected habitats from air pollutant emissions</i> <p><i>Defra publishes future projections of UK air pollutant emissions based on evidence of future emissions, traffic and vehicle fleet. Projections are updated as the evidence base changes. Applicant’s assessment should be consistent with this but may include more detailed modelling to demonstrate local impacts. In the event that the latest future projections do not reflect the latest available evidence base at the assessment stage, applicants should still provide an assessment using the latest future projections published by Defra. If an applicant believes they have robust additional supporting evidence that is likely to change the projected emissions, they should include this in their representations to the Examining Authority.</i></p>	
5.13 – 5.15	<p><i>Mitigation measures may affect the project design, layout, construction, operation and/or may comprise measures to improve air</i></p>	Includes mitigation measures that could

NPS Section	Relevant Policy Wording and/or Summary	Notes
	<p><i>quality in pollution hotspots beyond the immediate locality of the scheme. Measures could include, but are not limited to, changes to the route of the new scheme, changes to the proximity of vehicles to local receptors in the existing route, physical means including barriers to trap or better disperse emissions, and/or speed control. Applicants should routinely look for opportunities within the design of the proposed development to embed nature-based solutions, such as urban woodlands and trees to assist with pollutant reduction and dispersal along major transport corridors. In addition to avoiding further greenhouse gas (GHG) emissions when compared with some more traditional approaches, nature-based solutions can also result in biodiversity benefits as well as increasing absorption of carbon dioxide from the atmosphere (see also paragraphs 5.170 to 5.194 on the role of green infrastructure).</i></p> <p><i>The Secretary of State should consider whether mitigation measures are needed both for operational and construction emissions over and above any which may form part of the project application. In doing so the Secretary of State should have regard to the Air Quality Strategy or any successor to it and should consider relevant advice within Local Air Quality Management guidance.</i></p> <p><i>The proposed mitigation measures should ensure that the net impact of a project does not delay the point at which a zone will meet compliance timescales.</i></p>	<p>provide benefits to both European Sites and human health.</p>
5.31 – 5.32	<p><i>Applicants should look for opportunities within the design of the proposed development to embed nature-based or technological solutions to mitigate, capture or offset the emissions of construction.</i></p>	

NPS Section	Relevant Policy Wording and/or Summary	Notes
	<p><i>Steps taken to minimise, capture and offset emissions in design and construction, should be set out in a GHG Reduction Strategy, secured under the development consent order. This Strategy could include, for example, mitigation through woodland creation on or adjacent to the site and registered with the Woodland Carbon Code , contributing significantly to offsetting residual emissions. Applicants may wish to refer to IEMA’s GHG Management Hierarchy guidance when drafting their GHG Reduction Strategy.</i></p>	
5.40 – 5.41	<p><i>The applicant should consider the full range of potential impacts on ecosystems (including habitats and protected species) and provide environmental information proportionate to the likely impacts of the infrastructure on biodiversity and nature.</i></p> <p><i>The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests as well as consider how their proposal will deliver BNG in line with the requirements in a Biodiversity Gain Statement, as set out in paragraphs 4.20 to 4.23 above.</i></p>	
5.42 – 5.48	<p><i>To avoid harm or disturbance in line with the mitigation hierarchy the applicant should demonstrate that:</i></p> <ul style="list-style-type: none"> <i>• developments are designed to avoid the risk of harm and to minimise the footprint of the development and/or to retain the site’s important habitat features;</i> <i>• developments are designed and landscaped to provide green corridors and minimise habitat fragmentation (for</i> 	

NPS Section	Relevant Policy Wording and/or Summary	Notes
	<p><i>example using underpasses or green bridges to link habitats);</i></p> <ul style="list-style-type: none"> • <i>during construction, they will seek to ensure that activities will be confined to the minimum areas required for the works;</i> • <i>during construction and operation, best practice will be followed to ensure that risk of disturbance or damage to species or habitats follows the mitigation hierarchy (including as a consequence of transport access arrangements). For example, plan for construction work to be carried out at specific times to avoid sensitive times and location, such as the breeding season for wild birds and lifecycles of migratory fish.</i> <p><i>If avoidance or reduction of harm is not possible, applicants should include appropriate mitigation measures, in line with the mitigation hierarchy, as an integral part of their proposed development, including identifying where and how these will be secured in the long term.</i></p> <p><i>If avoidance or bespoke mitigation measures are insufficient or not possible, as a last resort, appropriate compensation measures should be sought and implemented. For example, moving protected species out of the development site and where practicable, restore habitats after construction works have finished.</i></p> <p><i>The applicant should not just look to mitigate direct harms but should show how the project has taken advantage of opportunities to conserve and enhance biodiversity, having regard to any relevant Local Nature Recovery Strategy. Opportunities will be taken to</i></p>	

NPS Section	Relevant Policy Wording and/or Summary	Notes
	<p><i>enhance or expand existing habitats and create new habitats in accordance with biodiversity net gain requirements. Habitat creation, enhancement and management proposals should include measures for climate resilience, including appropriate species selection. Maintaining habitat connectivity is important for climate resilience and the biodiversity of ecological networks.</i></p> <p><i>Wider ecosystem services and benefits of natural capital should also be considered when designing enhancement measures in order to maximise multi-functional benefits whilst minimising land-take. For example, this can be achieved through integration of Biodiversity Net Gain (BNG) features within a sustainable drainage system; the use of green roofs and walls to harvest rainwater and ameliorate urban heating; or the restoration of rivers to reduce flood risk and provide attractive amenity areas.</i></p> <p><i>The Secretary of State should consider what appropriate requirements should be attached to any consent and/or in any planning obligations entered into to ensure that any necessary mitigation and compensatory measures are secured, delivered, and if necessary enforced, and that biodiversity improvements are registered in accordance with BNG requirements.</i></p> <p><i>The Secretary of State will need to take account of the advice provided to the applicant by Natural England and/or the MMO, as regards any necessary mitigation measures and whether Natural England and/or or the MMO has granted or refused, or intends to grant or refuse, any relevant licences, including protected species mitigation licences. In advance of the formal</i></p>	

NPS Section	Relevant Policy Wording and/or Summary	Notes
	<i>submission, applicants are encouraged to use Natural England's Letter of No Impediment Approach and engage with Natural England.</i>	
5.52 – 5.53	<p><i>The most important sites for biodiversity in the UK are those identified and designated to meet the obligations of international biodiversity conventions and which are afforded special protection by the Habitats Regulations. These sites are designated as Special Areas of Conservation and Special Protection Areas and are collectively known as Habitats Sites. The following should be given the same protection as sites legally protected by the Habitat's Regulations: potential Special Protection Areas and possible Special Areas of Conservation, listed or proposed Wetlands of International Importance (Ramsar sites); and sites identified, or required, as compensatory measures for adverse effects on habitats sites.</i></p> <p><i>The Habitats Regulations set out a specific process (see paragraphs 4.12 to 4.16) to assess the likely implications for these sites from a proposed plan or project. To maintain the overall coherence of the National Site Network, such plans or projects may only proceed if the assessment concludes they will not adversely affect the integrity of the site or, in the case of a negative assessment, if there are no alternative solutions, and they must proceed for imperative reasons of overriding public interest with the necessary compensatory measures secured.</i></p>	
5.99 – 5.102	<i>Applications for development in a Coastal Change Management Area (CCMA) should make it clear why there is a need for it to be located in a CCMA. For developments requested in a CCMA, applicants should undertake an assessment of the vulnerability</i>	

NPS Section	Relevant Policy Wording and/or Summary	Notes
	<p><i>of the proposed development to coastal change, taking account of climate change, during the project's operational life and consult with their Coast Protection Authority and Coast Erosion Risk Management Authority (usually their District Council) regarding the Shoreline Management Plan for that coastal policy unit and coastal change planning policy.</i></p> <p><i>For any projects involving dredging or disposal into the sea, the applicant should consult the Marine Management Organisation (MMO), and where appropriate, for cross-boundary impacts, Natural Resource Wales and NatureScot, at an early stage. The applicant should also consult the MMO on projects which could impact on coastal change, since the MMO may also be involved in considering other projects which may have related coastal impacts.</i></p> <p><i>The applicant should examine the broader context of coastal protection around the proposed project, and the influence in both directions, i.e. coast on project, and project on coast.</i></p> <p><i>The applicant should be particularly careful to identify any effects of physical changes on the integrity and special features of Marine Conservation Zones, candidate marine Special Areas of Conservation, coastal Special Areas of Conservation and candidate coastal Special Areas of Conservation, coastal Special Protection Areas and potential coastal Special Protection Areas, Ramsar sites, Sites of Community Importance and potential Sites of Community Importance and SSSIs. For any projects affecting the above marine protected areas, the applicant should consult Natural England</i></p>	

NPS Section	Relevant Policy Wording and/or Summary	Notes
	<i>and where appropriate, for cross-boundary impacts, Natural Resource Wales and NatureScot, at an early stage.</i>	
5.219 – 5.220	<p><i>Noise resulting from a proposed development can also have adverse impacts on wildlife and biodiversity. Noise effects of the proposed development on ecological receptors should be assessed in accordance with the Biodiversity and Nature Conservation section of this NPS.</i></p> <p><i>Factors that will determine the likely noise impact include:</i></p> <ul style="list-style-type: none"> • <i>construction noise and the inherent operational noise from the proposed development and its characteristics;</i> • <i>the proximity of the proposed development to noise sensitive premises (including residential properties, schools and hospitals) and noise sensitive areas (including certain parks and open spaces);</i> • <i>the proximity of the proposed development to quiet places and other areas that are particularly valued for their tranquillity, acoustic environment or landscape quality such as National Parks, the Broads or Areas of Outstanding Natural Beauty; and</i> • <i>the proximity of the proposed development to designated sites where noise may have an adverse impact on the special features of interest, protected species or other wildlife.</i> 	
5.222 – 5.223	<i>The Examining Authority and the Secretary of State should consider whether mitigation</i>	Sets out requirement for applicants for individual

NPS Section	Relevant Policy Wording and/or Summary	Notes
	<p><i>measures are needed both for operational and construction noise over and above any which may form part of the project application. The Secretary of State may wish to impose requirements to ensure delivery and future maintenance of all mitigation measures.</i></p> <p><i>Mitigation measures for the project should be proportionate and reasonable and may include one or more of the following:</i></p> <ul style="list-style-type: none"> • <i>engineering: containment of noise generated;</i> • <i>materials: use of materials that reduce noise, (for example, low noise road surfacing);</i> • <i>lay-out: adequate distance between source and noise-sensitive receptors;</i> • <i>incorporating good design: to minimise noise transmission through landscaping and screening by natural or purpose-built barriers including topographical changes;</i> • <i>administration: specifying acceptable noise limits or times of use (e.g., in the case of railway station PA systems).</i> 	<p>NSIPs to consider noise mitigation measures, which in some instances may be relevant to reducing effects on European Sites.</p>
5.253	<p><i>The project should identify opportunities and secure measures to protect and improve water quality and resources through green and blue infrastructure, sustainable drainage and environmental and biodiversity net gain. This will help to achieve 25 Year Environment Plan objectives and potentially provide greater capacity to support infrastructure needs.</i></p>	

5.4.2 The measures in the revised NPS provide a policy framework that supports avoidance or mitigation of potential adverse effects on the integrity of European Sites. However, the overall framework of the revised NPS recognises the potential for individual NSIP projects to lead to adverse effects on the integrity of European Sites. Without detailed information on individual NSIPs that may come forward under the revised NPS, it is not possible to conclude that adverse effects on integrity can be avoided through the revised NPS policy provisions. It is therefore necessary to consider the broad mitigation measures that individual NSIPs may need to deliver as part of detailed project-specific measures. These are considered in the following section.

Broad mitigation measures that may be applicable to individual NSIP projects

5.4.3 This section of the HRA Report considers the broad types of mitigation measures that may be appropriate to address the effects of individual NSIPs taken forward under the revised NPS. Mitigation measures have been identified in relation to the impact pathways and potential LSE identified during the HRA screening. As set out in sections 5.2 and 5.3, it is not possible to fully assess the potential for LSE to also trigger adverse effects on the integrity of European Sites. As such, it is appropriate to consider mitigation measures that may avoid, lessen, or otherwise mitigate effects on European Site qualifying features for all of the impact pathways identified.

5.4.4 These measures can only be considered generically during assessment of the revised NPS. Again, this is because the precise impacts and effects, and hence the precise requirements for mitigation for any individual NSIP can only be determined through detailed assessment at the project level. **Table 5.2** overleaf, sets out the broad mitigation measures that are likely to be applicable to each of the identified LSE in **Table 4.2**. It should be noted that other impact pathways and hence other mitigation requirements could be identified during HRA of individual NSIPs, that are not identified in **Table 4.1**.

Table 5.2 - Potential Mitigation Measures for Individual NSIPs

Impact Pathway Triggering Adverse Effects	Potential Mitigation Measures
Habitat loss, disturbance and fragmentation	<p>Design scheme to avoid or minimise loss, disturbance, and fragmentation of qualifying interest habitats.</p> <p>Provide alternative habitats that provide equivalent or greater ecological functioning than those impacted, where impacts are confined entirely to areas outside the boundary of European Sites⁸.</p> <p>Incorporate habitat corridors into scheme design that address habitat fragmentation risks.</p> <p>Remove existing infrastructure/features that contributes to existing fragmentation as part of scheme design⁹.</p>
Species disturbance / noise and vibration	<p>Design scheme to incorporate suitable buffer zones between disturbing activities and habitats used by qualifying interest species.</p> <p>Seek to locate works that generate greatest levels of noise and vibration away from habitats used by qualifying interest species.</p> <p>Consider use of barriers to disrupt transmission of noise/vibration and block sight lines to habitats used by qualifying interest species.</p> <p>Time noise/vibration generating activities to avoid periods when qualifying interest species are present, or when they are less sensitive to noise and vibration impacts, e.g., avoid piling works adjacent to watercourses during fish migrations.</p>
Loss/fragmentation of habitats used by qualifying interest species (inside or outside European Sites)	<p>Design scheme to avoid or minimise loss, disturbance, and fragmentation of habitats used by qualifying interest species.</p> <p>Provide alternative habitats that provide equivalent or greater ecological functioning than those impacted,</p>

⁸ Where impacts are restricted to land outside the boundary of a European Site but that provides functionally linked land for that European Sites's qualifying interests, the provision of alternative habitat can be considered as a mitigation measures. Such an approach cannot be considered for impacts on land inside the boundary of a European Site, as this would be compensation, not mitigation. This could therefore only be considered after the assessment of alternatives and IROPI tests have been passed.

⁹ Depending on context this may be appropriate as mitigation or may need to be considered compensation and hence not appropriate at the appropriate assessment stage of the HRA process.

Impact Pathway Triggering Adverse Effects	Potential Mitigation Measures
	<p>where impacts are confined entirely to areas outside the boundary of European Sites⁶.</p> <p>Incorporate habitat corridors e.g., green bridges, wildlife underpasses or similar into scheme design that address habitat fragmentation risks.</p>
Introduction/spread of invasive non-native species (INNS)	<p>Design scheme to avoid works in proximity to INNS where practicable.</p> <p>Where the risk of spreading INNS is unavoidable, an appropriate management and treatment plan for managing this risk should be included as part of the Scheme. Such a plan may need to apply during both the construction and operation phases of any individual NSIP.</p>
Changes to surface and subsurface water flows	<p>Design scheme to minimise earthworks and other intrusive activities with potential to alter hydrological functioning.</p> <p>Complete assessment of potential hydrological change arising from individual scheme and incorporate mitigation to address hydrological risk as required.</p> <p>Design drainage features to support continued favourable hydrological functioning of affected European Sites.</p>
Air pollution	<p>Locate new road, rail, and SRFI infrastructure as far from any European Sites as possible, ideally at least 200 m away, Imperative subject to site-specific assessment.</p> <p>Consider restrictions/requirements for particular technology types to avoid or lessen impacts, e.g., use of fully electric-capable trains rather than diesel trains.</p> <p>Prioritise and incorporate low or zero-emission modes of transport into scheme design.</p> <p>Consider use of barriers and shelter belts to reduce transmission of air pollutants to sensitive habitats.</p>

Impact Pathway Triggering Adverse Effects	Potential Mitigation Measures
Accidental release of pollutants/contaminants changing water quality	<p>Design scheme to avoid works in locations where there is a risk of encountering/releasing existing pollutants in the environment as far as practicable.</p> <p>Embed and implement pollution prevention and control measures as part of scheme design. This is likely to be relevant to both construction and operation phases.</p>
Risk of incidental mortality of mobile species	<p>Design scheme to avoid or minimise loss, disturbance, and fragmentation of habitats used by qualifying interest species.</p> <p>Design scheme to include intrinsic features e.g., topography and landscaping layout that minimise the risk of incidental mortality.</p> <p>Incorporate habitat corridors e.g., green bridges, wildlife underpasses, fish passes, or bat/bird flyovers etc into scheme design.</p>
Exacerbating the effects of climate change e.g., fragmenting habitats prevents adjustments in range of qualifying interests	<p>Consider demand management measures to reduce emissions from operational road schemes.</p> <p>Consider restrictions/requirements for particular technology types to avoid or lessen impacts, e.g., use of fully electric-capable trains rather than Diesel trains.</p> <p>Prioritise and incorporate low or zero-emission modes of transport into scheme design.</p> <p>Incorporate joined up ecological networks into scheme design, that contribute to habitat connectivity for European Sites and their qualifying interests.</p>

Appropriate Assessment conclusions

- 5.4.5 It is not possible to rule out the potential for adverse effects on the integrity of European Sites. This is due to the non-spatial and strategic nature of the revised NPS, which means potential effects on European Sites cannot be accurately judged. This includes with consideration of in-combination effects of other plans and projects, and with consideration of mitigation measures.
- 5.4.6 The potential for adverse effects on integrity has been identified in relation to European Sites primarily in England. There is also the potential for adverse

effects on the integrity of European Sites in Scotland and Wales. As such, it is intended that the findings of this assessment be passed to the relevant SNCB's in England, Wales, and Scotland (Natural England, Natural Resources Wales, and NatureScot respectively). This is in line with the requirement to consult the relevant SNCBs on the findings of an Appropriate Assessment, under regulation 105 of the Habitats Regulations.

5.4.7 As there is a risk of adverse effects on the integrity of European Sites, the revised NPS needs to be subject to stages 3 and 4 of the HRA process:

- Stage 3: Assessment of alternative solutions: the process which examines alternative ways of achieving the objectives of the plan or project that avoid adverse effects on the integrity of the European Site(s); and
- Stage 4: Assessment where no alternative solutions exist and where adverse effects remain. This includes an assessment of whether the development is necessary for Imperative Reasons of Overriding Public Interest (IROPI).

6. HRA STAGE 3 – ALTERNATIVE SOLUTIONS

6.1 Requirements for Assessing Alternative Solutions

6.1.1 Regulation 64(1) of the Habitats Regulations states that:

'If the competent authority is satisfied that, there being no alternative solutions, the plan or project must be carried out for imperative reasons of overriding public interest (which, subject to paragraph (2), may be of a social or economic nature), it may agree to the plan or project notwithstanding a negative assessment of the implications for the European site or the European offshore marine site (as the case may be).'

6.1.2 Regulation 64(2) goes on to state:

'Where the site concerned hosts a priority natural habitat type or a priority species, the reasons referred to in paragraph (1) must be either— (a) reasons relating to human health, public safety or beneficial consequences of primary importance to the environment; or (b) any other reasons which the competent authority, having due regard to the opinion of the appropriate authority, considers to be imperative reasons of overriding public interest.'

6.1.3 Regulation 107 of the Habitats Regulations further confirms these requirements for land use plans.

6.1.4 Guidance from The Department for Environment, Food and Rural Affairs provides guidance on assessing alternative solutions¹⁰. This confirms that alternatives must be able to meet the needs of the original proposal. In this case, any alternatives would need to meet the policy objectives of a revised NPS, in order to be considered suitable alternatives. The DEFRA and NE guidance further clarifies that:

'An alternative solution is acceptable if it:

- *achieves the same overall objective as the original proposal*
- *is financially, legally and technically feasible*
- *is less damaging to the European site and does not have an adverse effect on the integrity of this or any other European site.'*

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<https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site>.

6.1.5 The approach to assessing alternatives has been informed by the process set out in The Habitats Regulations Assessment Handbook, as described below:

- Step 1 – define the objectives or purpose of the plan and the problem it is causing that needs to be solved, i.e. the harm that it would cause to the integrity of a European Site;
- Step 2 – understand the need for the plan;
- Step 3 – are there financially, legally and technically feasible alternative solutions;
- Step 4 – are there alternative solutions with a lesser effect on the integrity of the European Site?

6.2 Step 1: What are the Objectives of the Revised NPS and How would it Harm European Sites?

- 6.2.1 The revised NPS sets out the need for, and Government's policies for appropriate management, renewal, and where appropriate new infrastructure delivery of the national road and rail networks in England, through development of nationally significant infrastructure projects (NSIPs). The revised NPS also provides planning guidance for promoters of NSIPs on the road and rail networks, and the basis for the examination by the Examining Authority and decisions by the Secretary of State.
- 6.2.2 The revised NPS sets the framework for decision-making in relation to National Networks NSIPs. This supports delivery of National Networks NSIPs in accordance with wider government policy objectives, including Net Zero, safety of National Networks users, Socioeconomic and environmental drivers.
- 6.2.3 Sections 4 and 5 of this HRA report identify that development of National Networks NSIPs could lead to Likely Significant Effects (LSE) and adverse effects on integrity of European Sites. As set out in **Tables 4.1 and 4.2**, a range of impact and effects could be triggered by delivery of NSIPs under the revised NPS. Due to the non-spatial and strategic nature of the revised NPS it is not possible to determine which, if any, European Sites may be affected.

6.3 Step 2: Why is a Revised NPS Needed?

- 6.3.1 A NPS is required, in order to provide the policy framework for the development of nationally significant infrastructure projects (NSIPs) on the national road and rail networks in England. This provides essential guidance to promoters of NSIPS on the national road and rail networks, and the basis for the examination by the Examining Authority and decisions by the Secretary of State.
- 6.3.2 The revised NPS is required in order to update the current NPS, which was published in 2015. There have been a series of changes to policy and legislation relevant to transport planning since the 2015 NPS was published. These include the legally binding target to achieve Net Zero by 2050¹¹, publication of the Transport Decarbonisation Plan, and wider changes to the policy framework, for example, publication of the Environment Act (2021) and updates to the National Adaptation Programme for climate change.
- 6.3.3 The 2015 NPS therefore required updating to reflect the current policy framework. This will support effective decision-making on future National Networks NSIPs.

6.4 Step 3: Alternative Solutions

- 6.4.1 Two alternatives to the revised NPS have been considered in this HRA Report. These were also assessed in the Appraisal of Sustainability that accompanies the revised NPS.
- 6.4.2 Alternative 1 provides for increased prioritisation of investment which delivers environmental sustainability benefits. Under this alternative, a greater proportion of investment would be allocated to environmental and wellbeing improvements on both road and rail networks. Under Alternative 1, overall increases in road, rail, and SRFI capacity would be expected to be reduced relative to the revised NPS itself.
- 6.4.3 Alternative 2 provides for a similar scale and prioritisation of investment and requirements for individual NSIP delivery as the revised NPS. However, under this alternative there would be an increased focus on investment in areas requiring levelling up. There would therefore be a greater emphasis on promoting and delivering individual NSIPs in parts of England identified as requiring levelling up.

¹¹ Climate Change Act 2008 (2050 Target Amendment) Order 2019.

6.4.4 The 'Do Nothing' scenario was discounted as a viable option early in the process of development of the revised NPS. This was because:

- The previous NPS had become out of step with current legislation and policy, including new and updated policy directly relating to the National Networks; and
- Not revising the previous NPS, or having no NPS at all, would provide an inadequate policy framework to inform the preparation, examination, and decision-making for National Networks NSIPs.

6.5 Step 4: Alternative Solutions with potential for reduced effects on European Sites

Alternative 1: Prioritising investment which delivers environmental sustainability benefits

6.5.1 Under this alternative, there would be an increased focus on improving environmental sustainability and wellbeing of communities affected by the National Networks. Investment would ensure that networks remain safe, well maintained and fit for purpose. Limited capacity increases may be provided, but only where these also provide significant improvements to the environmental and/or wellbeing of communities adjacent to national networks.

6.5.2 Alternative 1 is likely to have reduced effects on European Sites relative to the revised NPS. This is because it would focus investment on projects that prioritised environmental benefits, and would not allow projects with significant negative effects on the environment to proceed (notwithstanding other benefits, including environmental benefits, that those projects could deliver). In addition, NSIP projects that increased capacity on the road and rail networks would not be taken forward, unless they would also deliver significant environmental and/or community wellbeing benefits. Increases in road, rail and SRFI capacity across the National Networks would therefore be reduced relative to the revised NPS, which on balance would likely lead to reduced impacts and therefore reduced adverse effects on European Sites. Due to the non-spatial and strategic nature of the revised NPS and Alternative 1, it is not possible to quantify any reductions in effects on European Sites arising from Alternative 1 relative to the revised NPS.

6.5.3 **Table 6.1** below, considers the technical, legal, and financial feasibility of Alternative 1, with regard to the objectives of the NPS and with comparison to the NPS itself.

Table 6.1 - Appraisal of Alternative 1

NPS Approach	Alternative 1 Approach	Technical Feasibility	Legal Feasibility	Financial Feasibility	Alignment with NPS Objectives
Strategy Summary					
<p>Investment across all national networks, that delivers a balance across economic, social and environmental sustainability outcomes, contributing across national priorities.</p>	<p>Investment across all national networks, that prioritises improving environmental sustainability and wellbeing of communities adjacent to national networks.</p> <p>Limited capacity increases may be provided, but only where these avoid significant negative impacts on carbon, all aspects of environment, and communities, and also provide significant improvements to the environment and/or wellbeing of communities adjacent to national networks.</p> <p>Greater proportion of investment allocated to environmental and wellbeing improvements on both road and rail networks.</p>	<p>Technically, it would be feasible to adopt a revised NPS more closely aligned with Alternative 1.</p> <p>However, this may limit delivery of NSIP interventions that address socioeconomic needs and the needs of National Networks users, by reducing or removing the emphasis on these as drivers of need for NSIPS.</p> <p>May prohibit the delivery of 'levelling up' and other socioeconomic benefits that would be delivered by schemes, that cannot entirely avoid or mitigate their significant environmental effects. For example, schemes that could only address some of their significant effects through compensation as a last resort, would not be permitted.</p>	<p>Legally, it would be feasible to adopt a revised NPS more closely aligned with Alternative 1 as, given its non-spatial nature, it would not cause the Secretary of State nor developers of road, rail or SRFI NSIP schemes to be in breach of their respective legal obligations.</p> <p>Legal obligations would continue to apply to individual schemes.</p>	<p>Alternative 1 would result in a reprioritisation of investment towards schemes that avoid significant environmental effects. This may result in fewer schemes coming forward or may require an increase in expenditure on schemes where substantial interventions are required to avoid significant environmental effects.</p>	<p>Alternative 1 would align equal to, or better than, the revised NPS with the following objective:</p> <ul style="list-style-type: none"> • Supporting the Government's environment and net zero priorities. <p>Alternative 1 would align less than the revised NPS with the following objectives:</p> <ul style="list-style-type: none"> • Maintaining network performance and meeting customer needs; • Supporting economic growth; • Ensuring resilience in networks; and • Maintaining and enhancing the safety of national networks. <p>Alternative 1 is therefore considered to meet the overall need case less well than the revised NPS itself.</p>

NPS Approach	Alternative 1 Approach	Technical Feasibility	Legal Feasibility	Financial Feasibility	Alignment with NPS Objectives
Roads					
<p>The scale of funding on the SRN will remain relatively consistent in real terms with that during Road Periods 1 and 2. Limited capacity increases may be provided to solve a range of issues across the network. The ageing nature of the network means a significant and increased proportion of this funding will likely be allocated to operating, maintaining and renewing the existing network.</p>	<p>NSIP options will only be brought forward where it can clearly be demonstrated that other options, involving less construction, cannot meet the scheme objectives. In all cases, any investment will only be permitted where these avoid significant negative impacts on carbon, all aspects of the environment, and communities, and also provide significant improvements to the environmental and/or wellbeing of communities adjacent to national networks. It is envisaged that the investment might be directed to small scale enhancements.</p>	<p>Smaller scale interventions that can avoid significant construction via the NSIP regime all have an important role to play in making effective use of the SRN, and the Government fully intends to make use of them. However, they will not be sufficient to address the challenges that the SRN faces, which may require specific, larger-scale interventions brought forward under the NSIP regime in specific locations to address those challenges.</p>	<p>With regard to roads NSIP schemes promoted by National Highways, it is subject to legal obligations to comply with a road investment strategy (section 3(6) Infrastructure Act 2015) to comply with directions and have regard to guidance contained within its Licence (section 6(3)). In the unlikely event that an NPS based on Alternative 1 conflicts (or has the potential to conflict) with these obligations, there are legal and procedural mechanisms that allow either the Strategy or the Licence to be varied. Similarly, it is not considered that an NPS based on Alternative 1 would cause the Secretary of State, a Local Authority nor a private developer of a roads NSIP scheme to be in breach of their respective legal obligations. Legal obligations would continue to apply to individual schemes.</p>	<p>May prohibit the delivery of road schemes that support 'levelling up' and deliver other socioeconomic benefits. Schemes that cannot entirely avoid or mitigate their significant environmental effects, i.e. road schemes that could only address some of their significant effects through compensation as a last resort, would not be permitted. There is a risk of network degradation if other parts of the network aren't maintained due to significant effects. This approach is likely to lead to fewer offline road enhancement projects being delivered, which may cost more depending on the scale of environmental mitigation required.</p>	<p>Alternative 1 would align equal to, or better than, the revised NPS with the following objectives :</p> <ul style="list-style-type: none"> • Environment. <p>Alternative 1 would align less than the revised NPS with the following objectives:</p> <ul style="list-style-type: none"> • Network performance and meeting users' needs; • Connectivity and economic growth; and • Resilience and adaptation to climate change; and • Safety <p>Alternative 1 is therefore considered to meet the overall need case less well than the revised NPS itself.</p>

NPS Approach	Alternative 1 Approach	Technical Feasibility	Legal Feasibility	Financial Feasibility	Alignment with NPS Objectives
Rail Network					
<p>Rail infrastructure enhancements are funded through Spending Reviews but given the nature of large, complex capital programmes, they typically have a life cycle that extends beyond Spending Review timeframes. The current assumption is that funding will be maintained at the same broad level as in the current Spending Review (which runs to the end of 2023/24) as a medium-term run rate, providing a stable basis for the department to plan delivery of its future priorities. Funding is expected to continue for previously committed major improvement programmes and re-openings where they meet strategic objectives.</p> <p>Current strategic objectives for the delivery of new or enhanced rail infrastructure include the government's Levelling Up agenda, decarbonisation of the railway in support of the government's Net Zero commitments, and balancing the needs of passenger and freight customers.</p>	<p>Strategic objectives for the delivery of new or enhanced rail infrastructure will be focused on renewing and growing the rail network through targeted investments to ensure all communities have access to high quality physical infrastructure and to support decarbonisation of the railway.</p> <p>The extent and scale of larger interventions will be limited. Larger scale interventions could be similar to those within the NPS. However, at the scheme level, NSIP options will only be brought forward where it can clearly be demonstrated that other options, involving less construction, cannot meet the scheme objectives. In all cases, any investment will only be permitted where these avoid significant negative impacts on carbon, all aspects of the environment, and communities, and also provide significant improvements to the environment and/or wellbeing of communities adjacent to national networks.</p> <p>Support for the growth of rail freight in particular will be prioritised, due to the environmental and economic benefits of the sector. Capacity, connectivity and reliability improvements will make rail a more competitive option against other transport modes for freight.</p>	<p>Under Alternative 1, there would be limits on the delivery of larger intervention schemes, including new rail links, or improvement schemes needed to maintain and enhance the safety of the railway. This would prevent the realisation of maximum benefits from the UK rail network in line with government policy. May limit the ability of the rail network to support modal shift to rail, including government policy for increasing the proportion of freight moved on the rail network relative to freight moved by road.</p>	<p>With regard to rail NSIP schemes promoted by Network Rail, it is subject to the obligations within its licence. In the unlikely event that an NPS based on Alternative 1 conflicts (or has the potential to conflict) with these obligations, there are legal and procedural mechanisms that allow the Licence to be varied. Similarly, it is not considered that an NPS based on Alternative 1 would cause the Secretary of State, a Local Authority nor a private developer of a rail NSIP scheme to be in breach of their respective legal obligations. Legal obligations would continue to apply to individual schemes.</p>	<p>May prohibit the delivery of rail projects that support 'levelling up' and deliver other socioeconomic benefits. Schemes that cannot entirely avoid or mitigate their significant environmental effects, i.e. rail schemes that could only address some of their significant effects through compensation as a last resort, would not be permitted.</p> <p>May impair the ability to facilitate predicted increases in rail freight, as per Network Rail future freight demand forecasts¹².</p>	<p>Alternative 1 would align equal to, or better than, the revised NPS with the following objective:</p> <ul style="list-style-type: none"> • Environment; <p>Alternative 1 would align less than the revised NPS with the following objectives:</p> <ul style="list-style-type: none"> • Network performance: demand on the rail network; • User needs; • Connectivity and economic growth • Resilience and adaptation to climate change: and • Safety. <p>Alternative 1 is therefore considered to meet the overall need case less well than the revised NPS itself.</p>

¹² (Network Rail, 2020)

NPS Approach	Alternative 1 Approach	Technical Feasibility	Legal Feasibility	Financial Feasibility	Alignment with NPS Objectives
Strategic Rail Freight Interchanges					
<p>An expanded network of SRFIs. SRFI capacity to be provided at a wide range of locations, to provide the flexibility needed to match the changing demands of the market, possibly with traffic moving from existing RFI to new larger facilities. Consideration should be given to ensuring existing SRFI locations are taken into account when making an application, to ensure that SRFIs are strategically located and thus enable a cross-country network which unlocks the full range of benefits that an expanded network of SRFIs can provide.</p>	<p>SRFIs will only be consented where these avoid significant negative impacts on carbon, all aspects of the environment and communities, and also provide significant improvements to the environmental and/or wellbeing of communities adjacent to national networks.</p>	<p>While alternative 1 is technically feasible, it may lead to fewer SRFIs being consented which may limit the ability of the rail network to support modal shift to rail, including government policy for increasing the proportion of freight moved on the rail network relative to freight moved by road (paragraph 3.85 to 3.87 of the revised NPS).</p>	<p>Legally, it would be feasible to adopt a revised NPS more closely aligned with Alternative 1, as it would not cause the Secretary of State nor developers of SRFI schemes to be in breach of their respective legal obligations. Legal obligations would continue to apply to individual schemes.</p>	<p>SRFI scheme are privately funded infrastructure and therefore the viability of projects will be determined by the market.</p> <p>Schemes that cannot entirely avoid or mitigate their significant environmental effects. For example, schemes that could only address some of their significant effects through compensation as a last resort, would not be permitted. This could impose significant challenges to delivery of SRFI, as given the need for them to tie-in to both strategic road and rail networks they must be located close to existing National Networks infrastructure.</p> <p>May impair the ability to facilitate predicted increases in rail freight with consequent effects on goods transport as per Network Rail future freight demand forecasts.</p>	<p>Alternative 1 would align equal to, or better than, the revised NPS with the following objective:</p> <ul style="list-style-type: none"> • Environment (subject to potential impacts on reducing modal shift under the revised NPS). <p>Alternative 1 would align less than the revised NPS with the following objectives :</p> <ul style="list-style-type: none"> • Network performance and resilience; • User needs; and • Connectivity and supporting economic growth. <p>Alternative 1 is therefore considered to meet the overall need case less well than the revised NPS itself.</p>

6.5.4 As set out above, Alternative 1 is considered likely to better meet the environmental objectives and therefore is considered likely to have lesser adverse effects on European Sites relative to the revised NPS. However, Alternative 1 does not fully achieve the objectives that must be addressed by the revised NPS. The revised NPS sets out in full the needs and drivers for development of the National Networks which underpin the objectives it seeks to achieve. Not all of the NPS objectives would be addressed by Alternative 1, relative to the balanced approach to economic, environmental, and socioeconomic factors promoted by the revised NPS.

Alternative 2

- 6.5.6 Under this alternative, there would be an increased focus on levelling up. Investment for individual NSIPs would be focussed on areas in England identified as requiring levelling up. Investment priorities and other policy provisions would otherwise be the same as the revised NPS, with similar levels of investment. **Table 6.2** provides an assessment of Alternative 2 relative to the Revised NPS.

Table 6.2 - Appraisal of Alternative 2

NPS Approach	Alternative 2 approach	Technical Feasibility	Legal Feasibility	Financial Feasibility	Alignment with NPS Objectives
Strategy Summary					
<p>Investment across all national networks, that delivers a balance across economic, social and environmental sustainability outcomes, contributing across national priorities.</p>	<p>Investment across national networks, which prioritises investment in strategically important locations, e.g., those identified as requiring levelling up, or having particular economic benefits. Investment would be targeted to support connectivity by strengthening the national network, (ensuring economic opportunity for communities and improved living standards).</p>	<p>Technically, it would be feasible to adopt a revised NPS more closely aligned with Alternative 2.</p> <p>May lead to increased adverse environmental and socioeconomic effects relative to revised NPS, due to increased focus on infrastructure interventions including new alignments and locations for NSIPs.</p> <p>May focus investment away from schemes that are not driven by socioeconomic factors.</p> <p>May prohibit the delivery of environmental mitigation and benefits that would be delivered by Schemes.</p>	<p>Legally, it would be feasible to adopt a revised NPS more closely aligned with Alternative 2 as, given its non-spatial nature, it would not cause the Secretary of State nor developers of road, rail or SRFI NSIP schemes to be in breach of their respective legal obligations.</p> <p>Care would need to be taken to ensure that the section 10(2) Planning Act 2008 duty is complied with: i.e. to exercise functions whilst reviewing/revising the NPS with the objective of contributing to the achievement of sustainable development. If such care is taken a NPS more closely aligned with Alternative 2 would be legally feasible.</p> <p>Legal obligations would continue to apply to individual schemes.</p>	<p>Financially it would be feasible to adopt a revised NPS more closely aligned with Alternative 2.</p> <p>Increases and/or reprioritisation in expenditure to deliver projects in strategically important locations. For example, those identified as requiring levelling up, or having particular economic benefits.</p> <p>Greater proportion of investment allocated to improvements to infrastructure with multi-modal impacts (i.e. the freight network). Total increases in capacity equivalent to, or greater, than the NPS if in the national interest of enabling innovation, driving long-term growth, and unlocking economic opportunity for communities.</p>	<p>Alternative 2 is expected to align equal to, or better than, the revised NPS with the following objectives:</p> <ul style="list-style-type: none"> • Maintaining network performance and meeting customer needs; and • Supporting economic growth. <p>Alternative 2 would align less than the revised NPS with the following objectives:</p> <ul style="list-style-type: none"> • Supporting the Government's environment and net zero priorities; • Ensuring resilience in networks; • Maintaining and enhancing the safety of the National Networks. <p>Alternative 2 is therefore considered to meet the overall need case less well than the revised NPS itself.</p>

NPS Approach	Alternative 2 approach	Technical Feasibility	Legal Feasibility	Financial Feasibility	Alignment with NPS Objectives
Roads					
<p>The scale of funding on the SRN will remain relatively consistent in real terms with that during Road Periods 1 and 2. Limited capacity increases may be provided to solve a range of issues across the network. The ageing nature of the network means a significant and increased proportion of this funding will likely be allocated to operating, maintaining and renewing the existing network.</p>	<p>Beyond the current Road Period, it is assumed that the scale of funding on the SRN will remain relatively consistent in real terms with that during Road Periods 1 and 2.</p> <p>Limited capacity increases may be provided with a greater proportion of investment allocated to support connectivity by strengthening the national network ensuring economic opportunity for communities and improved living standards.</p> <p>Greater proportion of investment allocated to improvements to infrastructure with multi-modal impacts (i.e. the freight network). Increases in capacity if in the national interest of enabling innovation, driving long-term growth, and unlocking economic opportunity for communities.</p> <p>Other investment will prioritise improvements to infrastructure with multi-modal impacts to support levelling-up agenda (i.e. the freight network).</p>	<p>Alternative 2 would be expected to lead to increased adverse environmental and socioeconomic effects relative to revised NPS, due to increased focus on infrastructure interventions including new roads, junctions, and other major road schemes, with an increased focus on capacity-building.</p> <p>May focus investment away from schemes that are not driven by socioeconomic factors.</p>	<p>With regard to roads NSIP schemes promoted by National Highways, it is subject to legal obligations to comply with a road investment strategy (section 3(6) Infrastructure Act 2015) to comply with directions and have regard to guidance contained within its Licence (section 6(3)). In the unlikely event that an NPS based on Alternative 2 conflicts (or has the potential to conflict) with these obligations, there are legal and procedural mechanisms that allow either the Strategy or the Licence to be varied. Similarly, it is not considered that an NPS based on Alternative 2 would cause the Secretary of State, a Local Authority nor a private developer of a roads NSIP scheme to be in breach of their respective legal obligations. With regard to roads in particular, as identified above, care would need to be taken to ensure that the section</p>	<p>Increases in expenditure allocated to operating, maintaining and renewing the existing network as well as enhancement schemes in locations that support levelling up.</p> <p>May focus investment away from schemes that are not driven by economic factors.</p>	<p>Alternative 2 is expected to align equal to, or better than, the revised NPS with the following objectives:</p> <ul style="list-style-type: none"> • Maintaining network performance and meeting user needs; and • Connectivity and economic growth. <p>Alternative 2 would align less than the revised NPS with the following objectives:</p> <ul style="list-style-type: none"> • Environment; • Resilience and adaptation to climate change; • Safety. <p>Alternative 2 is therefore considered to meet the overall need case less well than the revised NPS itself.</p>

NPS Approach	Alternative 2 approach	Technical Feasibility	Legal Feasibility	Financial Feasibility	Alignment with NPS Objectives
			<p>10(2) Planning Act 2008 duty is complied with.</p> <p>Legal obligations would continue to apply to individual schemes.</p>		
Rail Network					
<p>Rail infrastructure enhancements are funded through Spending Reviews but given the nature of large, complex capital programmes, they typically have a life cycle that extends beyond Spending Review timeframes. The current assumption is that funding will be maintained at the same broad level as in the current Spending Review (which runs to the end of 2023/24) as a medium-term run rate, providing a stable basis for the department to plan delivery of its future priorities. Funding is expected to continue for previously committed major improvement programmes and re-openings where they meet strategic objectives.</p> <p>Current strategic objectives for the delivery of new or enhanced rail infrastructure include the government's Levelling Up agenda, decarbonisation of the railway in support of the government's Net Zero commitments, balancing the needs of passenger and freight customers.</p>	<p>As the NPS. However, investment is actively prioritised in locations identified as requiring levelling up or having particular economic benefits to wider society.</p>	<p>Alternative 2 would be expected to lead to increased adverse environmental and socioeconomic effects relative to revised NPS, due to increased focus on infrastructure interventions to deliver levelling up and economic benefits.</p> <p>May focus investment away from schemes that are not driven by economic factors.</p>	<p>With regard to rail NSIP schemes promoted by Network Rail, it is subject to the obligations within its licence. In the unlikely event that an NPS based on Alternative 2 conflicts (or has the potential to conflict) with these obligations, there are legal and procedural mechanisms that allow the Licence to be varied.</p> <p>Similarly, it is not considered that an NPS based on Alternative 2 would cause the Secretary of State, a Local Authority nor a private developer of a rail NSIP scheme to be in breach of their respective legal obligations.</p> <p>Legal obligations would continue to apply to individual schemes.</p>	<p>Increases in expenditure (or financial non-viability) allocated to locations identified as requiring levelling up or having particular economic benefits to wider society.</p> <p>May focus investment away from schemes that are not driven by economic factors.</p>	<p>Alternative 2 is expected to align equal to, or better than, the revised NPS with the following objectives:</p> <ul style="list-style-type: none"> • Network performance: demand on the rail network; • User needs; and • Connectivity and economic growth. <p>Alternative 2 would align less than the revised NPS with the following objective:</p> <ul style="list-style-type: none"> • Environment; and • Safety <p>Alternative 2 is therefore considered to meet the overall need case less well than the revised NPS itself.</p>

NPS Approach	Alternative 2 approach	Technical Feasibility	Legal Feasibility	Financial Feasibility	Alignment with NPS Objectives
Strategic Rail Freight Interchanges					
<p>An expanded network of SRFIs would be provided. SRFI capacity to be provided at a wide range of locations, to provide the flexibility needed to match the changing demands of the market, possibly with traffic moving from existing RFI to new larger facilities. Consideration should be given to ensuring existing SRFI locations are taken into account when making an application, to ensure that SRFIs are strategically located and thus enable a cross-country network which unlocks the full range of benefits that an expanded network of SRFIs can provide.</p>	<p>An expanded network of SRFIs, with priority/consent given to locations identified as requiring levelling up or having particular economic benefits to wider society.</p>	<p>May limit the placement of SRFI in locations that best support the government's commitment to modal shift from road to rail and respond to overall demand whilst making best use of the existing strategic road and rail networks. It could also limit the associated social and economic benefits from wider modal shift. Plus, wider benefits such as decreasing congestion and improving air quality.</p>	<p>Legally, it would be feasible to adopt a revised NPS more closely aligned with Alternative 2, as it would not cause the Secretary of State nor developers of SRFI schemes to be in breach of their respective legal obligations. Legal obligations would continue to apply to individual schemes.</p>	<p>SRFI scheme are privately funded infrastructure and therefore the viability of projects will be determined by the market. May focus investment away from schemes that are not driven by economic factors.</p>	<p>Alternative 2 is expected to align equal to, or better than, the revised NPS with the following objectives:</p> <ul style="list-style-type: none"> • Network performance and resilience; • User needs; and • Connectivity and supporting economic growth. <p>Alternative 2 would align less than the revised NPS with the following objective:</p> <ul style="list-style-type: none"> • Environment. <p>Alternative 2 is therefore considered to meet the overall need case less well than the revised NPS itself.</p>

- 6.5.7 Alternative 2 would have different effects on European Sites than the revised NPS. This is because there would be an increased geographic focus on areas in England requiring levelling up, and hence a corresponding geographic focus of NSIP impacts on European Sites. There would by default be reduced provision for individual NSIPs and other interventions outside areas identified for levelling up, and increased provision for them in areas where levelling up is required. Due to this, there would be an increased likelihood of effects on European Sites closer to levelling up areas.
- 6.5.8 As the other investment priorities and policy provisions remain comparable to the revised NPS, it is not possible to determine whether Alternative 2 would have a lesser or greater effect on European Sites compared to the revised NPS. This would depend on the precise locations and nature of individual NSIPs brought forward under the revised NPS or Alternative 2.
- 6.5.9 Areas that may benefit from levelling up have a wide geographical distribution across England¹³. They include multiple locations in all the major regions. As such, if Alternative 2 were adopted instead of the revised NPS, there would still be the potential for adverse effects on a wide range of European Sites. Alternative 2 also has a greater focus on major infrastructure interventions to facilitate economic growth, and could therefore increase the likelihood of NSIPs coming forwards, notwithstanding the potential for these to have effects on European Sites. As such, Alternative 2 is not predicted to have lesser effects on European Sites than the revised NPS.

¹³ <https://www.gov.uk/government/news/supporting-the-levelling-up-agenda>.

7. HRA STAGE 4 – IMPERATIVE REASONS OF OVERRIDING PUBLIC INTEREST & COMPENSATORY MEASURES

7.1 Methodology for Assessing IROPI

7.1.1 Following appropriate assessment and consideration of alternatives, it has been determined that there are no feasible alternative solutions to the revised NPS. Adverse effects to the integrity of European Sites remain possible. It is therefore necessary to consider IROPI and compensatory measures.

7.1.2 This section of the HRA report considers whether the NPS is required for reasons that:

- Are Imperative: i.e. it is essential that a revised NPS be adopted;
- Have a clear and defined public interest, i.e. a revised NPS will facilitate and control development in a way that provides a public benefit;
- Are overriding, i.e. the benefits delivered by a revised NPS outweigh the potential adverse effects to the integrity of European Sites arising from a revised NPS; and
- Provide a long-term public benefit, i.e. short-term benefits would not be acceptable.

7.1.3 When determining the IROPI test for a plan or project, it is necessary to consider whether priority habitats or species are qualifying interests of affected European Sites. This is because the reasons that can be IROPI are more restricted for priority habitats and species.

7.1.4 Where a priority habitat or species is a qualifying feature of an affected European Site, IROPI must be either:

- Relating to human health, public safety, or beneficial consequences of primary importance to the environment; or
- Other reasons, which may be of an economic or social nature, subject to the competent authority having requested and given due consideration to an opinion from the Department for Environment, Food and Rural Affairs.

7.2 Assessment of IROPI

- 7.2.1 The functioning of society in England and the wider UK is facilitated in part by National Networks road and rail infrastructure. The National Networks provide the means by which people, goods, and a range of services are transported across the UK. The National Networks are therefore essential for the ongoing ability of society to function. There is therefore a demonstrable need for planning policy to enable the maintenance and where necessary development of the National Networks in support of this need.
- 7.2.2 The extant NPS has been effectively superseded in a number of areas, following other legislative and policy developments since it was published in 2015. It is therefore imperative that it be updated and replaced with a revised NPS, which reflects the current policy background and current pressures and needs on the National Networks. Not updating the extant 2015 NPS would result in it becoming increasingly obsolete over time. This could compromise decision-making and potentially delay delivery of critical infrastructure intended to be delivered via individual NSIPs and the DCO consenting process.
- 7.2.3 As decisions on DCO applications must be taken in accordance with a designated NPS unless specific exemptions apply, not updating the 2015 NPS could also result in decreased quality of Examination and decision-making for individual NSIPs over time.

Why is development of the national road network needed

- 7.2.4 Britain has seen a significant increase in the use of SRN. By 1993, motorway traffic was 42.2 billion vehicle miles, and in 2019 motorway traffic was 70.5 billion vehicle miles. This growth in traffic has not led to the equivalent provision of capacity; while motorway traffic has increased by two-thirds in this time (66%), motorway lengths have increased by less than a fifth (16%, 325 miles). To counter some of the associated deterioration in network performance, National Highways has focussed more resources on responding to the incidents and actively managing traffic conditions.
- 7.2.5 The SRN facilitates economic development. Sectors that rely on the SRN enable £409.7 billion of Growth Value Added to be created within the economy . It connects businesses – 91% of businesses in England are located within 9 miles of the SRN . The SRN also connects key economic infrastructure – on average, a SRN junction is located 0.1 miles away from six of the seven biggest English ports and 1.6 miles away from the 10 biggest

English airports. In connecting places, it unlocks economic activity, whether that is connecting consumers with labour markets or businesses with each other and consumers. This economic growth may be at a national level, through for instance strengthening the connectivity of the Union and supporting the development of the UK Freight Network, or at an international level through enhanced access to international markets through ports/airports, with the benefits that will bring to the logistics and freight sector, as well as wider business. It may be at the regional or local level, where a SRN enhancement may unlock land for development, the creation of new employment centres, opportunities for large-scale logistics or for the creation of new communities underpinned by sustainable transport, with the additional social benefits that this brings. For example, National Highways facilitated the delivery of 25 Growth and Housing Fund schemes between 2015 and 2020 – this supported 37,000 homes and 43,000 jobs .

- 7.2.6 The SRN needs to adapt in order to become more resilient to a range of impacts from climate change (see paras 4.30 to 4.41). The Road Investment Strategy (RIS) 2 has outlined the long-term vision for the SRN to be resilient to climate change and incidents, such as flooding, poor weather conditions, and blockages on connecting transport networks.
- 7.2.7 The SRN will also need to respond to and utilise technological changes. Technology such as self-driving vehicles, access to alternative fuels and greater use of digital infrastructure may have a significant impact on how our roads are used, operated, and managed, including enabling better use of the existing network, safety improvement, and improved data on which to base network planning.
- 7.2.8 Roads facilitate active travel, such as walking, wheeling and cycling. It is a government commitment for more than half of personal journeys in our towns and cities to be made by active travel by 2030, and in order to achieve this, there needs to be adequate road provision in place.

7.2.9 In addition to enabling a broad range of active travel, roads are also crucial for our public transportation. Buses are a key form of public transport that rely on roads to run. The 32,300 buses in England used by local operators in 2019-2020 travelled 1.13 billion vehicle miles.

7.2.10 The Strategic Road Network (SRN) consists of motorways and trunk roads and is essential to these connections. In England (in 2021), the SRN (all trunk motorways and trunk 'A' roads) was 4,500 miles long. Despite the SRN only comprising 2% of the total roads in England by length, one-third of all motor vehicle miles and two-thirds of HGV miles are made on the SRN.

7.2.11 The strategic and long-distance nature of the SRN provides long distance traffic with a safe and efficient route, freeing up local roads for genuinely local journeys and active travel, and keeping traffic away from principal centres of population. In turn, the better use of the local road network to improve the environment for active travel, increase accessibility by public transport, and the creation of better connections to the places people want to go, can also reduce pressures on the SRN. The SRN is also critical for supporting the movement of freight. In 2020, 77% of domestic freight moved in the UK by road and 68% of HGV miles were run on the SRN. In 2019, the road freight sector contributed £13.6 billion to the UK economy. Some of the UK leading sectors – logistics, freight, retail, construction and manufacturing – rely on the SRN to move their products through the country.

7.2.12 There is a need for development of the national road network in order to facilitate:

- Maintained or improved network performance for the travelling public, freight, and other goods and services;
- To facilitate sustainable economic growth and development across England, the Union, and through supporting links to international markets;
- Environmental benefits and enhancements including supporting modal shift;
- Resilience measures that make the national road network more resilient, in particular in response to the effects of climate change;
- Improving the safety performance of the national road network; and
- Advances in technology that enable better use of existing assets and new infrastructure.

Why is development of the national rail network needed

- 7.2.13 Railways are a vital part of the country's transport infrastructure and play a crucial role in growing the economy and meeting the connectivity needs of customers and business. They are already the cleanest method of public transport in terms of carbon emissions. While the pandemic has impacted passenger demand, the railways will continue to be a catalyst for job creation, investment and prosperity by connecting our towns and cities to build regional powerhouses, levelling up the country and unlocking growth around our existing and planned stations and rail routes, as well as supporting tourism, opportunities for new development, links to rural communities and keeping key goods moving.
- 7.2.14 Rail journeys are made for many reasons, including to get to work and education, access healthcare services, visit family and friends, and for leisure trips. Even with the impact of the COVID-19 pandemic, 795 million passenger journeys took place on the network in 2021, compared to the 1,790 million that took place in 2019 before the pandemic. Freight moved in 2021 was 16.7 billion net tonne kilometres against 16.87 billion net tonne kilometres in 2019.
- 7.2.15 Demand for passenger rail travel has seen strong increases since the 1990s. On the eve of the COVID-19 coronavirus pandemic, passenger numbers had more than doubled since 1994/95. This growth had ceased prior to COVID-19 and passenger numbers fell due to the pandemic, passenger demand has been increasing again, though remains at lower levels than seen before the pandemic.
- 7.2.16 The rail network is used to move freight across a number of key commodities, and acts as an important link in ensuring the resilience of the UK supply chain. While total freight moved has declined since peaking in 2013/14 there has been an increase in the intermodal market, with a 5% increase in net tonnes kilometres moved since 2013/14, and the construction market with a 44% increase since 2013/14.
- 7.2.17 There is a need for development of the national rail network in order to facilitate:
- Maintenance and improvements in service provision for private and business customers;
 - Enhanced connectivity for people and goods, in support of socioeconomic development;
 - Resilience and adaptation to climate change;

- Modal shift of freight from road to rail, in support of decarbonisation and wider sustainability objectives; and
- Maintaining and improving safety of the rail network.

Why is development of Strategic Rail Freight Interchanges needed

- 7.2.18 Rail freight plays an important part in our supply chain resilience. Following COVID-19, rail freight volumes have now recovered to comparable pre-pandemic levels and in some areas grown. For example, over two-thirds of all freight moved was domestic intermodal or construction freight, with moved volumes for construction, metals and other are higher than they were two years ago.
- 7.2.19 Intermodal freight is expected to continue to be a key freight growth market and Network Rail forecast that rail freight is due to continue growing, supported by a Rail Freight Growth target. The growth in these areas as well as the range of key commodities moved play an important part in the resilience of the supply chain.
- 7.2.20 Rail is a low-carbon transport mode, comprising only 1% of 2019 domestic GHG emissions. Rail is also currently the only means of transporting heavy goods in a low-carbon way using existing, proven technology through electrification. However, it is key that the sector fully decarbonises if the UK is to reach its net zero targets.
- 7.2.21 Government is also clear on the need to encourage modal shift from road to rail to realise the full environmental benefits and continues to provide funding through the Modal Shift Revenue Support grant to enable goods to be moved by rail where other modes have an economic advantage.
- 7.2.22 For many freight movements, rail is unable to undertake a full end-to-end journey for the goods concerned. The aim of a strategic rail freight interchange (SRFI) is to optimise the use of rail in the freight journey by maximising rail trunk haul and minimising some elements of the secondary distribution leg by road, through co-location of other distribution and freight activities.
- 7.2.23 SRFIs need to be supported at both ends by connections to rail infrastructure and logistics terminals. SRFIs are also typically associated with intermodal traffic. A fully effective network of SRFIs, supported by smaller-scale rail

freight interchanges (RFIs), will help to enable the sector to reach its full potential.

7.2.24 There is a need for development of SRFIs in order to facilitate:

- Growth of rail freight, supporting socioeconomic development and modal shift from road to rail wherever practicable;
- Enhanced supply chain resilience for consumers and businesses across England, the United Kingdom, and beyond;
- Meeting the changing needs of the logistics sector;
- Environmental benefits including reduced carbon emissions (relative to road transport); and
- Levelling up and increased connectivity within and between regions of the UK.

7.3 IROPI for Individual NSIP Projects

- 7.3.1 Based on precedent from previous road and rail schemes, the majority of individual NSIPs brought forward under the revised NPS are unlikely to proceed beyond the Appropriate Assessment stage of the HRA process. Where such schemes are not predicted to lead to LSE or adverse effects on the integrity of European Sites (the latter with mitigation in place as needed), then there would be no need to proceed to consideration of alternatives or IROPI.
- 7.3.2 The consideration of IROPI set out above for the revised NPS is therefore focussed on the strategic policy objectives of the revised NPS and the needs that trigger them. Should individual NSIPs subsequently be brought forward under the revised NPS that require consideration of IROPI, these would need to provide a project-specific justification as appropriate.
- 7.3.3 Where negative effects on a European Site cannot be excluded there will be a need to fully justify such development by means of IROPI on social or economic grounds. Where an individual NSIP may negatively affect any priority habitat or species on a SAC for which they are a protected feature, an IROPI case would need to be established solely on one or more of the grounds relating to human health, public safety, or beneficial consequences of primary importance to the environment, and be subject to consultation with the Appropriate Authority (under current arrangements in England, this function is delegated to Defra).
- 7.3.4 IROPI cases may be made for National Networks projects as follows (this is not an exhaustive list, but demonstrates the broad range of drivers of need for NSIPs that may be appropriate):
- Economic or social benefits, e.g., providing a new rail link between a SRFI and a port supports local and regional employment, and facilitates economic growth and development¹⁴;
 - Human health, for example, providing a bypass around a congested town may alleviate air quality issues by reducing traffic volumes and hence emissions through the town;
 - Safety, for example, through delivering improvements to an existing road with a poor safety record; or

¹⁴ Where affected European Sites support priority habitat or species qualifying interests, such reasons could only be considered subject to the competent authority having requested and given due consideration to an opinion from the Department for Environment, Food and Rural Affairs (see paragraph 7.3.3).

- Environmental benefits, for example, realigning an existing road that passes through a European Site to be outside the European Site.

7.3.5 In summary, it may in exceptional circumstances be necessary for individual NSIPs under the revised NPS to be brought forward that unavoidably lead to adverse effects on the integrity of European Site(s). The IROPI which may apply will be tested via consultation with Defra, in order to obtain their opinion as the Appropriate Authority in line with the Habitats Regulations.

7.4 Summary of IROPI for the revised NPS

7.4.1 It has been concluded that the revised NPS is necessary for Imperative Reasons of Overriding Public Interest. Relevant NSIPs that are subsequently brought forward following adoption of the revised NPS could be brought forward for one or more of the following reasons:

- public safety;
- human health;
- environmental improvements; and
- socioeconomic benefits.

7.4.2 It is possible that NSIPs could be brought forward for socioeconomic reasons, that affect European Sites designated due to the presence of priority habitats or species. Under regulation 64(2)(b) of the Habitats Regulations, it is therefore necessary to obtain an opinion from the Appropriate Authority, in order that these IROPI can be tested.

7.5 Compensatory Measures

7.5.1 Regulation 68 of the Habitats Regulations states that:

‘Where in accordance with regulation 64—

(a) a plan or project is agreed to, notwithstanding a negative assessment of the implications for a European site or a European offshore marine site, or

(b) a decision, or a consent, permission or other authorisation, is affirmed on review, notwithstanding such an assessment, the appropriate authority must secure that any necessary compensatory measures are taken to ensure that the overall coherence of Natura 2000 is protected.’

7.5.2 Compensatory measures can therefore only be considered once the preceding IROPI and alternative solutions tests have been passed. In relation to the underlined information above, references to Natura 2000 in the Habitats Regulations now refer to the UK National Site Network and the

European Sites within it. Compensatory measures would need to be secured via the consenting of individual road and rail NSIPs at the project level.

7.5.3 The non-spatial and strategic policy-based nature of a revised NPS means the HRA cannot consider compensatory measures in detail. This is because it is uncertain what (if any) projects brought forward under a revised NPS will need to proceed all the way through the HRA process. Any compensatory measures required will be highly specific and need to be tailored to the adverse effects they are meant to address. Requirements for compensatory measures would therefore need to be identified and secured during HRA of relevant projects.

7.5.4 Compensatory measures may include interventions such as:

- Purchase and management of land adjacent to a European Site, such that it provides new or enhanced habitat for qualifying interest features and can be incorporated into the site;
- Removal or reduction of other pressures on European Sites which are demonstrably negatively affecting the achievement of their conservation objectives. For example, removing a source of water-borne pollution that is undermining water quality in a SAC river, as part of measures to address shading by a new bridge; and
- Provision of enhanced habitats, habitat connectivity, and/or translocation of qualifying interest animal species, such that the favourable conservation status of their populations is maintained or increased.

7.5.5 As set out in UK government guidance for Competent Authorities (Department for Environment, Food & Rural Affairs, Natural England, Welsh Government, and Natural Resources Wales, 2021) there would need to be a high degree of confidence that compensatory measures for an individual NSIP could be delivered and would be effective. This guidance goes on to identify that the following should be considered:

- How technically feasible and effective compensatory measures will be - based on scientific evidence and previous examples;
- How financially viable the measures are – applicants for NSIPs must have enough funds to cover costs of compensatory measures;
- How the compensation would be carried out, including how it would be managed and monitored over the time it is needed, and how it has been secured;

- Distance from the affected site - compensation closer to the site is generally preferred, unless measures further away will benefit the National Site Network as a whole; and
- How long the compensatory measures will take to fully address the adverse effects they are designed to compensate for.

7.5.6 Compensatory measures must address the adverse effects predicted to result from the plan or project to which they relate. This ensures that 'the overall coherence' of the National Site Network is protected. For example, if a plan or project was permitted that resulted in the loss of Annex 1 heathland habitats, it would not be appropriate for compensatory measures to create Annex 1 woodland habitats. Compensatory measures in that instance should be focussed on creating or otherwise securing replacement Annex 1 heathland habitats.

8. CONCLUSION

- 8.1.1 Given the non-spatial and strategic nature of the revised NPS, it is not possible to know where or when individual NSIPs will come forward and be subject to decision-making on the basis of it. It has therefore not been possible to discount the potential for likely significant effects on European Sites. It has also not been possible to rule out the potential for adverse effects on the integrity of European Sites, again due to the non-spatial and strategic nature of the revised NPS.
- 8.1.2 As the potential for adverse effects on integrity cannot be discounted at this stage, next stages of the HRA process have been completed, with assessment of alternative solutions, IROPI, and compensatory measures.
- 8.1.3 The assessment of alternatives considered:
- The 'do nothing' option, i.e. not revising the existing NPS;
 - Alternative 1, with a greater focus on environmental and social outcomes; and;
 - Alternative 2, with a greater focus on addressing socioeconomic drivers, including 'levelling up'.
- 8.1.4 None of the alternatives considered would entirely avoid the risk of adverse effects to the integrity of European Sites, with Alternative 2 having potential to lead to increased effects on European Sites. The alternatives were also considered to not meet the objectives driving revision of the NPS, as well as the revised NPS itself.
- 8.1.5 It has been concluded that the revised NPS is necessary for Imperative Reasons of Overriding Public Interest. Relevant NSIPs that are subsequently brought forward following adoption of the revised NPS could be brought forward for one or more of the following reasons:
- public safety;
 - human health;
 - environmental improvements; and

- socioeconomic benefits¹⁵.
- 8.1.6 The government has therefore concluded that, subject to the opinion of the Appropriate Authority, the revised NPS passes the IROPI tests, and should be designated.
- 8.1.7 Whilst IROPI are considered to apply to the revised NPS, individual NSIPs must still seek to avoid adverse effects on the integrity of European Sites. It is possible that no NSIPs brought forward under the revised NPS in future would trigger adverse effects on integrity after mitigation. In the event that an individual NSIP cannot avoid adverse effects on integrity of one or more European Sites, project-specific consideration of alternative solutions, IROPI, and compensatory measures would be required.

¹⁵ In accordance with the Habitats Regulations (2017, as amended): (2) Where the site concerned hosts a priority natural habitat type or a priority species, the reasons referred to in paragraph (1) must be either—
(a) reasons relating to human health, public safety or beneficial consequences of primary importance to the environment; or
(b) any other reasons which the plan-making authority, having due regard to the opinion of the Appropriate Authority, considers to be imperative reasons of overriding public interest.

Annex A: Natural England Comment

HRA Methodology Report Section	Natural England comment	Response
N/A – General commentary	<p>The methodology seems quite comprehensive and has clearly been informed by relevant references and presented within the appropriate landscape of case law.</p> <p>We would draw your attention to the following points for which further detail can be found in comments in the attached document.</p>	<p>Noted and addressed in subsequent responses to more detailed comments from NE. References to guidance that could be used by applicants for individual NSIPs have not been referred to, given the potential for these to change over time and the vast number of</p>

	<p>We have added references to other relevant guidance to be taken into consideration including the latest Defra guidance on HRA Habitats regulations assessments: protecting a European site - GOV.UK (www.gov.uk) and Natural England’s approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations - NEA001. The latter is internal Natural England guidance (that has been published) designed to assist Natural England staff when giving practical and proportionate advice to competent authorities and others about their assessment of the potential impacts from road traffic emissions on the qualifying features of European Sites.</p> <p>This Guidance Note has been prompted by the High Court judgment in <i>Wealden v SSCLG</i> [2017] (‘the Wealden Judgment 2017’). It reflects Natural England’s current operational approach to advising competent authorities on air quality matters affecting European Sites. This note may be subject to review in light of operational feedback, new authoritative decisions and any subsequent reform of or changes to Natural England’s general approach to giving its advice.</p> <p>In section 4.6 we have commented on the potential impact pathways that should be considered in the HRA.</p>	<p>references that could be relevant in addition to those covering air quality.</p>
<p>Section 2.1 key legislation</p>	<p>Also needs to include sites identified or required as compensatory measures for adverse effects on SPAs, SAC and Ramsar sites.</p>	<p>This was covered under the 3rd paragraph of the relevant section and under paragraph 2.1.3 of this report.</p>

<p>Section 3.2 policy</p>	<p>Planning Act 2008?</p> <p>Government Circulars (for example, ODPM Circular 06/2005: Biodiversity and Geological Conservation – statutory obligations and their impact within the planning system), and recognised European Commission and Government guidance, for example, European Commission (2001), Assessment of plans and projects significantly affecting Natura 2000 sites – Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC;</p> <p>European Commission (2000) Managing Natura 2000 Sites – the Provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC;</p> <p>Opinion of the Commission (2007/2012) Guidance Document on Article 6(4) of the Habitats Directive 92/43/EEC – Clarification of the concepts of: Alternative Solutions, Imperative Reasons of Overriding Public Interest, Compensatory Measures;</p> <p>European Commission (2011) Guidance Document on Wind Energy Developments and Natura 2000; and</p> <p>European Commission (2011) Guidance Document – The Implementation of Birds and Habitats Directives in Estuaries and Coastal Zones: with particular attention to port development and dredging.</p>	<p>These sources of guidance and policy provisions have been considered through the production of this HRA Report where considered appropriate (see section 3.2).</p> <p>The latter two references (EC guidance on wind energy developments and coastal zones (port development and dredging)) have not been included due to their limited applicability on National Networks projects.</p>
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<p>Section 3.3 Case Law (Wealden)</p>	<p>http://publications.naturalengland.org.uk/publication/4720542048845824</p> <p>This is internal guidance designed to assist Natural England staff when giving practical and proportionate advice to competent authorities and others about their assessment of the potential impacts from road traffic emissions on the qualifying features of European Sites. This Guidance Note has been prompted by the High Court judgment in <i>Wealden v SSCLG</i> [2017] ('the Wealden Judgment 2017').</p> <p>This Guidance Note has been drafted to reflect Natural England's current operational approach to advising competent authorities on air quality matters affecting European Sites. External stakeholders should be mindful that this note may be subject to review in light of operational feedback, new authoritative decisions and any subsequent reform of or changes to Natural England's general approach to giving its advice.</p>	<p>References to guidance that could be used by applicants for individual NSIPs have not been referred to, given the potential for these to change over time and the vast number of references that could be relevant in addition to those covering air quality.</p> <p>The NEA001 Guidance Note has been referred to in this HRA Report in relation to the zone of influence of air quality impacts from National Networks projects (see Table 4.2).</p>
<p>Section 4.3 HRA Screening Methodology</p>	<p>See Defra guidance: https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site</p>	<p>This guidance has been referred to through production of the HRA Report and is referenced in Section 3.2.</p>

<p>Section 4.6 Impact Pathways Bullet 2</p>	<p>Could be damage to sites, both direct loss and indirect, e.g., due to PM deposition. Also to species, e.g., birds and noise.</p>	<p>Indirect impacts were considered in subsequent bullets in the list of impact pathways in the HRA Methodology Report. Table 4.1 of this HRA Report includes reference to these impact pathways.</p>
<p>Section 4.6 Impact Pathways Bullet 4</p>	<p>Disruption to the natural processes that support the site's designated features. Also, a reduction in the amount or quality of designated habitats or the habitats that support designated species and a limit to the potential for restoring designated habitats in the future.</p>	<p>Table 4.1 of this HRA Report includes reference to these impact pathways.</p>
<p>Section 4.6 Impact Pathways Bullet 6</p>	<p>Also, indirect effects on the affected network.</p>	<p>The potential for air quality impacts and subsequent effects from road projects is included in Table 4.1 of this HRA Report.</p>
<p>Section 5.1 Appropriate Assessment methodology</p>	<p>As stated in the Defra guidance it will also need to 'consider ways to avoid or reduce (mitigate) any potential for an 'adverse effect on the integrity of the site'.</p>	<p>Mitigation was discussed in Section 5.4 of the HRA Methodology Report. Mitigation is considered in Section 5.4 of this HRA Report.</p>

<p>Section 5.3 in-combination effects</p>	<p>Seems to suggest sign posting to lower level plans and projects. Can the AA also identify mitigation for the NPS too?</p>	<p>The subsequent Section 5.4 of the HRA Methodology Report addressed mitigation within the revised NPS. This Section of the HRA Methodology Report simply described the necessary generic level of assessment of in-combination effects within the revised NPS. Mitigating measures included within the revised NPS are described in Table 5.1 of this HRA Report. Mitigation measures which may be applicable for individual NSIPs are considered in Table 5.2.</p>
<p>Section 5.4 Mitigation</p>	<p>The HRA of the Plan must show that there are viable mitigation measures, albeit requiring further detailed design, and that the projects are free to modify the proposal to the extent required to ensure no adverse effects.</p>	<p>We do not agree that the HRA must describe viable mitigation measures. It can only describe those that may be appropriate at the project level, commensurate with the level of detail available. Given the uncertainty regarding the effects of individual NSIPs, this</p>

		HRA Report has concluded that it is not possible to determine no adverse effects on integrity and moved on to consideration of alternatives and IROPI.
Section 5.4 Mitigation	For example, indicate what further assessment may be necessary - see also the DTA Integrity test section F10.	Additional detail is provided in Section 5.2 of this HRA Report.
Section 8.1 Consultation	https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site	Reference to the Defra guidance has been included in this HRA Report.