

A47 North Tuddenham to Easton Dualling

Scheme Number: TR010038

Volume 7

7.2 National Policy Statement for National Networks Accordance Tables

APFP Regulation 5(2)(q)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed
Forms and Procedure) Regulations 2009

March 2021

Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning
(Applications: Prescribed Forms and
Procedure) Regulations 2009**

The A47 North Tuddenham to Easton
Development Consent Order 202[x]

**NATIONAL POLICY STATEMENT FOR NATIONAL NETWORKS
ACCORDANCE TABLES**

Regulation Number:	5(2)(q)
Planning Inspectorate Scheme Reference	TR010038
Application Document Reference	TR010038/APP/7.2
BIM Document Reference	PCF STAGE 3 HE551489-GTY-LSI-000-RP-TX-30014 C02
Author:	A47 North Tuddenham to Easton Dualling Project Team, Highways England

Version	Date	Status of Version
Rev.0	March 2021	Application Issue

CONTENTS

1	INTRODUCTION.....	1
1.1	Purpose of this Document	1
	TABLE 1: COMPLIANCE WITH NPS NN CHAPTER 2.....	3
	TABLE 2: COMPLIANCE WITH NPS NN CHAPTER 3.....	9
	TABLE 3: COMPLIANCE WITH NPS NN CHAPTER 4.....	20
	TABLE 4: COMPLIANCE WITH NPS NN CHAPTER 5.....	40

1 INTRODUCTION

1.1 Purpose of this Document

- 1.1.1 The National Policy Statement for National Networks (NPS NN) Accordance Tables relate to an application made by Highways England (the applicant) to the Secretary of State for Transport via the Planning Inspectorate (the Inspectorate) under the Planning Act 2008 (the 2008 Act) for a Development Consent Order (DCO). If made, the DCO would grant the Applicant the powers to undertake the A47 North Tuddenham to Easton Dualling (the Scheme).
- 1.1.2 The NPS NN sets out the Government's policies to deliver Nationally Significant Infrastructure Projects (NSIPs) on the national road and rail networks in England. It provides planning guidance for promoters of NSIPs and the basis for the examination by Examining Authority and decisions by the Secretary of State. Further details about the NPS NN can be found in the Case for Scheme (**TR010038/APP/7.1**).
- 1.1.3 The Accordance Tables provide an assessment of the Scheme's strategic alignment and conformity with the NPS NN and are set out as follows:
- Table 1: Scheme's conformity with NPS NN Chapter 2 – The need for development of the national networks and Government's policy
 - Table 2: Scheme's conformity with NPS NN Chapter 3 – Wider Government policy on national networks
 - Table 3: Scheme's conformity with NPS NN Chapter 4 – Assessment principles
 - Table 4: Scheme's conformity with NPS NN Chapter 5 – Generic impacts
- 1.1.4 Each relevant paragraph in the NPS NN is set out with adjacent commentary as to the extent of compliance by the Scheme with its terms. Those paragraphs with key overarching message have been highlighted to aid the reader.
- 1.1.5 The Accordance Tables reference other relevant documentation submitted as part of the Application and provide a summary where appropriate. The following documents and assessments have been used to inform the completion of the Accordance Tables:
- Draft Development Consent Order (**TR010038/APP/3.1**)
 - Consents and Agreements Position Statement (**TR010038/APP/3.3**)
 - Consultation Report and Annexes (**TR010038/APP/5.1 and 5.2**)
 - Environmental Statement, including Figures, Appendices and Non-Technical Summary (**TR010038/APP/6.1, 6.2, 6.3 and 6.4**)
 - Flood Risk Assessment, ES Appendix 13.1 (**TR010038/APP/6.3**)
 - Drainage Strategy Report, ES Appendix 13.2 (**TR010038/APP/6.3**)
 - Statement Relating to Statutory Nuisance (**TR010038/APP/6.7**)
 - Environmental Masterplan (**TR010038/APP/6.8**)

- Habitat Regulations Assessment (**TR010038/APP/6.9**)
- Case for the Scheme (**TR010038/APP/7.1**)
- Scheme Design Report (**TR010038/APP/7.3**)
- Environmental Management Plan (**TR010038/APP/7.4**)
- Equalities Impact Assessment (**TR010038/APP/7.6**)

TABLE 1: COMPLIANCE WITH NPS NN CHAPTER 2

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
<p>2.1 (The need for development of the national networks and Government's policy)</p>	<p>The national road and rail networks that connect our cities, regions and international gateways play a significant part in supporting economic growth, as well as existing economic activity and productivity and in facilitating passenger, business and leisure journeys across the country. Well-connected and high-performing networks with sufficient capacity are vital to meet the country's long-term needs and support a prosperous economy.</p>	<p>The A47 North Tuddenham to Easton dualling scheme (the Scheme) forms part of a package of proposals for the A47 corridor to achieve a modern standard dual carriageway, improving the vital connection between Peterborough, Kings Lynn Norwich and Great Yarmouth, and include the upgrade of the single carriageway sections on the route to dual carriageway.</p> <p>The Case for the Scheme (TR010038/APP/7.1) demonstrates the need for the Scheme to upgrade the section of single carriageway from North Tuddenham to Easton on the A47. The single carriageway acts as a bottleneck and leads to longer and unreliable journey times. The Scheme will improve traffic flow, reduce journey times on the route and increase route safety and resilience. It will also support economic growth by making journeys safer and more reliable as presented in this NPS NN paragraph 2.2 (see below).</p>
<p>2.2</p>	<p>There is a critical need to improve the national networks to address road congestion and crowding on the railways to provide safe, expeditious and resilient networks that better support social and economic activity; and to provide a transport network that is capable of stimulating and supporting economic growth. Improvements may also be required to address the impact of the national networks on quality of life and environmental factors.</p>	<p>The Scheme will create appropriate capacity to cope with peak demand and growth on the SRN at this location, ensuring a free flowing, safe, reliable and resilient network for the future. Sections 4.12 to 4.14 of the Transport Assessment, in the Case for Scheme (TR010038/APP/7.1), summarise the positive operational impacts of the Scheme on: journey times and congestion; the local road network and resilience; walking, cycling and public transport; and accidents.</p> <p>The economic appraisal of the Scheme has adopted a 60-year appraisal period and used a Benefit to Cost Ratio (BCR), in accordance with Department for Transport (DfT) guidelines, to compare the Scheme cost to its benefits over this period. This is set out in the Case for the Scheme Chapter 5 Economic Case Overview (TR010038/APP/7.1).</p> <p>Considerations include, user benefits during operation, disbenefits during construction, accident savings, monetised greenhouse gas, air quality, noise impacts, journey time reliability, wider economic impacts, and the social and distributional impacts. Sections 5.3 and 5.4 of the Case for the Scheme</p>

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<p>(TR010038/APP/7.1) summarise the economic assessment results in both qualitative and quantitative terms.</p> <p>The Scheme will generate £246.9 million (m) of travel time savings due to reductions in congestion, though there will be a disbenefit of -£35.1m vehicle operating costs due to increased speed and fuel consumption. There will also be construction disbenefits from journey delays (-£13.5m). Total environment benefits over the 60-year appraisal period would include: greenhouse gases £21.6m and air quality £2.5m. There would be a noise disbenefit of -£1.42m.</p> <p>Journey time reliability benefits would be worth £6.9m, while the wider economic benefits of £48.9m are mainly derived from the agglomeration assessment. This suggests that business users are the main beneficiaries from the enhanced connectivity and congestion reductions brought about by the Scheme and that there will be an overall, long-term positive impact. In terms of road safety, there will be an £11.5m benefit through accident savings.</p> <p>A distributional analysis has also been undertaken to consider the variance of impacts across different social groups to identify those who would gain or lose, with an emphasis on the potential impact on equality. In this particular regard, the analysis finds that while there are mainly beneficial or neutral impacts, the Scheme would have a moderate adverse noise impact on some socially vulnerable groups (schools, carehomes and day centres) and moderate adverse impacts on the air quality of some deprived income groups. There will be a slight adverse impact on the most deprived sector in income terms in relation to affordability. However, this relates to value for money, not changes to road charges or fares.</p> <p>The Scheme generates a present value benefit of £211.8m. The total Scheme costs are £122.9m (present value) with an assumption that none of the costs will be funded from developer contributions. The value for the total wider economic impacts is about £48.9m, whilst for journey time reliability it is £6.9m. The resulting quantitative calculation, which takes into account journey time reliability and the wider economic benefits, gives an adjusted BCR of 2.2. This represents 'high' value for money, based on DfT guidelines.</p>

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
2.4	<p>The pressure on our networks is expected to increase even further as the long-term drivers for demand to travel - GDP and population - are forecast to increase substantially over coming years. Under central forecasts, road traffic is forecast to increase by 30% and rail journeys by 40%, rail freight has the potential to nearly double by 2030.</p>	<p>Chapter 4 Transport Assessment in the Case for Scheme (TR010038/APP/7.1) has assessed current and future network performance.</p> <p>The modelling analysis indicates that the forecast local and regional traffic growth will cause a significant increase in delays along the A47 as well as on the local side road network. The Scheme, however, provides the required capacity improvements to allow for the forecasted traffic growth.</p> <p>In terms of operational traffic impacts on the highway network, the modelling assessments show the Scheme is operating successfully with 2040 forecast demand. The junction improvements provided by the Scheme generate benefits with respect to congestion relief as well as road safety.</p>
2.6	<p>There is also a need for development on the national networks to support national and local economic growth and regeneration, particularly in the most disadvantaged areas. Improved and new transport links can facilitate economic growth by bringing businesses closer to their workers, their markets and each other. This can help rebalance the economy.</p>	<p>Congestion, delays and unreliable journey times caused by inefficient transport infrastructure have a negative impact on the economy. Norwich, Cambridge and Peterborough are among the fastest growing cities in the country. Congestion and poor journey time reliability are a constraint to both local businesses and tourism and the visitor economy.</p> <p>The estimated wider economic benefits have been quantified in Chapter 5 Economic Case Overview within the Case for the Scheme (TR010038/APP/7.1).</p> <p>Journey time reliability benefits would be worth £6.9m, while the wider economic benefits of £48.9m are mainly derived from the agglomeration assessment. This suggests that business users are the main beneficiaries from the enhanced connectivity and congestion reductions brought about by the Scheme and that there will be an overall, long-term positive impact.</p> <p>The response to NPS NN Paragraph 2.2 above provides detail in relation to the distributional analysis and variance of impacts across different social groups.</p>
2.7	<p>In some cases, there may be a need for development to improve resilience on the networks to adapt to climate change</p>	<p>Environmental Statement (ES) Chapter 13 Road Drainage and the Water Environment (TR010038/APP/6.1) and the Flood Risk Assessment (ES Appendix 13.1, in TR010038/APP/6.3) consider the impact of flooding as a result of climate</p>

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	and extreme weather events rather than just tackling a congestion problem.	<p>change and describe how the Scheme has been designed to minimise: the risk of flooding as a result of the new works; and the risk of flooding to the Scheme, by incorporating current design standards and future climate change allowances to improve its resilience.</p> <p>ES Chapter 14 Climate (TR010038/APP/6.1) considers the Scheme's effect on climate (i.e. increases in carbon emissions) as well as the potential vulnerability of the Scheme to climate change (i.e. the resilience of Scheme assets to projected changes in climate). The Scheme has been deemed resilient (see Section 14.12).</p>
2.9	Broader environment, safety and accessibility goals will also generate requirements for development. In particular, development will be needed to address safety problems, enhance the environment or enhance accessibility for Non-Motorised Users. In their current state, without development, the national networks will act as a constraint to sustainable economic growth, quality of life and wider environmental objectives.	The Scheme's objectives, set out in Chapter 3 of the Case for the Scheme (TR010038/APP/7.1), are to deliver a design which not only supports economic growth and achieves value for money but critically will result in a safer, more free flowing network which is integrated and accessible to all road and non-motorised users. Where possible the Scheme will minimise impacts and improve the environment for those receptors along the route of the new and existing road. How the Scheme meets these objectives is demonstrated in the Case for the Scheme Table 3.1 (TR010038/APP/7.1).
2.16	<p>Traffic congestion constrains the economy and impacts negatively on quality of life by:</p> <ul style="list-style-type: none"> • Constraining existing economic activity as well as economic growth, by increasing costs to businesses, damaging their competitiveness and making it harder for them to access export markets. Businesses regularly consider access to good roads and other transport connections as key criteria in making decisions about where to locate. • Leading to a marked deterioration in the experience of road users. For some, particularly those with time-pressured journeys, congestion can cause frustration and stress, as well as inconvenience, reducing quality of life. • Constraining job opportunities as workers have more difficulty accessing labour markets. 	<p>The single carriageway between North Tuddenham and Easton experiences high levels of congestion, acting as a bottleneck and leading to longer and unreliable journey times along the A47 as well as on the local side road network.</p> <p>Chapter 4, the Transport Assessment, in the Case of Scheme (TR010038/APP/7.1), demonstrates that the Scheme will:</p> <ul style="list-style-type: none"> • provide additional capacity and improved journey times to encourage housing and economic growth in the local area as well as across the A47 corridor linking Norwich to Peterborough • provide additional capacity along the A47 and reduce delays on the connected side roads of Wood Lane, Berrys Lane and Taverham as well as the Norwich Western Link. This encourages growth in the local area from the Easton residential and food enterprise park developments, as well as providing capacity for future regional traffic growth up to 2040 • improve accessibility for local communities by reducing congestion along the A47 corridors. The Scheme also improves connectivity for local traffic

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<ul style="list-style-type: none"> causing more environmental problems, with more emissions per vehicle and greater problems of blight and intrusion for people nearby. <p>This is especially true where traffic is routed through small communities or sensitive environmental areas.</p>	<p>movements by integrating the existing A47 alignment into the local road network</p> <ul style="list-style-type: none"> improve safety operational issues by reducing congestion along the A47 and by converting at-grade junctions to grade separated junctions significantly reduce road traffic congestion in that journey times in the 2040 Do Something scenario are less than the 2015 base year improve cycling, walking and other vulnerable users as a result of new cycling and walking infrastructure. <p>NPS NN Paragraph 2.2 above summarises the likely wider economic growth attributed to the development of the Scheme.</p> <p>The ES (TR010038/APP/6.1) presents the assessment of the Scheme's impacts on the existing environment and people living near the junction.</p>
2.17	<p>The national road network is already under significant pressure. It is estimated that around 16% of all travel time in 2010 was spent delayed in traffic, and that congestion has significant economic costs: in 2010 the direct costs of congestion on the Strategic Road Network in England were estimated at £1.9 billion per annum.</p>	<p>See response to NPS NN paragraph 2.2 above.</p>
2.22	<p>Without improving the road network, including its performance, it will be difficult to support further economic development, employment and housing and this will impede economic growth and reduce people's quality of life. The Government has therefore concluded that at strategic level there is a compelling need for development of the national road network.</p>	<p>See response to NPS NN paragraphs 2.1, 2.2, 2.6, 2.10 and 2.12.</p> <p>The Scheme will upgrade the existing single carriageway A47 between North Tuddenham and Easton (which forms part of the SRN that will be upgraded by a package of proposals including the Scheme) to a modern, high performing dual carriageway to provide additional capacity and improved journey times for future regional traffic growth up to 2040.</p> <p>The upgrade will also improve safety, reduce accidents on the route, provide new cycling and walking infrastructure, and help generate economic benefits for Norwich, Broadland, Breckland and South Norfolk.</p>

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
2.24	<p>The Government's policy on development of the Strategic Road Network is not that of predicting traffic growth and then providing for that growth regardless. Individual Schemes will be brought forward to tackle specific issues, including those of safety, rather than to meet unconstrained traffic growth (that is, 'predict and provide').</p>	<p>See response to NPS NN paragraph 2.22</p> <p>The Scheme is included in the Department of Transport's Road Investment Strategy 2 (RIS2)¹ for 2020-2025 (page 101): "A47 North Tuddenham to Easton – dualling of the single carriageway section of the A47 between Norwich and Dereham, linking together two existing sections of dual carriageway".</p> <p>The Case for the Scheme, Chapter 3 (TR010038/APP/7.1) sets out the need for the Scheme. The single carriageway between North Tuddenham and Easton experiences high levels of congestion, acting as a bottleneck and leading to longer and unreliable journey times along the A47 as well as on the local side road network. This section of the A47 also has a poor safety record.</p> <p>As well as providing additional capacity and improved journey times to encourage housing and economic growth, the Scheme will:</p> <ul style="list-style-type: none"> • improve safety operational issues by reducing congestion along the A47 and by converting at-grade junctions to grade separated junctions • over a 60 year period, save a total of 291 accidents and 47 KSIs (killed or seriously injured) • improve cycling, walking and other vulnerable users as a result of new cycling and walking infrastructure. <p>Sections 4.13 and 4.14 of the Case for Scheme (TR010038/APP/7.1) explore the road safety and walking, cycling and horse-riding benefits in more detail.</p>

¹ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/872252/road-investment-strategy-2-2020-2025.pdf

TABLE 2: COMPLIANCE WITH NPS NN CHAPTER 3

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
<p>3.2 (Environment and social impacts)</p>	<p>The Government recognises that for development of the national road and rail networks to be sustainable these should be designed to minimise social and environmental impacts and improve quality of life.</p>	<p>The objectives of the Scheme recognise that the design should minimise its environmental (Objective 4) and social (Objective 5) impacts and thereby, together with the other Objectives, improve quality of life as follows:</p> <ol style="list-style-type: none"> 1. Supporting economic growth: The Scheme aims to reduce congestion related delay, improve journey time reliability and increase the overall capacity of the A47. This will help contribute to sustainable economic and residential development opportunities. 2. A safer and reliable network: Reduce accidents, improve operational safety issues at junctions along the A47, provide safer crossings for non-motorists and improve journey time reliability, leading to a reduction in driver stress. 3. A more free-flowing network: Increase resilience to coping with incidents such as collisions, breakdowns, maintenance and extreme weather. The improvements will reduce congestion, make journey times more reliable and increase capacity for future growth 4. Improved environment: Protect the environment by minimising adverse impacts and where possible, improve the area biodiversity such as the planting of native habitat. 5. An accessible and integrated network: Provide a safer route between communities for cyclists, walkers, horse-riders and other vulnerable users of the Network, taking into consideration how their requirements can be addressed with improved connectivity.

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<p>6. Value for money: To ensure that the Scheme is affordable and delivers good value for money.</p> <p>An Environmental Impact Assessment (EIA) has been undertaken, and proposals developed to mitigate likely significant environment effects arising from the Scheme. Where specific design, mitigation and enhancement measures have been applied, these are reported under each individual technical chapter (TR010038/APP/6.1) and summarised in the Environmental Statement (ES) Non-Technical Summary (TR010038/APP/6.4).</p> <p>The likely significant effects identified are summarised as:</p> <ul style="list-style-type: none"> • Air Quality – No significant residual air quality effects have been identified for the construction or operational phase on human health or ecological sensitive receptors. There will be some beneficial effects due to a diversion of traffic flows away from some receptor locations. • Noise and Vibration – During construction, one significant, moderate, temporary noise effect is predicted as a result of the drainage basin works adjacent to Acorn Barn. Furthermore, there are a large number of receptors that could experience significant effects due to noise from night-time or weekend works and this will also need further consideration once further detail regarding the scope and duration of these work has been defined. At the operational stage there will be a number of significant residual traffic noise effects, both adverse and beneficial, amongst the 1,877 noise sensitive receptors considered. These operational effects are as follows: <ul style="list-style-type: none"> • Significant beneficial noise effects are predicted at: <ul style="list-style-type: none"> ○ Noise Important Area 5200 ○ Three receptors in Hockering (outside of NIA 5200) ○ Two receptors on Ringland Road ○ Two receptors on The Broadway ○ Three PRoWs: Hockering FP3, FP10 and FP11, • Significant adverse noise effects are predicted at:

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<ul style="list-style-type: none"> ○ Eighty-three receptors in Lyng or on Lyng Road (north of the A47) ○ Two receptors on Church Lane, East Tuddenham ○ Six receptors on Mattishall Lane ○ Hall Farm and Hall Farm Cottages ○ St Andrew's Church, Honingham ○ Hockering Nursery and Newgate, Gypsy Lane, Hockering ○ Seven PRoWs: Hockering FP8, FP7, East Tuddenham FP9, Honingham RB1, Lyng RB1, RB12 and FP17 <p>Noise mitigation measures embedded in the Scheme design comprise low noise surface along the A47 dual carriageway and noise barriers/fences. No significant effects are expected at the remaining Noise Important Areas (5201, 5202 and 6287), and the Scheme is predicted to provide an enhancement at Noise Important Area 5202.</p> <ul style="list-style-type: none"> • Landscape and Visual – During construction, there would be a slight adverse (not significant) effect on landscape features and a moderate adverse (significant) effect on landscape character due to the removal of, and change to, existing vegetation and land use. There would also be significant adverse effects on visual receptors, including residential receptors and users of footpaths, in close proximity to the construction activities. During operation, at year 1 there would be a significant adverse effect on landscape character around the river corridors but by year 15, as a result of landscape planting, this would be not significant. At year 1 there would be significant adverse effect on some visual receptors, but by year 15 the establishment of Scheme planting would reduce most impacts to not significant. However, four properties that would retain a moderate adverse (significant) effect at year 15. Overall this assessment concludes that the Scheme would not result in an overall significant residual impact on landscape and visual amenity.

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<ul style="list-style-type: none"> Cultural Heritage – Archaeological recording prior to construction will help mitigate potential unavoidable impact on archaeological heritage. During construction and operation there will be adverse residual effects on the setting of St Peter’s Church (Grade I), St Andrew’s Church (Grade II*), Berry Hall (Grade II) and Church Farm House (Grade II). However, there will also be beneficial effects during operation on four other Listed Buildings: St Michael’s Church (Grade I), Manor Farmhouse (Grade II), Manor House (Grade II) and Yew Tree Farmhouse (Grade II) due to moving the A47 further away. Two Milestones within the Scheme will be recorded, conserved and restored and subsequently proposed for listing. There would be a slight impact on Honingham Park, a non-designated historic park and garden. However, there would be a neutral residual impact archaeological remains and no significant effects on the historic landscape. Biodiversity – Following mitigation there will be a moderate adverse residual effect on hedgerows, deciduous woodland, and grazing marsh as a result of the long maturity period for planting; though grasslands and ponds will have a slight beneficial effect. There will be a slight adverse residual effect on breeding birds, barn owls and wintering birds and a significant large adverse residual effect on bats due to the time lag between loss of habitat and the remediated habitats reaching maturity. However, the residual effect on barn owl would be moderate adverse until landowners have been identified and agreements are in place to install suitable nest boxes; thereafter the residual effect will decrease to slight adverse. No significant residual effect, either directly or indirectly, on designated sites and most other receptors, including protected species water vole, great crested newt and badger. A neutral residual effect is anticipated for all other biodiversity resources. Road Drainage and the Water Environment – During both construction and operation there will not be any significant impacts caused to the water environment through measures embedded in the design and the implementation of mitigation measures in the Environmental Management Plan (TR010038/APP/7.4). In this regard

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<p>the construction and operational activities affecting the River Tud and indirectly the River Wensum and River Yare will be compliant with the requirements of the Water Framework Directive (WFD) and not prevent future attainment of WFD water body targets. Overall the Scheme is not expected to give rise to significant adverse (moderate or greater) residual effects during the construction or operational phases.</p> <ul style="list-style-type: none"> Geology and Soils - The Scheme will result in an unavoidable permanent loss of Grades 2, 3a and 3b agricultural land. The residual significance of these losses ranges from moderate to very large adverse. A permanent loss of <1ha of Grade 4 land would be neutral effect. The temporary land take areas would be restored to agriculture following the completion of the construction phase. No significant residual effects have been identified relating to contamination risks, to human health or controlled waters, and geology. A Soil Management Plan will be developed, as part, in the Environmental Management Plan (TR010038/APP/7.4), to preserve land quality on the temporary land take areas and make effective reuse of the soils taken from the areas of permanent land take. Provided the mitigation and monitoring measures are effective and areas of temporary land take are restored to their former condition, the long-term residual effects on agricultural soils would be limited to the permanent loss of agricultural land. Population and Human Health – Overall, impacts on population and human health will be mainly non-significant once the Scheme is operational. Significant impacts on land use and accessibility include: temporary and permanent land-take from agricultural land holdings; temporary disruption as a result of road closures and traffic management during the construction phase; temporary and permanent diversions to Public Rights of Way; land take from part of a consecrated field adjacent to St Peter’s Church; and permanent changes in community severance and in access to private and business properties. Beneficial effects would be experienced by pedestrians and cyclists travelling along the new footways and cycleways, lower traffic levels and slower speeds on the existing A47 and the provision of safe crossing

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<p>points. There will be some adverse amenity effects for human health, specifically in terms of noise and dust during construction and noise during operation which would be mitigated through measures in the EMP (TR010038/APP/7.4). There is no impact on the Food Enterprise Zone, and this is discussed in the Scheme Design Report (TR010038/APP/7.3).</p> <ul style="list-style-type: none"> • Material Assets and Waste - No significant effects have been identified for the construction or operational phase. • Climate - In accordance with DMRB LA 114, carbon emissions associated with the Scheme have been provided in the context of published UK carbon budgets. Efforts to minimise carbon emissions throughout the design and construction of the Scheme at this stage are outlined. Recommendations to further reduce carbon emissions through design considerations and recalculation of carbon emissions at later stages of the design process have also been made. The vulnerability of Scheme assets to projected changes in climate during operation has been assessed, and the Scheme has been deemed resilient to the current projections. <p>Following design and mitigation efforts, some residual significant effects will be unavoidable, though these have been minimised as far as possible. Policy and guidance recognises that not all impacts are able to be resolved in large scale Schemes and the Case for the Scheme (TR0100038/APP/7.1) considers the above residual impacts against the longer term and wider benefits of the Scheme in environmental, safety, social and economic terms.</p>
3.3	In delivering new schemes, the Government expects applicants to avoid and mitigate environmental and social impacts in line with the principles set out in the NPPF and the Government's planning guidance. Applicants should also provide evidence that they have considered reasonable opportunities to deliver environmental and social benefits as part of schemes.	<p>See the response to NPS NN paragraph 3.2.</p> <p>At the core of the NPPF is a presumption in favour of sustainable development. The principles of the NPPF relevant to each of the topics covered in the ES (TR010038/APP/6.1), and local planning policies that need to be considered, are set out in Chapter 6 of the Case for the Scheme (TR010038/APP/7.1).</p>

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<p>The Case for the Scheme (TR010038/APP/7.1) shows that the Scheme is compliant with local and national planning policy. The ES provides details of the opportunities for social and environmental benefits of the Scheme considered as part of the EIA process. Each chapter of the ES sets out how environmental impacts of the Scheme would be mitigated, in line with current relevant guidance and accepted principles. Reasonable opportunities for environmental and social benefits have also been considered as part of the EIA process and would also be an ongoing aim of the detailed design process to deliver environmental and social benefits. Examples include:</p> <ul style="list-style-type: none"> • enhancement of the existing and provision of new WCH routes • minimisation of construction effects on receptors and the environment • appointment of a community relations officer • preservation of archaeological resources and heritage assets • seeking to make carbon savings.
3.5	<p>Outside the nationally significant infrastructure project regime, Government policy is to bring forward targeted works to address existing environmental problems on the Strategic Road Network and improve the performance of the network. This includes reconnecting habitats and ecosystems, enhancing the settings of historic and cultural heritage features, respecting and enhancing landscape character, improving water quality and reducing flood risk, avoiding significant adverse impacts from noise and vibration and addressing areas of poor air quality.</p>	<p>One of the Scheme's objectives is to protect and create an improved environment by minimising adverse impacts and where possible, improving the areas biodiversity such as the planting of native habitat.</p> <p>Chapters 5 to 14 of the ES (TR010038/APP/6.1) set out the measured baseline conditions used for assessment. Where existing environmental issues occur, their impact has been taken together with the potential impact of the Scheme and any mitigation has been designed to address and eradicate the entire impact or where possible enhance the current baseline situation. In carrying out mitigation, the targeted works will therefore address existing issues where possible.</p> <p>All mitigation measures are set out as appropriate within the above chapters of the ES and are reflected on the drawings accompanying the application.</p>
3.6	<p>Transport will play an important part in meeting the Government's legally binding carbon targets and other environmental targets. As part of this there is a need to shift to greener technologies and fuels, and to promote lower</p>	<p>Chapter 14 of the ES (TR010038/APP/6.1) considers the impact of the Scheme on climate change and vice versa.</p>

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<p>carbon transport choices. Over the next decade, the biggest reduction in emissions from domestic transport is likely to come from efficiency improvements in conventional vehicles, specifically cars and vans, driven primarily by EU targets for new vehicle CO2 performance. Electrification of the railway will also support reductions in carbon.</p>	<p>In accordance with the Design Manual for Roads and Bridges (DMRB) LA 114² 'Climate', the Scheme has sought to minimise carbon emissions as far as possible in order to contribute to the UK's net reduction in carbon emissions. Recommendations to further reduce carbon emissions through design considerations and recalculation of carbon emissions at later stages of the design process have also been made.</p> <p>Consideration of how to mitigate effects on climate (i.e. carbon emissions associated with the Scheme) has been fundamental to the design process in accordance with the principles of PAS 2080: Carbon Management in Infrastructure (i.e. baselining, target setting and monitoring).</p> <p>The inclusion of new walking and cycling routes, as described in ES Chapter 12 Population and Human Health (Section 12.8, TR010038/APP/6.1), also align to sustainable and integrated transport objectives. These new provisions introduce greener transport options locally.</p>
3.10	<p>The Government's overall vision and approach on road safety is set out in the Strategic Framework for Road Safety. It is a vision in which Britain remains a world leader in road safety; where highway authorities are empowered to take informed decisions within their area; where driver and rider training gives learners the skills they need to be safe on our roads; and where tough measures are taken against the minority of offenders who deliberately choose to drive dangerously. As set out in paragraphs to 4.66, Scheme promoters are expected to take opportunities to improve road safety, including introducing the most modern and effective safety measures where proportionate.</p>	<p>Chapter 5 of the Case for the Scheme (TR010038/APP/7.1) summarises the economic assessment of the Scheme</p> <p>The Economic Assessment has calculated the accident cost savings in accordance with the Department for Transport's (DfT) online Transport Appraisal Guidance (WebTAG) using the Cost and Benefit to Accidents – Light Touch (COBALT). This assessment forecasts that, over the 60-year assessment period, the Scheme will provide an accident reduction benefit of £11.5 million. Over a 60-year timeframe the Scheme's improvements, when compared to the 'without Scheme' scenario, will save a total of 291 accidents and 47 KSIs (killed or seriously injured).</p> <p>ES Chapter 12 Population and Human Health (TR010038/APP/6.1) also sets out the beneficial effects of the Scheme's WCH route improvements in safety terms.</p>

² <https://www.standardsforhighways.co.uk/dmrb/search/87f12e4f-70f8-4eed-8aed-9e9a42e24183>

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
3.15	The Government is committed to providing people with options to choose sustainable modes and making door-to-door journeys by sustainable means an attractive and convenient option. This is essential to reducing carbon emissions from transport.	<p>ES Chapter 12 Population and Human Health (TR010038/APP/6.1) notes that the Scheme would help to promote sustainable modes of transport, by providing improved facilities for walkers and cyclists (see details in response to NPS NN paragraph 3.17, below).</p> <p>The inclusion of new walker and cyclist routes, as described in Section 4.14 of the Case for the Scheme (TR010038/APP/7.1) and ES Chapter 12 Population and Human Health (TR010038/APP/6.1), align to sustainable and integrated transport objectives.</p> <p>See also the response to NPS NN paragraph 3.2.</p>
3.17 (Sustainable transport)	There is a direct role for the national road network to play in helping pedestrians and cyclists. The Government expects applicants to use reasonable endeavours to address the needs of cyclists and pedestrians in the design of new schemes. The Government also expects applicants to identify opportunities to invest in infrastructure in locations where the national road network severs communities and acts as a barrier to cycling and walking, by correcting historic problems, retrofitting the latest solutions and ensuring that it is easy and safe for cyclists to use junctions.	<p>The Scheme would provide new walker and cyclist facilities, which include creating a continuous link between Hockering and Easton for WCH users. The new facilities to be provided and the facilities to be replaced are detailed in Section 4.14 of the Case for the Scheme (TR010038/APP/7.1) and ES Chapter 12 Population and Human Health (TR010038/APP/6.1). The inclusion of new or improved walking and cycling routes align to sustainable and integrated transport objectives and will mitigate against a number of issues of severance raised during the consultations.</p> <p>The Scheme would stop up and abandon a remnant of PRoW Hockering FP12 that currently serves no purpose for walker, cyclist and horse-rider users and is no longer required.</p> <p>In terms of severance there are a significant number of amenities in the areas surrounding the Scheme and a large proportion of older people. Due to the increased capacity of the A47 mainline and the reduced traffic levels on the local road network, the elderly will be able to access key amenities such as hospitals, GP surgeries and places of worship easier and safer with reduced walking times. The rest of the vulnerable groups within the study area are also expected to benefit from the Scheme in the same way but not of the same magnitude.</p>
3.19	The Government is committed to creating a more accessible and inclusive transport network that provides a range of	The key objectives of the Scheme are set out in the Case for the Scheme (Section 3.5 and Table 3.1, TR010038/APP/7.1).

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<p>opportunities and choices for people to connect with jobs, services and friends and family.</p>	<p>In relation to accessibility and inclusivity, the A47 provides strategic road access from Norwich to Peterborough, Kings Lynn, the Midlands and the north of England, so plays a vital role in supporting the economy in this area.</p> <p>The Scheme has considered local communities and access to the road network, providing a safer route between communities for walkers, cyclists, horse-riders and vulnerable users.</p>
3.20	<p>The Government's strategy for improving accessibility for disabled people is set out in Transport for Everyone: an action plan to improve accessibility for all. In particular:</p> <ul style="list-style-type: none"> • The Government will continue to work to ensure that the bus and train fleets comply with modern access standards by 2020, and to improve rail station access for passengers with reduced mobility. The private car will continue to play an important role, providing disabled people with independence where other forms of transport are not accessible or available. • The Government expects applicants to improve access, wherever possible, on and around the national networks by designing and delivering Schemes that take account of the accessibility requirements of all those who use, or are affected by, national networks infrastructure, including disabled users. All reasonable opportunities to deliver improvements in accessibility on and to the existing national road network should also be taken wherever appropriate. 	<p>The Highways England design standards and Scheme specific details are compliant with current national legislation set out under the Equality Act 2010 and associated Public Sector Equality Duty (PSED).</p> <p>One of the Scheme objectives is to provide a safer route between communities for WCH and vulnerable users of the network. This includes new walking infrastructure and re-using the existing A47 for these purposes. There will be an overall beneficial impact in terms of severance as part of the qualitative social and distributional impact assessment. Overall, the impact is moderate beneficial due to the elderly and other vulnerable groups being able to access key amenities, such as hospitals, GP surgeries and places of worship, easier and safer with reduced walking times.</p> <p>See also the response to NPS NN paragraph 3.19.</p>
3.21 (Accessibility)	<p>Applicants are reminded of their duty to promote equality and to consider the needs of disabled people as part of their normal practice. Applicants are expected to comply with any obligations under the Equalities Act 2010</p>	<p>An EqIA (TR010038/APP7.6) has been prepared for the Scheme and meets the requirements of the Equalities Act 2010. The EqIA has considered the needs of these protected characteristic groups within the context of the Scheme.</p> <p>Based on the conclusions of the EIA and an understanding of the EDIT results, it is not anticipated that the Scheme would significantly impact people within the protected characteristic groups as set out in the Equality Act 2010.</p> <p>See the response to NPS NN paragraphs 3.19 and 3.20.</p>

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
3.22	Severance can be a problem in some locations. Where appropriate applicants should seek to deliver improvements that reduce community severance and improve accessibility.	<p>ES Chapter 12 Population and Human Health (TR010038/APP/6.1) describes the assessment of severance in terms of separation of communities to assets and areas of community land, alterations to private properties (including their access) and severance of walker, cyclist and horse-rider routes.</p> <p>The existing A47 traffic volumes already create severance and accessibility issues for local communities due to congestion or safety risks joining or crossing the A47. The Scheme has been designed to manage impacts of severance to agricultural land and buildings, plus access along Low Road, Church Lane (East Tuddenham), Hockering FP12, Berrys Lane and Blind Lane and Church Lane (Easton).</p> <p>During construction, access along the local road network for local residents and businesses across the study area may be disrupted whilst traffic management measures are in place, resulting in longer journey times and a degree of severance between communities, businesses and their facilities.</p> <p>During operation, there would be severance for private property and housing, community land, community assets, development land and businesses in the communities of Great Witchingham, Upper Wensum, Mattishall and Easton. Access to some private properties and businesses may change as a result of the Scheme; e.g. properties along Church Lane, Rotten Row and Hillcrest changes to access would result in a Moderate adverse effect. In some cases access to farm yards and fields will be severed, but new access arrangements have been designed where possible. Users of three footpaths (Hockering FP7, Honingham RB1 and Ringland Lane / Dog Lane crossing) are anticipated to experience significant residual adverse effects as a result of path closures and journey length increases.</p> <p>Beneficially, a new combined footway/cycleway will be provided along a section of the Scheme and safe crossings are being provided east of Honingham roundabout and in the location of the existing Easton roundabout. This would improve connectivity between Hockering and Easton for pedestrians and cyclists. A new crossing of the Scheme would be facilitated by the Mattishall</p>

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<p>Lane underbridge.</p> <p>A qualitative social and distributional impact assessment has been undertaken in accordance with the Department of Transport (May 2019) Transport Appraisal Guidance (TAG) Databook. Chapter 5 Economic Case Overview in the Case for Scheme (TR010038/APP/7.1) reports on its findings that there are overall moderate beneficial impacts due to the elderly and other vulnerable groups being able to access key amenities, such as hospitals, GP surgeries and places of worship, more easily and safely with reduced walking times.</p>

TABLE 3: COMPLIANCE WITH NPS NN CHAPTER 4

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
4.3	<p>In considering any proposed development, and in particular, when weighing its adverse impacts against its benefits, the Examining Authority and the Secretary of State should take into account:</p> <ul style="list-style-type: none"> • its potential benefits, including the facilitation of economic development, including job creation, housing and environmental improvement, and any long term or wider benefits • its potential adverse impacts, including any longer-term and cumulative adverse impacts, as well as any measures to avoid, reduce or compensate for any adverse impacts. 	<p>The Scheme offers an effective solution to the congestion along the A47 between North Tuddenham and Easton. It will remove a long-standing bottleneck for road users, helping to create a high performing dual carriageway supporting the local and regional economic growth.</p> <p>The Case for the Scheme (TR010038/APP/7.1) gathers together and presents the Scheme benefits, setting out the need for the Scheme, the Scheme development and options considered, long term justification in transport and economic terms and how it satisfies national, regional and local planning, transport and economic policy.</p> <p>Potential environmental and cumulative impacts are considered in the EIA process as detailed throughout the topic chapters of the ES (TR010038/APP/6.1). Design, mitigation and enhancement measures to avoid, reduce or compensate are also reported in this document.</p>
4.4	<p>In this context, environmental, safety, social and economic benefits and adverse impacts, should be considered at</p>	<p>The ES (TR010038/APP/6.1) reports on the EIA, which has been carried out with consideration for potential effects at national, regional and local levels.</p>

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	national, regional and local levels. These may be identified in this NPS, or elsewhere.	Chapter 4 Transport Assessment of the Case for Scheme (TR010038/APP/7.1) considers the transport effects of the Scheme on the strategic and local highway network with respect to traffic congestion, road safety and local sustainable modes of transport. The economic benefits of the Scheme are summarised within Chapter 5 (Economic Case Overview) of the Case for the Scheme and Chapter 6 considers the national, regional and local planning, transport and economic policy context.
4.5	Applications for road and rail projects (with the exception of those for SRFIs, for which the position is covered in paragraph 4.8 below) will normally be supported by a business case prepared in accordance with Treasury Green Book principles. This business case provides the basis for investment decisions on road and rail projects. The business case will normally be developed based on the Department's Transport Business Case guidance and WebTAG guidance. The economic case prepared for a transport business case will assess the economic, environmental and social impacts of a development. The information provided will be proportionate to the development. This information will be important for the Examining Authority and the Secretary of State's consideration of the adverse impacts and benefits of a proposed development. It is expected that NSIP schemes brought forward through the development consent order process by virtue of Section 35 of the Planning Act 2008, should also meet this requirement.	Chapter 5 Economic Case Overview of the Case for the Scheme (TR010038/APP/7.1) summarises the economic assessment of the Scheme, presenting the anticipated economic benefits and dis-benefits. After accounting for delays associated with construction and maintenance and, taking into account monetised journey time reliability and the wider economic benefits, the combined monetised value of benefits of the Scheme is forecast to be £211.8 million. The assessment has used the Transport Appraisal Guidance (TAG) Databook (May 2019).
4.6 (local transport model)	Applications for road and rail projects should usually be supported by a local transport model to provide sufficiently accurate detail of the impacts of a project. The modelling will usually include national level factors around the key drivers of transport demand such as economic growth, demographic change, travel costs and labour market participation, as well as local factors. The Examining Authority and the Secretary of State do not need to be	A strategic multi-modal model covering all strategic traffic movements across Norwich and wider Breckland, Broadland and South Norfolk area was used as the basis to derive forecasted traffic impacts of the Scheme's performance across the wider area. Known as the Norwich Area Transport Strategy Model (NATS), the Model was utilised for preliminary design work and has been developed in line with the DfT's Transport Appraisal Guidance (TAG). Within the Scheme's area of impact, the model contains a detailed zoning and network resolution and has been calibrated to a high level of accuracy.

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<p>concerned with the national methodology and national assumptions around the key drivers of transport demand. We do encourage an assessment of the benefits and costs of schemes under high and low growth scenarios, in addition to the core case. The modelling should be proportionate to the scale of the scheme and include appropriate sensitivity analysis to consider the impact of uncertainty on project impacts.</p>	<p>In both the future year scenarios, 2025 and 2040, a Do Minimum (DM) and a Do Something (DS) network scenario has been modelled. Following the TAG guidance, developments with the likelihood of at least 'near certain' or 'more than likely' were included in the forecast estimates. Sensitivity tests were also undertaken to consider the impact of changes to traffic growth and uncertainty of assumptions, such as presence or absence of the Norwich Western Link.</p> <p>Details are provided in the Transport Assessment presented in Chapter 4 of the Case for the Scheme (TR010038/APP/7.1).</p> <p>The Case for the Scheme Chapter 5 Economic Case Overview (TR010038/APP/7.1) summarises the economic assessment of the Scheme and presents the anticipated benefits and disbenefits associated with the Scheme.</p>
4.9	<p>The Examining Authority should only recommend, and the Secretary of State should only impose, requirements in relation to a development consent, that are necessary, relevant to planning, relevant to the development to be consented, enforceable, precise, and reasonable in all other respects. Guidance on the use of planning conditions or any successor to it, should be taken into account where requirements are proposed.</p>	<p>The draft Development Consent Order (DCO) (TR010038/APP/3.1) includes proposed Requirements which are considered to be necessary, relevant, enforceable, precise and reasonable and have taken into account guidance on the use of planning conditions.</p> <p>The Explanatory Memorandum (TR010038/APP/3.2) explains the purpose and effect of each provision in the draft DCO, including the requirements.</p>
4.10	<p>Planning obligations should only be sought where they are necessary to make the development acceptable in planning terms, directly related to the proposed development and fairly and reasonably related in scale and kind to the development.</p>	<p>It is not anticipated that a planning obligation is needed and none are proposed.</p>
4.12	<p>In considering applications for linear infrastructure, decision-makers will need to bear in mind the specific conditions under which such developments must be designed. The generic impacts section of this NPS has been written to take these differences into account.</p>	<p>The Scheme has been assessed against the generic impacts as listed in the NPS NN and these assessments are detailed within these Accordance Tables and the Case for the Scheme (TR010038/APP/7.1).</p>
4.13	<p>This NPS does not identify locations at which development of the road and rail networks should be brought forward.</p>	<p>The Scheme forms part of a package of proposals for the A47 corridor to achieve a modern standard dual carriageway and improve the vital SRN connection</p>

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<p>However, the road and rail networks provide access for people, business and goods between places and so the location of development will usually be determined by economic activity and population and the location of existing transport networks.</p>	<p>between Peterborough, Kings Lynn Norwich and Great Yarmouth. Congestion, delays and unreliable journey times caused by inefficient transport infrastructure have a negative impact on the economy. Norwich, Cambridge and Peterborough are among the fastest growing cities in the country.</p> <p>The Scheme will upgrade the existing A47 between North Tuddenham and Easton from single carriageway to a modern, higher performing dual carriageway. The single carriageway acts as a bottleneck and leading to longer and unreliable journey times. The new dual carriageway will improve the traffic flow, reduce journey times on the route and increase the route safety and resilience. The Scheme is also intended to support economic growth by making journeys safer and more reliable as presented in this NPS NN paragraph 2.2.</p>
<p>4.15 (Environmental Impact Assessment)</p>	<p>All proposals for projects that are subject to the European Union's Environmental Impact Assessment Directive and are likely to have significant effects on the environment, must be accompanied by an environmental statement (ES), describing the aspects of the environment likely to be significantly affected by the project. The Directive specifically requires an environmental impact assessment to identify, describe and assess effects on human beings, fauna and flora, soil, water, air, climate, the landscape, material assets and cultural heritage, and the interaction between them. Schedule 4 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 sets out the information that should be included in the environmental statement including a description of the likely significant effects of the proposed project on the environment, covering the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the project, and also the measures envisaged for avoiding or mitigating significant adverse effects. Further guidance can be found in the online planning portal. In this NPS, the terms 'effects', 'impacts' or 'benefits' should accordingly be</p>	<p>An ES (TR010038/APP/6.1) has been prepared in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.</p> <p>The ES presents a description of the Scheme, the likely significant environmental and any cumulative effects of the Scheme with other developments and the measures to avoid, prevent, reduce or if possible, offset any identified significant adverse effects.</p> <p>The scope of the ES complies with the EIA Scoping Opinion (TR010038/APP/6.6). ES Chapter 4 Environmental Assessment Methodology (TR010038/APP/6.1) sets out the approach taken to prepare the EIA.</p>

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	understood to mean likely significant effects, impacts or benefits.	
4.16	When considering significant cumulative effects, any environmental statement should provide information on how the effects of the applicant's proposal would combine and interact with the effects of other development (including projects for which consent has been granted, as well as those already in existence).	<p>Chapter 15 Cumulative Effects Assessment of the ES (TR010038/APP/6.1) provides an assessment of the likely significant effects of the Scheme in combination with other past, present and reasonably foreseeable development as well as impact interactions. This assessment has followed the methodology in Planning Inspectorate Advice Note Seventeen.</p> <p>This chapter also identifies the developments that have been considered in the cumulative assessment. Past and present development is considered as part of the baseline and, in some cases, reflects the sensitivity of the receptors assessed. The developments considered in the assessment include those recommended for inclusion by the local planning authorities.</p> <p>As a result of the residual effects of the Scheme, as a single project there is potential for significant cumulative effects for some receptors at Low Road, Mattishall Lane, Hill View, Sandy Lane, Church Lane and Rotten Row. There is also potential for significant cumulative effects to occur at St Andrew's Church, Oak Farm and Hall Farm.</p> <p>Best standard practice construction approaches in combination with community liaison would likely help to mitigate the cumulative impact of the effects. A planting design to mitigate visual impacts by screening the property views is presented in the Environmental Masterplan (TR010038/APP/6.8).</p> <p>Notwithstanding, best standard practice construction approaches in combination with community liaison would likely help mitigate the cumulative impact of the effects. A planting design to mitigate visual impacts by screening the property views is presented in the Environmental Masterplan (TR010038/APP/6.8).</p> <p>The assessment of noise and vibration of the Scheme combined with the Norwich Western Link has identified additional (beneficial and adverse) significant effects.</p> <p>The residual effects during the construction and operational phases of the Scheme with of all of the other developments are not anticipated to contribute</p>

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		beyond that of the effects identified in the preceding environmental chapters.
4.17	The Examining Authority should consider how significant cumulative effects and the interrelationship between effects might as a whole affect the environment, even though they may be acceptable when considered on an individual basis with mitigation measures in place.	See response to NPS NN paragraph 4.16 above.
4.18	In some instances, it may not be possible at the time of the application for development consent for all aspects of the proposal to have been settled in precise detail. Where this is the case, the applicant should explain in its application which elements of the proposal have yet to be finalised, and the reasons why this is the case.	<p>The Scheme design is described in ES Chapter 2 The Proposed Scheme (TR010038/APP/6.1) and the details shown on the Engineering Drawings (TR010038/APP/2.7) and General Arrangement Plans (TR010038/APP/2.2).</p> <p>At the DCO application stage the Scheme is at a preliminary design stage. The detailed design stage converts the preliminary design into detailed design and build construction drawings for use by the build Contractor. At this stage the preliminary design will be refined and informed by additional investigations, such as targeted, more accurate topographical surveys. However, any design refinement would be controlled by the following factors:</p> <ul style="list-style-type: none"> • The draft DCO (TR010038/APP/3.1) which contains powers of lateral and vertical deviation as shown on the Works Plans (TR010038/APP/2.4). • The limits of deviation as described in the draft DCO (TR010038/APP/3.1) and the Explanatory Memorandum (TR010038/APP/3.2). • The approach to the assessment of the limits of deviation in the EIA as set out in ES Chapter 2 The Proposed Scheme (TR010038/APP/6.1).
4.19	Where some details are still to be finalised, applicants are advised to set out in the environmental statement, to the best of their knowledge, what the maximum extent of the proposed development may be (for example in terms of site area) and assess the potential adverse effects which the project could have to ensure that the impacts of the project as it may be constructed have been properly assessed.	<p>See response to NPS NN paragraph 4.18 above.</p> <p>A reasonable worst case assumption has been used throughout the EIA process.</p>

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
4.20	Should the Secretary of State decide to grant development consent for an application where details are still to be finalised, this will need to be reflected in appropriate development consent requirements in the development consent order. If development consent is granted for a proposal and at a later stage the applicant wishes for technical or commercial reasons to construct it in such a way that it is outside the terms of what has been consented, for example because its extent will be greater than has been provided for in terms of the consent, it will be necessary to apply for a change to be made to the development consent.	The draft requirements set out in the draft DCO (TR010038/APP/3.1) make provision for the detailed design of the Scheme in general accordance with the Works Plans and Engineering Drawings (TR010038/APP/2.4 and TR010038/APP/2.7), subject to any variation agreed in writing by the Secretary of State on the basis that the changes would not give rise to any materially new or materially worse adverse environmental effects in comparison with those reported in the ES (TR010038/APP/6.1).
4.21	In cases where the EIA Directive does not apply to a project, and an environmental statement is not therefore required, the applicant should instead provide information proportionate to the project on the likely environmental, social and economic effects	Not applicable. The EIA Directive and therefore the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 apply to the Scheme.
4.22 (Habitats Regulations Assessment)	Prior to granting a Development Consent Order, the Secretary of State must, under the Habitats Regulations, consider whether it is possible that the project could have a significant effect on the objectives of a European site, or on any site to which the same protection is applied as a matter of policy, either alone or in combination with other plans or projects. Applicants should also refer to paragraphs 5.20 to 5.38 of this national policy statement on biodiversity and geological conservation and to paragraphs 5.3 to 5.15 on air quality. The applicant should seek the advice of Natural England and, where appropriate, for cross-boundary impacts, Natural Resources Wales and Scottish Natural Heritage to ensure that impacts on European sites in Wales and Scotland are adequately considered.	A Report to Inform Habitat Regulations Assessment (TR010038/APP/6.9) has been produced that concludes there would be no reasonably foreseeable significant effects on the River Wensum Special Area of Conservation (SAC) and Paston Great Barn SAC as a result of the Scheme during construction or operation. Natural England has agreed to the approach and conclusions of the impact assessment in relation to European sites, as presented in the Report.
4.23	Applicants are required to provide sufficient information with their applications for development consent to enable the Secretary of State to carry out an Appropriate Assessment if required. This information should include details of any	See comments in response to NPS NN paragraph 4.22. The Report to Inform the Habitat Regulations Assessment (TR010038/APP/6.9) concludes that there would be no likely significant effects upon European Sites.

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<p>measures that are proposed to minimise or avoid any likely significant effects on a European site. The information provided may also assist the Secretary of State in concluding that an appropriate assessment is not required because significant effects on European sites are sufficiently unlikely that they can be excluded.</p>	<p>Appendix A DMRB Screening Matrix considered effects on the River Wensum Special Area of Conservation (SAC) and Paston Great Barn SAC, which is designated for its barbastelle (<i>Barbastella barbastellus</i>) populations. The report demonstrates no likely significant effects on any of the qualifying features of the SAC before mitigation, during construction and operation (alone or in combination with other developments).</p> <p>As no likely significant effects were identified, no mitigation is proposed and an Appropriate Assessment is not anticipated to be required.</p>
4.26	<p>Applicants should comply with all legal requirements and any policy requirements set out in this NPS on the assessment of alternatives. In particular:</p> <ul style="list-style-type: none"> • The EIA Directive requires projects with significant environmental effects to include an outline of the main alternatives studied by the applicant and an indication of the main reasons for the applicant's choice, taking into account the environmental effects. • There may also be other specific legal requirements for the consideration of alternatives, for example, under the Habitats and Water Framework Directives. • There may also be policy requirements in this NPS, for example the flood risk sequential test and the assessment of alternatives for developments in National Parks, the Broads and Areas of Outstanding Natural Beauty (AONB). 	<p>The Case for the Scheme Chapter 4 The Need for the Scheme (TR010038/APP/7.1) and ES Chapter 3 Consideration of Alternatives (TR010038/APP/6.1) summarise the main Scheme alternatives that have been considered.</p> <p>A Water Framework Directive (WFD) assessment has been undertaken and can be found in ES Chapter 13 Road Drainage and the Water Environment (TR010038/APP/6.1) (see Section 13.10).</p> <p>A FRA has been provided as ES Appendix 13.1 (TR010038/APP/6.3). It confirms that the Scheme is classed as 'essential infrastructure' under the NPPF. With regard to the sequential test, although the majority of the Scheme is located within Flood Zone 1 (low risk) it does pass through areas of Flood Zone 2 and 3 (medium and high risk, respectively) immediately surrounding the River Tud.</p> <p>The Scheme is an upgrade to the A47 and therefore needs to run parallel to the existing road. Similarly, it is an essential requirement that the road crosses the River Tud east of Honingham. It is therefore not possible to move the road to be completely outside of the high flood risk zones. Several design iterations have been discussed with the EA and the design has been modified to minimise impact as much as possible. As such, the Scheme meets the requirements of the sequential test.</p>
4.27 (Alternatives)	<p>All projects should be subject to an options appraisal. The appraisal should consider viable modal alternatives and may also consider other options (in light of the paragraphs</p>	<p>The Scheme has been subject to a full options appraisal process as described in the Case for the Scheme (Chapter 2 Scheme Development and Options Considered) (TR010038/APP/7.1) and ES Chapter 3 Consideration of Alternatives</p>

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	3.23 to 3.27 of this NPS). Where projects have been subject to full options appraisal in achieving their status within Road or Rail Investment Strategies or other appropriate policies or investment plans, option testing need not be considered by the examining authority or the decision maker. For national road and rail schemes, proportionate option consideration of alternatives will have been undertaken as part of the investment decision making process. It is not necessary for the Examining Authority and the decision maker to reconsider this process, but they should be satisfied that this assessment has been undertaken.	<p>(TR010038/APP/6.1)</p> <p>The initial feasibility studies and options appraisal used criteria from the DfT's Early Assessment and Sifting Tool which resulted in the Schemes inclusion in the Government's Road Investment Strategy for 2015 to 2020 (RIS1). The Scheme has also been included in RIS2 2020 to 2025.</p>
4.28-4.29 (Criteria for "good design" for national network Infrastructure)	Applicants should include design as an integral consideration from the outset of a proposal. Visual appearance should be a key factor in considering the design of new infrastructure, as well as functionality, fitness for purpose, sustainability and cost. Applying "good design" to national network projects should therefore produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction, matched by an appearance that demonstrates good aesthetics as far as possible.	<p>The Case for the Scheme (Chapter 2 Scheme Development and Options Considered TR010038/APP/7.1) and ES Chapter 3 Consideration of Alternatives (TR010038/APP/6.1) describe the Scheme's development, the options considered and the selection of the preferred option.</p> <p>The Scheme Design Report (TR010038/APP/7.3) considers these factors and explains the further evolution of the design and the measures incorporated into the Scheme.</p>
4.31	A good design should meet the principal objectives of the scheme by eliminating or substantially mitigating the identified problems by improving operational conditions and simultaneously minimising adverse impacts. It should also mitigate any existing adverse impacts wherever possible, for example, in relation to safety or the environment. A good design will also be one that sustains the improvements to operational efficiency for as many years as is practicable, taking into account capital cost, economics and environmental impacts.	<p>See response to NPS NN paragraphs 4.28 and 4.29.</p> <p>The design principles of the Scheme are considered in the Scheme Design Report Chapter 3 Design Principles (TR010038/APP/7.3). This chapter explains that there are 10 principles of good design which should be implemented by a scheme, as identified within Highways England's Strategic Design Panel Progress Report 3³: Good Road Design. These cover the principal objectives identified in the NPS. Accordingly good design:</p> <ul style="list-style-type: none"> • makes roads safe and useful • is inclusive • makes roads understandable

³ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/844039/Strategic_Design_Panel_progress_report_3.pdf

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<ul style="list-style-type: none"> • fills in context • is restrained • is thorough • is environmentally sustainable • is innovative • is long lasting • is a collaborative process. <p>Chapter 3 of the Scheme Design Report (TR010038/APP/7.3) describes how the Scheme considers each of the design principles and how each principle has been applied within the design of the Scheme.</p>
4.33	<p>The applicant should therefore take into account, as far as possible, both functionality (including fitness for purpose and sustainability) and aesthetics (including the scheme's contribution to the quality of the area in which it would be located). Applicants will want to consider the role of technology in delivering new national networks projects. The use of professional, independent advice on the design aspects of a proposal should be considered, to ensure good design principles are embedded into infrastructure proposals.</p>	<p>See response to NPS NN paragraphs 4.29 and 4.31.</p> <p>The design was developed by a professional, independent engineering design consultancy employed by the Applicant. The design applied industry approved standards and good design principles as summarised in the Scheme Design Report (TR010038/APP/7.3). The Scheme Design Report's Chapter 3 Design Principles also reviews the Scheme's functionality in relation to safety, inclusivity and ability of the road layout to be understood in addition to its sustainability and resilience. In terms of aesthetics, the design fits within the built and landscape context and the Scheme is restrained, minimising impact on existing infrastructure and the environment. The design also takes into account materials, innovation, location and appearance of other aspects of the Scheme (eg. cycleways and wetland basins).</p>
4.34	<p>Whilst the applicant may only have limited choice in the physical appearance of some national networks infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting and design measures relative to existing landscape and historical character and function, landscape permeability, landform and vegetation.</p>	<p>See response to NPS NN paragraphs 4.29, 4.31 and 4.33.</p> <p>The Environmental Masterplan (TR010038/APP/6.8) presents the final design and mitigation measures in relation to landscape character, landscape permeability, landform and vegetation and historic character. This has been informed by the technical assessments within the ES (TR010038/APP/6.1) and in collaboration with stakeholder engagement.</p> <p>The following ES chapters (TR010038/APP/6.1) identify design and mitigation</p>

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<p>measures in relation to landscape and historical character and function, landscape permeability, landform and vegetation:</p> <ul style="list-style-type: none"> Chapter 6: Cultural Heritage eg. removal of the screening layer of trees along the northern boundary of St Peter's Church (NHLE1305921) will be replaced with new screening planting beyond which will be installed a green/living noise barrier. These measures are designed to maintain the setting of the churchyard and the church from within the churchyard. Chapter 7: Landscape and Visual effects eg. selecting plant and grass species appropriate to the locality to maintain consistency with the appearance of the area. Chapter 8: Biodiversity eg. trapping and translocation of Great Crested Newts into suitable receptor sites prior to construction and the subsequent enhancement of the site to encourage the species back into the area.
4.35	Applicants should be able to demonstrate in their application how the design process was conducted and how the proposed design evolved. Where a number of different designs were considered, applicants should set out the reasons why the favoured choice has been selected....	See response to NPS NN paragraphs 4.28-29, 4.31, 4.33 and 4.34.
4.38 (Climate change adaptation)	Adaptation is therefore necessary to deal with the potential impacts of these changes that are already happening. New development should be planned to avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the provision of green infrastructure.	<p>ES Chapter 14 Climate (TR010038/APP/6.1) considers the Scheme's effect on climate (i.e. increases in carbon emissions) as well as the vulnerability of the Scheme assets to projected changes in climate during operation. The latest UK Climate Projections have been used and the Scheme has been deemed resilient.</p> <p>A qualitative methodology for assessing the vulnerability of Scheme assets to climate change during operation has been produced in line with DMRB guidance LA 114⁴ Climate and IEMA Climate Change Resilience & Adaptation Guidance (2020)⁵ (see Section 14.4 of ES Chapter 14 Climate, TR010038/APP/6.1).</p> <p>Section 14.9 of the ES, Design Intervention and Mitigation, sets out how, through consultation with the design team, assets of the Scheme (e.g. highways,</p>

⁴ <https://www.standardsforhighways.co.uk/dmr/search/87f12e4f-70f8-4eed-8aed-9e9a42e24183>

⁵ Available to download from <https://www.iema.net/resources/reading-room/2020/06/26/iema-eia-guide-to-climate-change-resilience-and-adaptation-2020>

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<p>pavement and structures) likely to be vulnerable to climate change have adhered to inherent design considerations and standards to account for climate resilience. Specific design considerations are detailed within the individual topic chapters of the ES, e.g. Chapter 13 Road Drainage and the Water Environment (TR010038/APP/6.1). Further, aspects of the design contribute towards the provision of green infrastructure, such as creation of: permanent mammal crossings; SuDS features including new ponds; wetland habitats within some drainage ponds; and new routes for walkers and cyclists.</p> <p>The drainage design includes capacity for climate change projections. The FRA (ES Appendix 13.1, in TR010038/APP/6.3) and ES Chapter 13 (TR010038/APP/6.1) have considered the risk to the Scheme and the risk posed by the Scheme on flooding from all sources. Section 13.10 of ES Chapter 13 shows that with mitigation in place, the Scheme is not expected to give rise to significant adverse (moderate or greater) residual effects during the construction or operational phases. The development is therefore considered appropriate under the requirements of the NPPF and the NPS NN.</p>
4.40	<p>New national networks infrastructure will be typically long-term investments which will need to remain operational over many decades, in the face of a changing climate. Consequently, applicants must consider the impacts of climate change when planning location, design, build and operation. Any accompanying environment statement should set out how the proposal will take account of the projected impacts of climate change.</p>	<p>See response to NPS NN paragraphs 4.38.</p>
4.41	<p>Where transport infrastructure has safety-critical elements and the design life of the asset is 60 years or greater, the applicant should apply the UK Climate Projections 2009 (UKCP09) high emissions scenario (high impact, low likelihood) against the 2080 projections at the 50% probability level.</p>	<p>ES Chapter 14 Climate (Table 14.7) (TR010038/APP/6.1) applies the UKCP18 highest emissions scenario for the 2080s (2080 to 2099) (updated in 2018 from the UKCP09 projections) at the 50% probability level.</p>
4.42	<p>The applicant should take into account the potential impacts of climate change using the latest UK Climate Projections available at the time and ensure any environment statement</p>	<p>See response to NPS NN paragraph 4.41.</p> <p>Efforts to minimise carbon emissions throughout the design and construction of</p>

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	that is prepared identifies appropriate mitigation or adaptation measures. This should cover the estimated lifetime of the new infrastructure...	the Scheme at this stage are outlined in accordance with the requirements set out in DMRB LA 114. ES Chapter 14 Climate (Section 14.9) (TR010038/APP/6.1) identifies mitigation in terms of reductions through design in new road surfacing, earthworks and materials. Recommendations to further reduce carbon emissions through design considerations and recalculation of carbon emissions at later stages of the design process have also been made.
4.43	The applicant should take into account the potential impacts of climate change using the latest UK Climate Projections available at the time and ensure any environment statement that is prepared identifies appropriate mitigation or adaptation measures. This should cover the estimated lifetime of the new infrastructure...	<p>See response to NPS NN paragraphs 4.41 and 4.42.</p> <p>The vulnerability of Scheme assets to projected changes in climate during operation has been assessed, and the Scheme has been deemed resilient to the current projections.</p> <p>The recent UK government announcement on ending the sales of new petrol and diesel vehicles by 2030 will further reduce the Scheme's end user carbon emissions.</p>
4.44	Any adaptation measures should be based on the latest set of UK Climate Projections, the Government's national Climate Change Risk Assessment and consultation with statutory consultation bodies. Any adaptation measures must themselves also be assessed as part of any environmental impact assessment and included in the environment statement, which should set out how and where such measures are proposed to be secured.	<p>See response to NPS NN paragraph 4.41 to 4.43.</p> <p>The latest figures have been used to influence adaptation measures and the 2017 UK Climate Change Risk Assessment has been considered (Section 14.3 of ES Chapter 14 Climate (TR010038/APP/6.1)).</p> <p>The Scheme's vulnerability to climate change is considered in Section 14.11 of ES Chapter 14. The Scheme has been deemed resilient to the current projections.</p> <p>During the design stage, the Design Team were briefed on projected climate changes to ensure that the Scheme would be accordingly resilient. Through consultation with stakeholders and environmental technical specialists, the Design Team ensured those Scheme assets likely to be vulnerable to climate change have adhered to inherent design considerations and standards to account for climate resilience. Specific design considerations are detailed within the individual ES topic chapters (e.g. attenuation basins and dry culverts as described in ES Chapter 13 Road Drainage and the Water Environment (TR010038/APP/6.1)).</p> <p>The Scheme has been deemed resilient and no consequential impacts have been</p>

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		identified (see Section 14.12).
4.45	If any proposed adaptation measures themselves give rise to consequential impacts the Secretary of State should consider the impact in relation to the application as a whole and the impacts guidance set out in this part of this NPS (e.g. on flooding, water resources, biodiversity, landscape and coastal change).	See response to NPS NN paragraphs 4.41 to 4.44.
4.46	Adaptation measures can be required to be implemented at the time of construction where necessary and appropriate to do so.	See response to NPS NN paragraphs 4.41 to 4.44. When necessary and appropriate any adaptation measures will be implemented at the time of construction.
4.48 (Pollution control and other environmental protection Regimes)	Issues relating to discharges or emissions from a proposed project which affect air quality, water quality, land quality and the marine environment, or which include noise and vibration, may be subject to separate regulation under the pollution control framework or other consenting and licensing regimes. Relevant permissions will need to be obtained for any activities within the development that are regulated under those regimes before the activities can be operated.	<p>Details of other regulatory consents to be sought for the Scheme are set out in the Consents and Agreements Position Statement (TR010038/APP/3.3). These could include:</p> <ul style="list-style-type: none"> • protected species licences (e.g. great crested newts, bats, water voles) • waste exemptions to ensure waste exemptions for re-use of material on site are in place (if required) • mobile plant licences for crushing operations or site permits if not using a contractor with their own mobile licences • land drainage consent • Section 61 agreement.
4.50 and 4.51	In deciding an application, the Examining Authority and the Secretary of State should focus on whether the development itself is an acceptable use of the land, and on the impacts of that use, rather than the control of processes, emissions or discharges themselves. They should assess the potential impacts of processes, emissions or discharges to inform decision making, but should work on the assumption that in terms of the control and enforcement, the relevant pollution control regime will be properly applied and enforced. Decisions under the Planning Act should complement but not duplicate those	<p>The Case for the Scheme Chapter 6 Conformity with Planning Policy (TR010038/APP/7.1) sets out the need for the Scheme in this location and how it accords with planning policy in terms of its land use acceptability.</p> <p>The impacts of processes, emissions or discharges from the Scheme are considered throughout the ES (TR010038/APP/6.1). In terms of control and enforcement, the relevant pollution control regime will be properly applied and enforced.</p>

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	taken under the relevant pollution control regime.	
4.53	When an applicant applies for an Environmental Permit, the relevant regulator (the Environment Agency) requires that the application demonstrates that processes are in place to meet all relevant Environmental Permit requirements...	<p>The Consents and Agreements Position Statement (TR010038/APP/3.3) provides details of the various consents that may be required as part of the Scheme. At this point (i.e. the submission of the Application), the majority of consents and all of the powers required have been included, or addressed, within the draft DCO (TR010038/APP/3.1) as permitted by various provisions of the 2008 Act.</p> <p>An Environment Agency permit will be required for groundwater dewatering and discharging activities. Construction activities planned over and within 8m of a main river (the River Tud) and its floodplain will require a Flood Risk Activity Permit from the Environment Agency. ES Chapter 13 Road Drainage and the Water Environment (TR010038/APP/6.1) assesses the effects associated with the works that will require a permit from the Environment Agency and has proposed implementation of a construction-phase drainage system. The Environment Agency has been consulted throughout the development of the Scheme and the mitigation proposed is consistent with best practice guidelines.</p> <p>Chapter 10 Material Assets and Waste discusses compliance with the Environment Agency's waste management permitting requirements.</p>
4.54	Applicants are encouraged to begin pre-application discussions with the Environment Agency as early as possible. It is however expected that an applicant will have first thought through the requirements as a starting point for discussion. Some consents require a significant amount of preparation; as an example, the Environment Agency suggests that applicants should start work towards submitting the permit application at least 6 months prior to the submission of an application for a Development Consent Order, where they wish to parallel track the applications. This will help ensure that applications take account of all relevant environmental considerations and that the relevant regulators are able to provide timely advice and assurance to the Examining Authority.	<p>The Environment Agency has been consulted throughout the development of the Scheme. The mitigation proposed is consistent with best practice guidelines and the outcome of the assessments undertaken follows DMRB guidelines.</p> <p>Further details can be found in Chapter 13 Road Drainage and the Water Environment of the ES (TR010038/APP/6.1) and in the Drainage Strategy (Appendix 13.2 to the ES (TR010038/APP/6.3))</p> <p>A Statement of Common Ground will be developed with the Environment Agency to record the matters that have been agreed between both parties and to identify any matters where comments still need to be resolved.</p> <p>See the response to NPS NN paragraph 4.53 for overview of permits required from the Environment Agency. Highways England will continue to engage with the Environment Agency ahead of the main construction works.</p>

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
4.55	<p>The Secretary of State should be satisfied that development consent can be granted taking full account of environmental impacts. This will require close cooperation with the Environment Agency and/or the pollution control authority, and other relevant bodies, such as the MMO, Natural England, Drainage Boards, and water and sewerage undertakers, to ensure that in the case of potentially polluting developments:</p> <ul style="list-style-type: none"> - the relevant pollution control authority is satisfied that potential releases can be adequately regulated under the pollution control framework; and - the effects of existing sources of pollution in and around the project are not such that the cumulative effects of pollution when the proposed development is added would make that development unacceptable, particularly in relation to statutory environmental quality limits. 	<p>The EMP (TR010038/APP/7.4) outlines the control of processes, emissions and discharges through the construction process to mitigate any identified adverse construction impacts.</p> <p>ES Chapter 13 Road Drainage and the Water Environment (TR010038/APP/6.1) sets out the pollution control measures that have been included within the design in order to mitigate potential pollution effects during operation.</p> <p>ES Chapter 15 Cumulative Effects Assessment (TR010038/APP/6.1) assesses cumulative effects arising from the Scheme. No cumulative effects in relation to pollution are predicted.</p> <p>The Environment Agency, Anglian Water, Norfolk Rivers Internal Drainage Board and Norfolk County Council (as the Lead Local Flood Authority) have been consulted during the development of the design, assessment and, where relevant, mitigation proposals. The respective agreed positions will be detailed in Statements of Common Ground.</p> <p>See also the response to NPS NN paragraph 4.54.</p>
4.56	<p>The Secretary of State should not refuse consent on the basis of regulated impacts unless there is good reason to believe that any relevant necessary operational pollution control permits or licences or other consents will not subsequently be granted.</p>	<p>Details of other regulatory consents to be sought for the Scheme are set out in the Consents and Agreements Position Statement (TR010038/APP/3.3), which concludes that there is no reason to consider that the relevant permits or licences will not be subsequently granted.</p>
4.58	<p>It is very important that during the examination of a nationally significant infrastructure project, possible sources of nuisance under section 79(1) of the 1990 Act, and how they may be mitigated or limited are considered by the Examining Authority so they can recommend appropriate requirements that the Secretary of State might include in any subsequent order granting development consent. More</p>	<p>Potential sources of nuisance have been considered with regard to proceedings in respect of statutory nuisance and are dealt with in the Statement of Statutory Nuisances (TR010038/APP/6.6) in accordance with section 79(1) of the Environmental Protection Act 1990 and regulation 5(2)(f) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (the APFP Regulations 2009).</p>

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	information on the consideration of possible sources of nuisance is at paragraphs 5.81-5.89.	
4.60 (Safety)	New highways developments provide an opportunity to make significant safety improvements. Some developments may have safety as a key objective, but even where safety is not the main driver of a development the opportunity should be taken to improve safety, including introducing the most modern and effective safety measures where proportionate. Highway developments can potentially generate significant accident reduction benefits when they are well designed.	The Scheme has safety as a key objective. Section 4.6 of the Case for Scheme (Chapter 4 Transport Assessment, TR010038/APP/7.1) summarises the analysis of accidents and concludes overall that the Scheme would have a beneficial impact in terms of reducing accidents. The assessment states that over the 60-year appraisal period, the Scheme will provide an accident reduction benefit with a monetised value forecast to be £11.5 million. Over a 60-year timeframe the Scheme's improvements, when compared to the 'without Scheme' scenario, will save a total of 291 accidents and 47 KSIs (killed or seriously injured).
4.61	The applicant should undertake an objective assessment of the impact of the proposed development on safety including the impact of any mitigation measures. This should use the methodology outlined in the guidance from DfT (WebTAG) and from the Highways Agency.	Section 4.6 of the Case for Scheme (Chapter 4 Transport Assessment, TR010038/APP/7.1) provides an assessment of overall impact of the Scheme on road safety, in accordance with WebTAG ⁶ and Highways England (formerly Highways Agency) guidance.
4.62	They should also put in place arrangements for undertaking the road safety audit process. Road safety audits are a mandatory requirement for all trunk road highway improvement schemes in the UK (including motorways).	The requirements resulting from the road safety audit undertaken at Preliminary Design stage have been incorporated into the Scheme design where appropriate.
4.64	The applicant should be able to demonstrate that their scheme is consistent with the Highways Agency's Safety Framework for the Strategic Road Network and with the national Strategic Framework for Road Safety. Applicants will wish to show that they have taken all steps that are reasonably required to: <ul style="list-style-type: none"> • minimise the risk of death and injury arising from their development; • contribute to an overall reduction in road casualties; 	See comments in response to NPS NN paragraph 4.60 above. Measures to minimise the risk of death and injury arising from the construction of the Scheme are specified within the EMP (TR010038/APP/ 7.4). The Scheme has prioritised safety in design and is modelled to decrease the overall number of accidents on the road network by creating a high-quality dual carriageway, with the provision of new cycling and walking infrastructure, providing safety improvements for walkers, cyclists and other vulnerable users. The Scheme is therefore consistent with the Highways Agency's Safety

⁶ DfT WebTAG Unit M1 Section 4.2: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/427118/webtag-tag-unit-m1-1-principles-of-modelling-and-forecasting.pdf

DfT WebTAG Unit M3.1 Section 2.7.3: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/888363/tag-unit-m3.1-highway-assignment-modelling.pdf

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<ul style="list-style-type: none"> • contribute to an overall reduction in the number of unplanned incidents; and • contribute to improvements in road safety for walkers and cyclists. 	<p>Framework for the Strategic Road Network and with the national Strategic Framework for Road Safety.</p> <p>Further details on the accident analysis and forecast Scheme safety benefits are included in the Case for the Scheme (Chapter 4 Transport Assessment, TR010038/APP7.1).</p>
4.65	<p>They will also wish to demonstrate that:</p> <ul style="list-style-type: none"> • they have considered the safety implications of their project from the outset; and • they are putting in place rigorous processes for monitoring and evaluating safety. 	<p>See comments in response to NPS NN paragraph 4.60 and 4.64, above.</p> <p>Safety has been taken into account through the consideration of alternatives and the design evolution of the Scheme, as illustrated throughout Chapters 2 and 3 of the Case for the Scheme (TR010038/APP7.1). Details on the accident analysis and forecast safety benefits associated with the Scheme design is included in Chapter 4 of the Case for the Scheme (TR010038/APP7.1).</p> <p>Sections 3.15 to 3.22 in the Outline Traffic Management Plan refers to ongoing safety and monitoring during construction (TR010038/APP7.5).</p> <p>Once the Scheme is complete there will be a Road Safety Audit undertaken to assess the safety and operational aspects of the Scheme to inform the operational management of the Scheme.</p>
4.66	<p>The Secretary of State should not grant development consent unless satisfied that all reasonable steps have been taken and will be taken to:</p> <ul style="list-style-type: none"> - minimise the risk of road casualties arising from the Scheme; and - contribute to an overall improvement in the safety of the Strategic Road Network. 	<p>The Scheme has been designed to comply with DMRB which sets the standards for safe highway design. Section 4.13 of the Case for Scheme (TR010038/APP7.1) provides an analysis of accident risk and safety and demonstrates that over a 60-year timeframe the Scheme will reduce the risk of road casualties by saving a total of 291 accidents and 47 killed or seriously injured. Therefore, overall the Scheme would contribute to an overall improvement in the safety of the SRN on the A47 between North Tuddenham and Easton.</p> <p>The Scheme has been designed to improve safety for walkers, cyclists and horse-riders as set out in Section 12.9 of ES Chapter 12 Population and Human Health (TR010038/APP6.1).</p>

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
4.76 - 4.77 (Security considerations)	Where national security implications have been identified, the applicant should consult with relevant security experts from CPNI [Centre for the Protection of National Infrastructure] and the Department for Transport, to ensure that physical, procedural and personnel security measures have been adequately considered in the design process and that adequate consideration has been given to the management of security risks. If CPNI and the Department for Transport (as appropriate) are satisfied that security issues have been adequately addressed in the project when the application is submitted, they will provide confirmation of this to the Secretary of State, and the Examining Authority should not need to give any further consideration to the details of the security measures during the examination. The applicant should only include such information in the application as is necessary to enable the Examining Authority to examine the development consent issues and make a properly informed recommendation on the application.	No national security issues were identified in developing the Scheme and no issues were identified in the responses to the statutory consultation. Therefore, there was no requirements to consult relevant security experts from CPNI and the Department for Transport.
4.81 - 4.82 (Health)	As described in the relevant sections of this NPS, where the proposed project has likely significant environmental impacts that would have an effect on human beings, any environmental statement should identify and set out the assessment of any likely significant adverse health impacts. The applicant should identify measures to avoid, reduce or compensate for adverse health impacts as appropriate. These impacts may affect people simultaneously, so the applicant, and the Secretary of State (in determining an application for development consent) should consider the cumulative impact on health.	The Scheme has been subject to an EIA, which has considered impacts on sensitive human receptors (including local communities, walkers and cyclists) from air quality and noise. ES Chapter 12 Population and Human Health (TR010038/APP/6.1) specifically reports the impacts and proposed mitigation for the effects of the Scheme's construction and operation on the following human health determinants and health outcomes: <ul style="list-style-type: none"> • access to healthcare facilities • access to community, recreation and education facilities • existing and predicted levels of air and noise pollution • stress and anxiety • landscape amenity • sources of pollution • safety

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<p>ES Chapter 15 Cumulative Effects Assessment (TR010038/APP/6.1) assesses the combined health impacts of the Scheme with other know proposed or committed developments.</p> <p>During construction, there are likely to be some negative effects on local communities and potentially their health in terms of the noise and dust created by construction activities and the visual amenity impact of construction vehicles and compounds. Mitigation measures, including an EMP (TR010038/APP/7.4) and provision of a Community Liaison Officer, will seek to minimise these effects as far as possible. During operation, it is not expected that there would be any negative health outcomes, but there may be some positive health outcomes in terms of noise and accessibility for some receptors.</p>

TABLE 4: COMPLIANCE WITH NPS NN CHAPTER 5

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
<p>5.6 - 5.9 (Air quality)</p>	<p>Where the impacts of the project (both on and off-scheme) are likely to have significant air quality effects in relation to meeting EIA requirements and / or affect the UK's ability to comply with the Air Quality Directive, the applicant should undertake an assessment of the impacts of the proposed project as part of the environmental statement.</p> <p>The environmental statement should describe: existing air quality levels;</p> <ul style="list-style-type: none"> • forecasts of air quality at the time of opening, assuming that the scheme is not built (the future baseline) and taking account of the impact of the scheme; and • any significant air quality effects, their mitigation and any residual effects, distinguishing between the construction and operation stages and taking account of the impact of road traffic generated by the project. <p>Defra publishes future national projections of air quality 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.</p> <p>In addition to information on the likely significant effects of a project in relation to EIA, the Secretary of State must be provided with a judgement on the risk as to whether the project would affect the UK's ability to comply with the Air Quality Directive.</p>	<p>ES Chapter 5 Air Quality (TR010038/APP/6.1) accords with the requirements of NPS NN paragraphs 5.6 to 5.9. The future baseline has been assessed, taking into account the future air quality if the Scheme did not proceed. The detailed modelling also utilises Defra projections of air quality which allow for the effects of government initiatives to reduce emissions from motor vehicles and other sources.</p> <p>The results of the air quality assessment conclude that there will be no significant effects on air quality at either the construction or operational stage of the Scheme.</p> <p>ES Chapter 5 Air Quality (TR010038/APP/6.1) also states that the Scheme will not affect the UK's ability to comply with the Air Quality Directive (see Section 5.8 of the ES).</p>
<p>5.10</p>	<p>The Secretary of State should consider air quality impacts over the wider area likely to be affected, as well as in the near vicinity of the Scheme. In all cases the Secretary of State must take account of relevant statutory air quality thresholds set out in domestic and European legislation. Where a project is likely to</p>	<p>The local and wider study areas for the air quality assessment are defined in ES Chapter 5 Air Quality (Section 5.6, TR010038/APP/6.1).</p> <p>During operation, the air quality assessment has concluded there are no significant adverse effects with the Scheme for human health and ecological</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	lead to a breach of the air quality thresholds, the applicant should work with the relevant authorities to secure appropriate mitigation measures with a view to ensuring so far as possible that those thresholds are not breached.	receptors. The predicted air quality concentrations are below the air quality objective thresholds, set under the Environment Act 1995, at all receptors. With no significant effects being reported, no mitigation measures have been proposed.
5.11	<p>Air quality considerations are likely to be particularly relevant where schemes are proposed:</p> <ul style="list-style-type: none"> • within or adjacent to Air Quality Management Areas (AQMA); roads identified as being above Limit Values or nature conservation sites (including Natura 2000 sites and SSSIs, including those outside England); and <p>where changes are sufficient to bring about the need for a new AQMA or change the size of an existing AQMA; or bring about changes to exceed the Limit Values, or where they may have the potential to impact on nature conservation sites.</p>	<p>The local and wider study areas defined in ES Chapter 5 Air Quality (TR010038/APP/6.1) are not within or adjacent to any AQMAs. There are no AQMAs currently declared in by Broadland District Council or South Norfolk Council. Breckland has one AQMA 24km west of the Scheme, and the closest AQMA is over 3km to the north-east, within Norwich City Centre, and does not fall within the modelled study area.</p> <p>There are 21 sites of ecological importance within 200m of the affected road network that are sensitive to nitrogen deposition, including the River Wensum Special Area of Conservation (SAC) and Hockering Wood Site of Special Interest (SSSI). ES Chapter 5 Air Quality confirms that there are no significant effects recorded in this respect.</p> <p>The Scheme would not bring about the need for a new AQMA, change the size of an existing AQMA or bring about changes to exceed the Limit Values.</p>
5.12	The Secretary of State must give air quality considerations substantial weight where, after taking into account mitigation, a project would lead to a significant air quality impact in relation to EIA and / or where they lead to a deterioration in air quality in a zone/agglomeration.	Compliance of the Scheme with the EU Air Quality Directive is presented in Chapter 5 Air Quality of the ES (TR010038/APP/6.1). During construction, it is unlikely there would be a significant effect on air quality or affect the UK's ability to comply with the Air Quality Directive. The assessment has concluded there would be no significant effects from the operation of the Scheme.
5.13	<p>The Secretary of State should refuse consent where, after taking into account mitigation, the air quality impacts of the scheme will:</p> <ul style="list-style-type: none"> • result in a zone/agglomeration which is currently reported as being compliant with the Air Quality Directive becoming non-compliant; or • affect the ability of a non-compliant area to achieve compliance within the most recent timescales reported to the European Commission at the time of the decision. 	<p>See response to NPS NN paragraph 5.11</p> <p>Neither of these scenarios will occur with the Scheme.</p>
5.14 - 5.15	The Secretary of State should consider whether mitigation measures put forward by the applicant are acceptable. A	See response to NPS NN paragraph 5.10

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<p>management plan may help codify mitigation at this stage. 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.</p> <p>Mitigation measures may affect the project design, layout, construction, operation and/or may comprise measures to improve air 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 speed control. The implementation of mitigation measures may require working with partners to support their delivery.</p>	<p>ES Chapter 5 Air Quality (Section 5.8, TR010038/APP/6.1) states that as construction activities are programmed to last less than two years, it is unlikely there would be a significant effect on air quality or affect the UK's ability to comply with the Air Quality Directive. The construction traffic assessment was therefore screened out of the assessment.</p> <p>With the best practice construction mitigation measures in place, as per the EMP (TR010038/APP/7.4), the impact of construction dust is considered highly unlikely to trigger a significant air quality effect. Therefore, in accordance with guidance LA 105, no significant effects on sensitive receptors have been identified.</p> <p>During operation no receptors are expected to exceed the annual mean NO2 AQO in the opening year scenarios. All modelled receptors have predicted annual mean NO2 concentrations well below the objective. In accordance with LA 105, no significant effects on human health or ecological receptors have been identified as a result of the Scheme in place (see ES Chapter 5 Air Quality, Section 5.8 (TR010038/APP/6.1)).</p> <p>Notwithstanding, the various management plans required, the EMP will address best practice in construction methods and mitigation of impacts.</p>
5.16	<p>The Government has a legally binding framework to cut greenhouse gas emissions by at least 80% by 2050. As stated above, the impact of road development on aggregate levels of emissions is likely to be very small. Emission reductions will be delivered through a system of five-year carbon budgets that set a trajectory to 2050. Carbon budgets and plans will include policies to reduce transport emissions, taking into account the impact of the Government's overall programme of new infrastructure as part of that.</p>	<p>The Government's framework, carbon budget and plans have been taken into consideration within ES Chapter 14 Climate (TR010038/APP/6.1) which reports the estimated emissions of greenhouse gases arising from the Scheme for the construction, operation and overall total for the whole lifecycle.</p> <p>The assessment used the Applicant's Carbon Tool (v2.3) to allow the consideration of carbon in the design process, resulting in the development of a carbon baseline from which further reductions may be made.</p> <p>The Applicant's Carbon Tool was developed to better manage carbon emissions resulting from the maintenance and improvement of the trunk road network. It contains average embodied carbon figures for various construction materials taken from the Bath Inventory of Carbon and Energy, along with</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		transport, energy and waste factors from Defra 2014 and the Waste Resources Action Programme (see Sections 14.4 and 14.5 of the ES).
5.17 (Carbon emissions)	Carbon impacts will be considered as part of the appraisal of scheme options (in the business case), prior to the submission of an application for DCO. Where the development is subject to EIA, any Environmental Statement will need to describe an assessment of any likely significant climate factors in accordance with the requirements in the EIA Directive. It is very unlikely that the impact of a road project will, in isolation, affect the ability of Government to meet its carbon reduction plan targets. However, for road projects applicants should provide evidence of the carbon impact of the project and an assessment against the Government's carbon budgets.	See response to NPS NN paragraph 5.16
5.18	The Government has an overarching national carbon reduction strategy (as set out in the Carbon Plan 2011) which is a credible plan for meeting carbon budgets. It includes a range of non-planning policies which will, subject to the occurrence of the very unlikely event described above, ensure that any carbon increases from road development do not compromise its overall carbon reduction commitments. The Government is legally required to meet this plan. Therefore, any increase in carbon emissions is not a reason to refuse development consent, unless the increase in carbon emissions resulting from the proposed Scheme are so significant that it would have a material impact on the ability of Government to meet its carbon reduction targets.	<p>See response to NPS NN paragraph 5.16</p> <p>The assessment in ES Chapter 14 Climate (TR010038/APP/6.1) has considered the Scheme's effect on carbon emissions. In accordance with DMRB guidance LA 114 'Climate', carbon emissions associated with the Scheme have been provided in the context of published UK carbon budgets. These budgets currently extend until 2032 and can be compared with 26% of the emissions increase associated with the Scheme. The remaining 74% of the increase in carbon emissions will occur after 2032 (the end of the last currently published UK carbon budget).</p> <p>Efforts to minimise carbon emissions throughout the design and construction of the Scheme at this stage are outlined in accordance with the requirements set out in DMRB LA 114. Recommendations to further reduce carbon emissions through design considerations and recalculation of carbon emissions at later stages of the design process have also been made.</p> <p>Monitoring of carbon emissions associated with the construction of the Scheme will be undertaken as per Highways England requirements to meet their key performance indicator "<i>Carbon dioxide equivalents (or CO₂e) in tonnes associated with the Supply Chain's activities</i>" (Highways England</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		2019).
5.19	Evidence of appropriate mitigation measures (incorporating engineering plans on configuration and layout, and use of materials) in both design and construction should be presented. The Secretary of State will consider the effectiveness of such mitigation measures in order to ensure that, in relation to design and construction, the carbon footprint is not unnecessarily high. The Secretary of State's view of the adequacy of the mitigation measures relating to design and construction will be a material factor in the decision-making process.	<p>ES Chapter 14 Climate (TR010038/APP/6.1) identifies measures to reduce emissions across the lifecycle of the Scheme. Good practice measures are included in the Environmental Management Plan (TR010038/APP/7.4).</p> <p>Use of the Applicant's Carbon Tool has allowed consideration of carbon in the design process resulting in the development of a carbon baseline from which further reductions may be made.</p> <p>Section 14.9 of the ES Chapter 14 Climate (TR010038/APP/6.1) presents the design interventions and mitigation applied to the Scheme to reduce carbon emissions. Examples include removing 1 km of earthworks reducing general fill and topsoil carbon footprint of between 64 tCO₂e (site won) and 934 tCO₂e (imported fill). The design change on the Easton footbridge also provided carbon savings of 36 tCO₂e by changing from a steel warren truss with steel approach ramps to a composite steel girder footbridge integral with reinforced concrete bankseat abutments supported on reinforced earth embankments.</p> <p>Monitoring and reporting on carbon emissions associated with energy and fuel use during the construction process will be undertaken; see Table 3-1 of the EMP (TR010038/APP/7.4).</p>
5.20 (Biodiversity and ecological conservation)	Biodiversity is the variety of life in all its forms and encompasses all species of plants and animals and the complex ecosystems of which they are a part. Government policy for the natural environment is set out in the Natural Environment White Paper (NEWP). The NEWP sets out a vision of moving progressively from net biodiversity loss to net gain, by supporting healthy, well-functioning ecosystems and establishing more coherent ecological networks that are more resilient to current and future pressures. Geological conservation relates to the sites that are designated for their geology and/or their geomorphological importance.	<p>See response to NPS NN paragraph 5.22 – 5.23</p> <p>ES Chapter 8 Biodiversity (TR010038/APP/ 6.1) assesses the potential effects on sites, habitats and species of conservation importance including indirect effects. The types and areas of habitat creation and the increases or decreases in size of area covered by each habitat are provided to quantify the biodiversity net losses and gains (see Section 8.9).</p> <p>The Environmental Masterplan (TR010038/APP/6.8) has been developed to take into account opportunities to conserve and enhance biodiversity. It also identifies areas for habitat creation to mitigate for the loss of Habitats of Principal Importance (HPI).</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<p>There are no sites designated for their geological importance within the Scheme extents. ES Chapter 13 Road Drainage and the Water Environment (TR010038/APP/6.1) assesses the effects of the Scheme on geomorphological sites protected by the Water Framework Directive (see Section 13.10). Construction and operational activities affecting the River Tud and indirectly the River Wensum (downstream of Norwich) will be compliant with the requirements of the WFD, nor prevent future attainment of good ecological status.</p>
5.22 - 5.23	<p>Where the project is subject to EIA the applicant should ensure that the environmental statement clearly sets out any likely significant effects on internationally, nationally and locally designated sites of ecological or geological conservation importance (including those outside England) on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity and that the statement considers the full range of potential impacts on ecosystems.</p> <p>The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests.</p>	<p>ES Chapter 9 Geology and Soils (TR010038/APP/6.1) identifies that there are no sites designated for their geological importance within the Scheme extents.</p> <p>ES Chapter 8 Biodiversity (TR010038/APP/6.1) sets out the predicted effects on internationally, nationally and locally designated sites and other habitats and species.</p> <p>Tables 8-11 and 8-12 in ES Section 8.9, Chapter 8 Biodiversity set out the mitigation measures for the Scheme while Table 8.14, Section 8.10 details the predicted significance of residual effects on biodiversity resources following the implementation of committed mitigation.</p> <p>It is anticipated that during construction and operation the Scheme would have a residual neutral effect, with mitigation in place, on the international, European and nationally designated sites, ancient woodland, county wildlife sites (incl. proposed).</p> <p>The Scheme is anticipated to have a slight adverse effect on breeding birds, barn owl and wintering birds due to the loss of arable habitat that is not being replaced and the time lag until wooded habitats and hedgerows mature. However, the residual effect on barn owl would be moderate adverse until landowners have been identified and agreements are in place to install suitable nest boxes; thereafter the residual effect will decrease to slight adverse.</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<p>The significance of effects on bats as a result of the Scheme is large adverse.</p> <p>Grasslands and ponds will have a slight beneficial effect.</p> <p>A neutral residual effect is anticipated for all other biodiversity resources during construction and operation the Scheme, with mitigation in place.</p> <p>The Environmental Masterplan (TR010038/APP/6.8) has been developed to take into account opportunities to conserve and enhance biodiversity.</p> <p>See also response to NPS NN paragraph 3.2.</p>
5.25	<p>As a general principle, and subject to the specific policies below, development should avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives. The applicant may also wish to make use of biodiversity offsetting in devising compensation proposals to counteract any impacts on biodiversity which cannot be avoided or mitigated. Where significant harm cannot be avoided or mitigated, as a last resort, appropriate compensation measures should be sought.</p>	<p>See response to NPS NN paragraphs 5.20, 5.22 – 5.23 and 3.2.</p>
5.26	<p>In taking decisions, the Secretary of State should ensure that appropriate weight is attached to designated sites of international, national and local importance, protected species, habitats and other species of principal importance for the conservation of biodiversity, and to biodiversity and geological interests within the wider environment.</p>	<p>See response to NPS NN paragraphs 5.20 & 5.22 – 5.23 and 3.2.</p> <p>ES Chapter 8 Biodiversity (Table 8-6, TR010038/APP/6.1) sets out the predicted effects on internationally, nationally and locally designated sites and other habitats and species. The Scheme would have a Neutral effect on the European Designated Sites during construction and operation; a Neutral residual effect on River Wensum, Hockering Wood and Rosie Curston's Meadow SSSI; and a Neutral residual effect on Hockering Wood, Park Grove, Harman's Grove, Mouse Wood and Holly Wood and four unnamed parcels of ancient woodlands, and all 16 county wildlife sites and the one proposed CWS. Significant residual effects are predicted for some protected species and priority habitats. The nature of these residual impacts and measures taken to minimise the impacts are discuss in more detail in Section 7.4 of the Case for the Scheme (TR010038/APP/7.1). Overall, although a worst case significant</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<p>residual effect is predicted for a protected species and habitats of principal importance for the conservation of biodiversity, these need to be considered against the worst case context for which they have been predicted significant and the wider economic and transport benefits of the Scheme as set out in this document. It is therefore considered that on balance the wider benefits of the Scheme outweigh the potential harm to biodiversity within the wider environment, the extent of which should decrease over time as new habitats mature.</p> <p>ES Chapter 9 Geology and Soils (TR010038/APP/6.1) identifies that there are no sites designated for their geological importance within the Scheme extents.</p>
5.27	<p>The most important sites for biodiversity are those identified through international conventions and European Directives. The Habitats Regulations provide statutory protection for European sites (see also paragraphs 4.22 to 4.25). The National Planning Policy Framework states that the following wildlife sites should have the same protection as European sites:</p> <ul style="list-style-type: none"> • Potential Special Protection Areas and possible Special Areas of Conservation; • listed or proposed Ramsar sites; and • sites identified, or required, as compensatory measures for adverse effects on European sites, potential Special Protection Areas, possible Special Areas of Conservation and listed or proposed Ramsar sites. 	See response to NPS NN paragraph 5.26.
5.28 - 5.29 (Biodiversity-SSSIs)	<p>Many Sites of Special Scientific Interest (SSSIs) are also designated as sites of international importance and will be protected accordingly. Those that are not, or those features of SSSIs not covered by an international designation, should be given a high degree of protection. All National Nature Reserves are notified as SSSIs.</p> <p>Where a proposed development on land within or outside a SSSI is likely to have an adverse effect on an SSSI (either individually or in combination with other developments), development</p>	See response to NPS NN paragraph 5.26.

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<p>consent should not normally be granted. Where an adverse effect on the site's notified special interest features is likely, an exception should be made only where the benefits of the development at this site clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest, and any broader impacts on the national network of SSSIs. The Secretary of State should ensure that the applicant's proposals to mitigate the harmful aspects of the development and, where possible, to ensure the conservation and enhancement of the site's biodiversity or geological interest, are acceptable. Where necessary, requirements and/or planning obligations should be used to ensure these proposals are delivered.</p>	
<p>5.32 (Biodiversity -Irreplaceable habitats including ancient woodland and veteran trees)</p>	<p>Ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland. Once lost it cannot be recreated. The Secretary of State should not grant development consent for any development that would result in the loss or deterioration of irreplaceable habitats including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the national need for and benefits of the development, in that location, clearly outweigh the loss. Aged or veteran trees found outside ancient woodland are also particularly valuable for biodiversity and their loss should be avoided. Where such trees would be affected by development proposals, the applicant should set out proposals for their conservation or, where their loss is unavoidable, the reasons for this.</p>	<p>Chapter 8 Biodiversity of the ES (TR010038/APP/6.1) considers all ecological features. There are five named and four unnamed parcels of Ancient Woodland within 2km of the Scheme, but none are directly impacted. The only risk during construction and operation is through increased air pollution, but the residual impact is 'no change' and not significant.</p> <p>No aged or veteran trees have been identified by the assessment.</p>
<p>5.33</p>	<p>Development proposals potentially provide many opportunities for building in beneficial biodiversity or geological features as part of good design. When considering proposals, the Secretary of State should consider whether the applicant has maximised such opportunities in and around developments. The Secretary of State may use requirements or planning obligations where appropriate in order to ensure that such beneficial features are delivered.</p>	<p>See response to NPS NN paragraph 5.22 – 5.23.</p> <p>Chapter 8 Biodiversity of the ES (TR010038/APP/6.1) describes the ecological mitigation and enhancement measures.</p> <p>Tables 8-11 and 8-12 in ES Section 8.9, Chapter 8 Biodiversity (TR010038/APP/6.1) set out the mitigation measures for the Scheme which have sought to maximise opportunities for building in beneficial biodiversity.</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<p>These include:</p> <ul style="list-style-type: none"> • vegetating attenuation ponds which will assist in creating ecosystems • locating culverts close to breeding ponds • minimisation of light spill onto habitats • toolbox talks during construction to ensure operatives can identify habitats and species and measures required • species rich tree and hedgerow planting to encourage diversity and for refuge and roosting • creation of wetland areas, ponds and species rich grassland • installation of bird and barn owl boxes • movement of protected species to a safe suitable area • bat crossing points and bat hops with tall trees • provision for fish and aquatic mammals • badger tunnels • monitoring. <p>The Environmental Masterplan (TR010038/APP/6.8) and Table 3-1: Register of Environmental Actions and Commitments (REAC) within the EMP (TR010038/APP/7.4) illustrate and detail these and other measures.</p>
<p>5.35 (Biodiversity - Protection of other habitats and species)</p>	<p>Other species and habitats have been identified as being of principal importance for the conservation of biodiversity in England and Wales and therefore requiring conservation action. The Secretary of State should ensure that applicants have taken measures to ensure these species and habitats are protected from the adverse effects of development. Where appropriate, requirements or planning obligations may be used in order to deliver this protection. The Secretary of State should refuse consent where harm to the habitats or species and their habitats would result unless the benefits of the development (including need) clearly outweigh that harm.</p>	<p>ES Chapter 8 Biodiversity (TR010038/APP/6.1) considers all species and habitats of importance and assesses the residual effects following mitigation. Habitats considered include: arable field margins, lowland fens, traditional orchards, hedgerows, standing and running water, coastal and floodplain grazing marsh, woodland and grassland types, fenland drainage ditches and reedbed.</p> <p>Species and their habitats considered include: white-clawed crayfish, great-crested newt, reptiles, breeding and wintering birds, barn owl, bats, otters, water vole, badgers, botanical species, terrestrial and aquatic invertebrates, invasive species and other notable species (brown hare, common toad, hedgehog).</p> <p>Mitigation measures are set out in Section 8.9 of ES Chapter 8 Biodiversity</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<p>(TR010038/APP/6.1) that will reduce adverse effects through measures such as: replacing lost habitat; timing of construction works to avoid the most sensitive times of year; and landscape planting and pollution control measures to prevent damage and degradation to habitats.</p> <p>The Environmental Masterplan (TR010038/APP/6.8) identifies areas for habitat / creation to mitigate for the loss of Habitats of principal Importance (HPI).</p> <p>The EMP (TR010038APP/7.4) sets out good practice environmental measures that would be implemented to protect biodiversity during construction, why they are required, who is responsible for delivering them and details any ongoing maintenance and monitoring arrangements. The EMP is secured through Requirement 4 of the draft DCO (TR010038/APP/3.1).</p> <p>Mitigation and enhancement measures are set out in the REAC included in the EMP (TR010038/APP/7.4).</p>
<p>5.36 (Biodiversity – Mitigation)</p>	<p>Applicants should include appropriate mitigation measures as an integral part of their proposed development, including identifying where and how that:</p> <ul style="list-style-type: none"> • during construction, they will seek to ensure that activities will be confined to the minimum areas required for the works; • during construction and operation, best practice will be followed to ensure that risk of disturbance or damage to species or habitats is minimised (including as a consequence of transport access arrangements); • habitats will, where practicable, be restored after construction works have finished; • developments will be designed and landscaped to provide green corridors and minimise habitat fragmentation where reasonable; • opportunities will be taken to enhance existing habitats and, where practicable, to create new habitats of value 	<p>See response to NPS NN paragraphs 5.33 and 5.35</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<p>within the site landscaping proposals, for example through techniques such as the 'greening' of existing network crossing points, the use of green bridges and the habitat improvement of the network verge.</p>	
5.37	<p>The Secretary of State should consider what appropriate requirements should be attached to any consent and/or in any planning obligations entered into in order to ensure that mitigation measures are delivered.</p>	<p>Schedule 2 of the draft DCO (TR010038/APP/3.1) includes proposed Requirements. No requirement for planning obligations has been identified.</p> <p>See response to NPS NN paragraphs 5.33 and 5.35</p>
5.38	<p>The Secretary of State will need to take account of what mitigation measures may have been agreed between the applicant and Natural England and/or the MMO, and whether Natural England and/or the MMO has granted or refused, or intends to grant or refuse, any relevant licences, including protected species mitigation licences.</p>	<p>Natural England has been consulted with regard to protected species and the requirement for any protected species licenses. Details of the consultation are included in ES Chapter 8 Biodiversity's Section 8.4 (TR010038/APP/6.1)</p> <p>Protected species licences and mitigation (incl. increased habitat) will be agreed with Natural England to manage loss of bat roosts, water vole, great crested newt and badger to achieve a neutral residual effect. The need and proposed mitigation measures to be covered by the licences are based on the assessment set out in ES Chapter 8 Biodiversity (TR010038/APP/6.1). These licence requirements are included in the Consent and Agreements Position Statement (TR010038/APP/3.3).</p> <p>A Statement of Common Ground will be developed with Natural England to record the matters that have been agreed between both parties and to identify any matters where comments still need to be resolved.</p>
5.42 (Waste management)	<p>The applicant should set out the arrangements that are proposed for managing any waste produced. The arrangements described should include information on the proposed waste recovery and disposal system for all waste generated by the development. The applicant should seek to minimise the volume of waste produced and the volume of waste sent for disposal unless it can be demonstrated that the alternative is the best overall environmental outcome.</p>	<p>The consumption of materials and products, use of materials offering sustainable benefits and the production, storage and disposal of waste including logistical details are set out in ES Chapter 10 Material Assets and Waste (TR010038/APP/6.1).</p> <p>ES Appendix 10.3 (TR010038/APP/6.3) sets out an Outline Site Waste Management Plan (SWMP). This has been prepared to demonstrate how waste generated during the construction phase will be minimised and controlled to reduce impacts. Preliminary information included in the Outline SWMP will be updated and used to develop the detailed SWMP (See action</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<p>M1 of Table 1.2 of the EMP, TR010038/APP/7.4).</p> <p>Mitigation and enhancement measures are also set out Table 3-1 (REAC) included in the EMP (TR010038/APP/7.4).</p>
5.43	<p>The Secretary of State should consider the extent to which the applicant has proposed an effective process that will be followed to ensure effective management of hazardous and non-hazardous waste arising from the construction and operation of the proposed development. The Secretary of State should be satisfied that the process sets out:</p> <ul style="list-style-type: none"> - any such waste will be properly managed, both onsite and off-site; - the waste from the proposed facility can be dealt with appropriately by the waste infrastructure which is or is likely to be, available. Such waste arisings should not have an adverse effect on the capacity of existing waste management facilities to deal with other waste arisings in the area; and - <input type="checkbox"/> adequate steps have been taken to minimise the volume of waste arisings, and of the volume of waste arisings sent to disposal, except where an alternative is the most sustainable outcome overall. 	<p>See response to NPS NN paragraph 5.42.</p> <p>ES Appendix 10.3 Outline SWMP (TR010038/APP/6.3) sets out how the Scheme would prioritise waste prevention, followed by preparing for re-use, recycling, recovery and lastly disposal to landfill as per the internationally recognised waste hierarchy.</p> <p>The EMP (TR010038/APP/7.4) indicates the environmental mitigation measures that would be implemented during construction. The EMP includes the Outline SWMP that includes the management of hazardous and non-hazardous waste. It also sets out why measures are required, who is responsible for delivering them and any ongoing maintenance and monitoring arrangements. The EMP is secured through Requirement 4 to the draft DCO (TR010038/APP/3.1).</p> <p>Minimising the production of waste has been considered throughout the design process. Measures proposed include:</p> <ul style="list-style-type: none"> • considering the re-use of waste generated on-site before it is transported off-site for re-use or disposal • use of site-won or recycled material assets as opposed to sourcing new materials, i.e. sand and gravel • use of material logistics planning to manage responsible local resourcing of material assets minimal ordering of materials, appropriate segregation and storage-site by waste type, to facilitate re-use.
5.44	<p>Where necessary, the Secretary of State should use requirements or planning obligations to ensure that appropriate measures for waste management are applied.</p>	<p>No requirement for planning obligations has been identified.</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
<p>5.55 - 5.58 (Civil and military aviation and defence interests)</p>	<p>Where the proposed development may have an effect on civil or military aviation and/or other defence assets, an assessment of potential effects should be carried out.</p> <p>The applicant should consult the MoD, CAA, National Air Traffic Services (NATS) and any aerodrome – licensed or otherwise – likely to be affected by the proposed development in preparing an assessment of the proposal on aviation or other defence interests.</p> <p>Any assessment on aviation or other defence interests should include potential impacts during construction and operation of the project upon the operation of CNS infrastructure, flight patterns (both civil and military), other defence assets and aerodrome operational procedures.</p> <p>If any relevant changes are made to proposals for an NSIP during the pre-application period or before the end of the examination of an application, it is the responsibility of the applicant to ensure that the relevant aviation and defence consultees are informed as soon as reasonably possible.</p>	<p>No civil or military aviation and/or other defence assets will be affected by the Scheme and no issues were identified in the responses to the statutory consultation, which included relevant bodies such as the Ministry of Defence and Civil Aviation Authority.</p>
<p>5.59</p>	<p>The Secretary of State should be satisfied that effects on civil and military aviation and other defence assets have been addressed by the applicant and that any necessary assessment of the proposal on aviation or defence interests has been carried out. In particular, it should be satisfied that the proposal has been designed to minimise adverse impacts on the operation and safety of aerodromes and that reasonable mitigation is carried out. It may also be appropriate to expect operators of the aerodrome to consider making reasonable changes to operational procedures. The Secretary of State will have regard to the necessity, acceptability and reasonableness of operational changes to aerodromes, and the risks or harm of such changes when taking decisions. When making such a judgement in the case of military aerodromes, the Secretary of State should have regard to interests of defence and</p>	<p>See response to NPS NN paragraphs 5.55 – 5.58</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	national security.	
5.62	<p>Where, after reasonable mitigation, operational changes and planning obligations and requirements have been proposed, development consent should not be granted if the Secretary of State considers that:</p> <ul style="list-style-type: none"> • a development would prevent a licensed aerodrome from maintaining its licence; • the benefits of the proposed development are outweighed by the harm to aerodromes serving business, training or emergency service needs; or • the development would significantly impede or compromise the safe and effective use of defence assets or significantly limit military training. 	See response to NPS NN paragraphs 5.55 – 5.58
5.71- 5.75 (Coastal change)	<p>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 in a CCMA, applicants should undertake an assessment of the vulnerability of the proposed development to coastal change, taking account of climate change, during the project's operational life.</p> <p>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 Scottish Natural Heritage, 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.</p> <p>The applicant should examine the broader context of coastal protection around the proposed project, and the influence in both directions, that is, coast on project, and project on coast. 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</p>	The Scheme is not within in a CCMA.

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<p>Conservation (SACs), coastal SACs and candidate coastal SACs, coastal Special Protection Areas (SPAs) and potential coastal SPAs, Ramsar sites, Sites of Community Importance (SCIs) and potential SCIs and sites of Special Scientific Interest. For any projects affecting the above marine protected areas, the applicant should consult Natural England and where appropriate, for cross-boundary impacts, Natural Resource Wales and Scottish Natural Heritage, at an early stage.</p>	
<p>5.82 (Dust, odour, artificial light,</p>	<p>Because of the potential effects of these emissions and in view of the availability of the defence of statutory authority against nuisance claims s.104 of the Planning Act 2008 described previously, it is important that the potential for these impacts is considered by the applicant in their application, by the Examining Authority in examining applications and by the Secretary of State in taking decisions on development consents.</p>	<p>The Statement Relating to Statutory Nuisances (TR010038/APP/6.6) explains how the Scheme would not cause a nuisance for reasons of dust, odour, artificial light, smoke and steam, having regard to the results of the ES (TR010038/APP/6.1).</p> <p>ES Chapter 5 Air Quality (Sections 5.8 and 5.10, TR010038/APP/6.1) presents the results of a qualitative assessment of potential dust effects, undertaken in accordance with the Design Manual for Roads and Bridges (DMRB), LA 105 Air Quality and Institute of Air Quality Management (IAQM)</p> <p>The air quality assessment has concluded there will be no significant effects on air quality at human and ecological receptors as a result of the Scheme.</p> <p>ES Chapter 12 Population and Human Health (TR010038/APP/6.1) recognises that during construction, there may be temporary effects on local air quality (including dust dispersal and deposition and odour) from construction vehicles and activities although the principal contractor will be required to put in place measures to minimise noise, dust and visual effects. With mitigation measures in place, no receptors have been identified as significantly affected by the Scheme.</p> <p>Section 12.9 in ES Chapter 12 and the EMP (TR010038/APP/7.4) set out the mitigation measures that would be implemented during construction. This is secured through Requirement 4 to the draft DCO (TR010038/APP/3.1).</p> <p>With regard to artificial light, measures to reduce the potential construction and operational effects on humans and biodiversity are specified in ES Chapter 7</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		Landscape and Visual Effects and Chapter 8 Biodiversity, respectively (TR010038/APP/6.1). Construction activity impacts and mitigation include a restriction on night-time working and low-level lighting during construction and reducing light spill onto habitats, especially those supporting commuting and foraging protected species. Mitigation measures are prescribed in the EMP (TR010038/APP/7.4) and will be secured through Requirement 4 to the draft DCO (TR010038/APP/3.1).
5.83	For nationally significant infrastructure projects of the type covered by this NPS, some impact on amenity for local communities is likely to be unavoidable. Impacts should be kept to a minimum and should be at a level that is acceptable.	ES Chapter 12 Population and Human Health (TR010038/APP/ 6.1) assesses the impacts during construction and operation of the Scheme on local communities, including effects related to noise, dust and visual amenity. The EMP (TR010038/APP/7.4) captures the environmental mitigation measures set out in ES Chapter 12 to be implemented to avoid or keep these impacts to a minimum and, where possible, at a level that is acceptable. The EMP is secured through Requirement 4 to the draft DCO (TR010038/APP/3.1).
5.84 - 5.87	Where the development is subject to an Environmental Impact Assessment, the applicant should assess any likely significant effects on amenity from emissions of odour, dust, steam, smoke and artificial light and describe these in the Environmental Statement. In particular, the assessment provided by the applicant should describe: <ul style="list-style-type: none"> • the type and quantity of emissions; • aspects of the development which may give rise to emissions during construction, operation and decommissioning; • premises or locations that may be affected by the emissions; • effects of the emission on identified premises or locations; and 	See response to NPS NN paragraph 5.82. The scope of the EIA was discussed with Norfolk County Council and the Environment Agency. The nature of the Scheme would not generate odour and steam from its operation. Construction and operational effects associated with dust and smoke (particulate matter), including the predicted type, quantity and receptor locations of emissions are considered within ES Chapter 5 Air Quality (TR010038/APP/6.1); receptor locations are presented in Section 5.6. Mitigation measures include development of a dust management plan, daily on and off-site inspections and a record of complaints/exceptional dust events. With the implementation of mitigation measures, no significant effects are likely. ES Chapter 7 Landscape and Visual (TR010038/APP/6.1) assesses potential construction and operational effects from lighting, including indirect effects (see Sections 7.8 and 7.10).

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<ul style="list-style-type: none"> measures to be employed in preventing or mitigating the emissions. <p>The applicant is advised to consult the relevant local planning authority and, where appropriate, the Environment Agency about the scope and methodology of the assessment.</p> <p>The Secretary of State should be satisfied that all reasonable steps have been taken, and will be taken, to minimise any detrimental impact on amenity from emissions of odour, dust, steam, smoke and artificial light. This includes the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.</p>	<p>During construction some isolated residential properties may experience glimpsed views of night-time lighting of compounds; for example at Berry Hall & Berry Hall Cottages and Merrywood House, which are in close proximity to proposed compounds beside the Wood Lane junction. However, given the sparsely developed nature of the study area, effects due to night-time lighting are expected to be limited. Overall, there would not be a significant effect on night-time views arising from construction.</p> <p>During operation of the Scheme lighting and vehicle headlights would create new effects (beyond the existing highway infrastructure) that would be most apparent around the two proposed junctions (Wood Lane and Norwich Road). Until proposed planting on the embankment matures, there is the potential for headlights to be directed towards nearby residential receptors. Overall, it is not predicted to be a significant effect on night-time views in Year 1 or year 15.</p> <p>Measures to reduce the potential construction and operational effects of lighting on biodiversity are specified within ES Chapter 8 Biodiversity (TR010038/APP/6.1). Mitigation includes lighting to be designed to reduce light spill into neighbouring habitats.</p> <p>These assessments have been used to inform the REAC in the EMP (Table 3-1) (TR010038/APP/7.4), which will be secured through Requirement 4 of the draft DCO (TR010038/APP/3.1).</p>
5.89	<p>The Secretary of State should ensure the applicant has provided sufficient information to show that any necessary mitigation will be put into place. In particular, the Secretary of State should consider whether to require the applicant to abide by a scheme of management and mitigation concerning emissions of odour, dust, steam, smoke, artificial light from the development to reduce any loss to amenity which might arise during the construction and operation of the development. A construction management plan may help codify mitigation.</p>	<p>See response to NPS NN paragraph 5.82 and 5.84-5.87.</p> <p>The REAC in the EMP (Table 3-1) (TR010038/APP/7.4) sets out necessary mitigation which will be secured through Requirement 4 of the draft DCO (TR010038/APP/3.1). Construction traffic would be managed through a Traffic Management Plan (TR010038/APP/7.5).</p>
5.90 (Flood risk)	<p>Climate change over the next few decades is likely to mean milder wetter winters and hotter drier summers in the UK, while</p>	<p>See response to NPS NN paragraphs 4.38 and 4.46.</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<p>sea levels will continue to rise. Within the lifetime of nationally significant infrastructure projects, these factors will lead to increased flood risks in areas susceptible to flooding, and to an increased risk of flooding in some areas which are not currently thought of as being at risk. The applicant, the Examining Authority and the Secretary of State (in taking decisions) should take account of the policy on climate change adaptation in paragraphs 4.36 to 4.47.</p>	<p>The vulnerability of the Scheme to climate change and the resilience of the Scheme to climate change impacts and associated weather effects, including how the Scheme will take account of the projected climate change, has been assessed in ES Chapter 14 Climate (TR010038/APP/6.1). The Scheme has been deemed resilient (see Section 14.12).</p>
5.91	<p>The National Planning Policy Framework (paragraphs 100 to 104) makes clear that inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk. But where development is necessary, it should be made safe without increasing flood risk elsewhere. The guidance supporting the National Planning Policy Framework explains that essential transport infrastructure (including mass evacuation routes), which has to cross the area at risk, is permissible in areas of high flood risk, subject to the requirements of the Exception Test.</p>	<p>ES Appendix 13.1 FRA (TR010038/APP/6.3) assesses the risk of flooding caused by and to the Scheme.</p> <p>According to the Environment Agency's Flood Map for Planning, the majority of the Scheme lies within Flood Zone 1 so has a low fluvial flood risk. However, the Scheme does pass through areas of Flood Zone 2 and 3 (medium and high risk, respectively) immediately surrounding the River Tud. The Scheme crosses two sections of Flood Zone 2 and 3 east of Honingham, where it crosses the River Tud, and south east of Hockering, where it crosses an ordinary watercourse / drain which is tributary of the River Tud. The Scheme runs adjacent to Flood Zones 2 and 3 south east of Hockering and at Taverham Road, within the DCO boundary. Areas of Flood Zone 3 are within the Scheme DCO boundary but outside of the permanent construction area of the Proposed Scheme at Berry's Lane, west of Honingham, and east of Taverham Road.</p> <p>The Scheme crosses isolated areas of low and medium surface water (pluvial) flood risk associated with flood flow pathways which run in a southerly direction.</p> <p>A review of available information found that there is no evidence of flooding from local sewer networks has occurred within the immediate area of the proposed scheme, thus the risk is considered low.</p> <p>The majority of the Scheme is at medium risk of groundwater flooding. However, east of the Scheme, from Honingham, there is medium to high risk of groundwater flooding.</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<p>ES Appendix 13.1 FRA (TR010038/APP/6.3) confirms that the Scheme is classed as “Essential Infrastructure” under the NPPF. See response to NPS NN paragraphs 4.26.</p>
5.92 - 5.93	<p>Applications for projects in the following locations should be accompanied by a flood risk assessment (FRA):</p> <ul style="list-style-type: none"> • Flood Zones 2 and 3, medium and high probability of river and sea flooding; • Flood Zone 1 (low probability of river and sea flooding) for projects of 1 hectare or greater, projects which may be subject to other sources of flooding (local watercourses, surface water, groundwater or reservoirs), or where the Environment Agency has notified the local planning authority that there are critical drainage problems. <p>This should identify and assess the risks of all forms of flooding to and from the project and demonstrate how these flood risks will be managed, taking climate change into account.</p>	<p>ES Appendix 13.1 FRA (TR010038/APP/6.3) presents the Flood Risk Assessment that considers the potential for surface, sewer and groundwater flooding and any mitigation; see response to NPS NN paragraphs 5.91, above.</p> <p>The model of the Oak Farm watercourse predicts flooding upstream of the proposed new road connecting Main Road and Lyng Road with the existing A47 west of Hockering. To mitigate this, an orifice will be placed at the inlet to the new west culvert under the new road to throttle flows and a bund installed to prevent flooding of the road, providing a net betterment in terms of flood risk downstream.</p> <p>As the new West Culvert design will not result in a reduction of the total flood volume upstream of the A47 and, given the landscaping required, the need to limit forward flows and protect the road, compensatory storage is not considered suitable. This arrangement has been developed in liaison with the Environment Agency and lead local flood authority (Norfolk County Council).</p> <p>For the Hockering watercourse floodwaters are predicted to remain within the channel in the area of interest. The design is sensitive to blockage hence maintenance of the culvert will be prioritised, and a trash screen installed.</p> <p>There is no risk of tidal flooding and no evidence of sewer flooding having affected the route of the Scheme. The risk of reservoir failure is very low.</p> <p>The Scheme will increase the amount of impermeable area, and hence runoff rates. To mitigate this, SuDS features are proposed as part of the drainage strategy to treat and attenuate surface water runoff. Furthermore, interceptor drains or ‘dry culverts’ will be installed to maintain continuity of existing overland surface water flow pathways where they are intercepted by the Scheme and ensure that surface waters are not able to accumulate and are</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<p>directed away from the site, thereby preventing flooding.</p> <p>Other design considerations, mitigation measures and residual risks are described in ES Chapter 13 Road Drainage and the Water Environment (TR010038/APP/6.1).</p>
5.94	<p>In preparing an FRA the applicant should:</p> <ul style="list-style-type: none"> • consider the risk of all forms of flooding arising from the project (including in adjacent parts of the United Kingdom), in addition to the risk of flooding to the project, and demonstrate how these risks • will be managed and, where relevant, mitigated, so that the development remains safe throughout its lifetime; • take the impacts of climate change into account, clearly stating the development lifetime over which the assessment has been made; • consider the vulnerability of those using the infrastructure including arrangements for safe access and exit; • include the assessment of the remaining (known as 'residual') risk after risk reduction measures have been taken into account and demonstrate that this is acceptable for the particular project; • consider if there is a need to remain operational during a worst case flood event over the development's lifetime; • provide the evidence for the Secretary of State to apply the Sequential Test and Exception Test, as appropriate. 	<p>Design considerations, mitigation measures and residual risks are described in ES Chapter 13 Road Drainage and the Water Environment (TR010038/APP/6.1), supported by detailed studies in ES Appendix 13.1 FRA (TR010038/APP/6.3) and ES Appendix 13.2 Drainage Strategy Report (TR010038/APP/6.3). These documents demonstrate that the Scheme meets the requirements of the NPS NN. See also the responses to NPS NN paragraph 5.92 and 5.93.</p> <p>Sections 9.1 and 9.2 of the FRA demonstrate how the Sequential and Exception Tests have been applied. The design is considered to meet the requirements of the Exception Test.</p> <p>The design incorporates flood risk reduction measures having taken into account the need to remain operational during a worst case flood event over the development's lifetime.</p> <p>The Scheme would discharge to the River Tud and its tributaries. Runoff shall be attenuated to a 1 in 100 year event (including an allowance for climate change) using oversized pipes and vegetated detention basins. The drainage has been designed for an extreme pluvial event (1 in 100 year plus 20% climate change with a sensitivity check at 40% climate change) to ensure there would be no increase flood risk to others. Flood flow pathways that are intercepted by the Scheme will be maintained to allow natural overland drainage through the construction of 'dry culverts' or cross-drains designed to 1 in 100-year plus 65% climate change allowance.</p> <p>Fluvial flood risk impacts associated with the River Tud Crossing are minimised by design including the provision of flood compensatory storage due to the loss of floodplain storage as a result of the bridge abutments.</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<p>There are no adverse flood risk impacts associated with the Newgate House Culvert (Hockering tributary). Both the River Tud Crossing and Newgate House Culvert are designed for a 1 in 100-year plus 65% climate change allowance peak flood level with at least 600mm freeboard. At the Oak Farm tributary, the throttling of flood flows by the existing A47 culvert is maintained by the West Culvert Extension and the New West Culvert with no risk to flood-sensitive receptors.</p>
5.96	<p>Applicants for projects which may be affected by, or may add to, flood risk are advised to seek sufficiently early pre-application discussions with the Environment Agency, and, where relevant, other flood risk management bodies such as lead local flood authorities, Internal Drainage Boards, sewerage undertakers, highways authorities and reservoir owners and operators. Such discussions can be used to identify the likelihood and possible extent and nature of the flood risk, to help scope the FRA, and identify the information that will be required by the Secretary of State to reach a decision on the application once it has been submitted and examined. If the Environment Agency has concerns about the proposal on flood risk grounds, the applicant is encouraged to discuss these concerns with the Environment Agency and look to agree ways in which the proposal might be amended, or additional information provided, which would satisfy the Environment Agency's concerns, preferably before the application for development consent is submitted.</p>	<p>The Environment Agency, Anglian Water, Norfolk Rivers Internal Drainage Board and Norfolk County Council (as the Lead Local Flood Authority) have been consulted during the development of the design, assessment and, where relevant, mitigation proposals.</p> <p>ES Appendix 13.1 FRA (TR010038/APP/6.3) Section 4.4 summarises the consultation undertaken as part of the assessment of flood risk. Section 11 of ES Appendix 13.2, the Drainage Strategy Report (TR010038/APP/6.3) also details the stakeholders and consultation that has taken place.</p> <p>The Environment Agency, Anglian Water and Norfolk County Council responded to the EIA Scoping Report (TR010038/APP/6.5) via the Planning Inspectorate.</p> <p>The Drainage Strategy has been developed in discussion with statutory consultees and consultation is still ongoing (see Section 14 ES Appendix 13.2 the Drainage Strategy Report (TR010038/APP/6.3)).</p> <p>Statements of Common Ground will be developed with the Environment Agency and Norfolk County Council to record the matters that have been agreed with these parties and to identify any matters where comments still need to be resolved.</p>
5.97	<p>For local flood risk (surface water, groundwater and ordinary watercourse flooding), local flood risk management strategies and surface water management plans provide useful sources of information for consideration in Flood Risk Assessments. Surface</p>	<p>See response to NPS NN paragraph 5.91.</p> <p>ES Appendix 13.1 FRA (TR010038/APP/6.3) presents the flood risk assessment that considers the potential for surface, sewer and groundwater</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<p>water flood issues need to be understood and then account of these issues can be taken, for example flow routes should be clearly identified and managed.</p>	<p>flooding and any mitigation.</p> <p>Section 2.1 summarises the data sources consulted to inform the FRA and included the following strategic flood studies conducted by the Environment Agency and Local Authorities: Norfolk County Council Preliminary Flood Risk Assessment Report (PFRAR) (Norfolk County Council, 2011), Breckland Council Level 1 Strategic Flood Risk Assessment (SFRA) (Breckland Council, 2017), Greater Norwich Area SFRA (JBA, 2017).</p> <p>The Environment Agency, Anglian Water, Norfolk Rivers Internal Drainage Board and Norfolk County Council (as the Lead Local Flood Authority) have also been consulted during the development of the design, assessment and, where relevant, mitigation proposals.</p>
5.98	<p>Where flood risk is a factor in determining an application for development consent, the Secretary of State should be satisfied that, where relevant:</p> <ul style="list-style-type: none"> - the application is supported by an appropriate FRA; - the Sequential Test (see the National Planning Policy Framework) has been applied as part of site selection and, if required, the Exception Test (see the National Planning Policy Framework). 	<p>A FRA has been prepared and is provided at ES Appendix 13.1 (TR010038/APP/6.3).</p> <p>According to the Environment Agency's Flood Map for Planning, the majority of the study area is located in Flood Zone 1, and as such the risk of flooding from rivers is low. However, the Scheme does pass through areas of Flood Zone 2 and 3 (medium and high risk, respectively) immediately surrounding the River Tud.</p> <p>The approach regarding the Sequential Test and Exception Test are as per NPS NN paragraphs 5.94. The Scheme is an upgrade of an existing essential highway infrastructure and is classified as 'essential infrastructure'.</p> <p>Design considerations, mitigation measures and residual risks are described in ES Chapter 13 Road Drainage and the Water Environment (TR010038/APP/6.1), supported by detailed studies in ES Appendix 13.1 FRA (TR010038/APP/6.3) and ES Appendix 13.2 Drainage Strategy Report (TR010038/APP/6.3) in accordance with the requirements of the Sequential Test and Exception Test.</p>
5.99	When determining an application, the Secretary of	Sections 9.1 and 9.2 of ES Appendix 13.1 FRA (TR010038/APP/6.3)

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<p>State should be satisfied that flood risk will not be increased elsewhere and only consider development appropriate in areas at risk of flooding where (informed by a flood risk assessment, following the Sequential Test and, if required, the Exception Test), it can be demonstrated that:</p> <ul style="list-style-type: none"> - within the site, the most vulnerable development is located in areas of lowest flood risk unless there are overriding reasons to prefer a different location; and - development is appropriately flood resilient and resistant, including safe access and escape routes where required, and that any residual risk can be safely managed, including by emergency planning; and priority is given to the use of sustainable drainage systems. 	<p>demonstrate how the Sequential and Exception Tests have been applied.</p> <p>The Scheme is an upgrade to an existing road and, due to design constraints, cannot be positioned to be completely outside of Flood Zone 3. As part of the stage 2 assessment a range of routes were assessed prior to the Preferred Route Announcement in 2017, so the Scheme passes the Sequential test.</p> <p>The development is classified as 'essential infrastructure' hence the Exception Test has been applied. This demonstrates that the sustainability benefits of the Scheme, including reduced congestion, outweigh the negligible flood risk. The Scheme also includes several mitigation measures which will ensure that the design is safe for its lifetime and will not detrimentally impact flood risk to others. The proposal therefore passes the Exception Test and is compliant with NPS NN paragraph 5.94.</p>
5.100	<p>For construction work which has drainage implications, approval for the project's drainage system will form part of any development consent issued by the Secretary of State. The Secretary of State will therefore need to be satisfied that the proposed drainage system complies with any National Standards published by Ministers under Paragraph 5(1) of Schedule 3 to the Flood and Water Management Act 2010. In addition, the development consent order, or any associated planning obligations, will need to make provision for the adoption and maintenance of any Sustainable Drainage Systems (SuDS), including any necessary access rights to property. The Secretary of State, should be satisfied that the most appropriate body is being given the responsibility for maintaining any SuDS, taking into account the nature and security of the infrastructure on the proposed site. The responsible body could include, for example, the applicant, the landowner, the relevant local authority, or another body such as the Internal Drainage Board.</p>	<p>ES Appendix 13.2, the Drainage Strategy Report (TR010038/APP/6.3) details the design standards applied, incorporation of SuDS and proposed maintenance of the drainage of the Scheme. The detailed design for the Scheme drainage will be in accordance with relevant guidance in the DMRB (Highways England, 2019b; 2020a; 2020b), in particular technical standards under the prescribed headings as set out in Appendix B of DMRB CG 502 'The Certification of Drainage Design'; this document outlines the requirements for the certification of drainage design on motorway and all-purpose trunk roads.</p> <p>The Scheme incorporated SuDS features, including detention basins or wetlands, filter drains, and grassed ditches. The detention basins and wetlands support the 4 pillars of SuDS (quantity, quality, biodiversity and amenity) by providing: storage to restrict discharge rates to greenfield run-off rates; vegetated surface for water to flow over to settle; filtrate and biodegrade hydrocarbons and pollutants (including sediment and dissolved sediment-bound heavy metals). The detentions basins also promote biodiversity as these will include a diverse range of local plants which will provide habitat and food for invertebrates and birds. Perimeter fencing around the basins will be provided but will not be designed to restrict wildlife access. The proposed</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<p>basins are irregular shaped and are designed to be sympathetic with the surrounding landscape which will be further enhanced by the proposed planting. The additional benefits of the wetlands will depend on the level of contamination anticipated of the inflows.</p> <p>The amenity potential of the detention basins is limited given their function, setting and close proximity to the proposed new dual carriageway. However, the detention basins and their surroundings have all been developed to try and sympathetically sit in the existing landscape using native species of grass, shrubs, hedgerows and trees.</p> <p>Grassed ditches provide a vegetated surface for water to flow over to settle and filtrate hydrocarbons and pollutants. Grassed ditches also promote biodiversity as these include a diverse range of local plants which will provide habitat and food for invertebrates and birds. The proposed ditches will be natural in form and will be designed to be sympathetic to their setting. Filter drains provided at the edge of road carriageways provide a degree of filtration and contributes to slowing down carriageway run-off. Gravel media can also host microorganisms and provide a breeding ground for insects.</p> <p>The proposed responsibility of the drainage assets will be that of Highways England and Norfolk County Council. Allocation of assets between the two bodies is subject to agreement at this time. It is proposed that Highways England would take responsibility of any assets located along or within the proposed mainline highway, whilst Norfolk County Council would adopt assets located within the proposed junctions and local highways. It is proposed that any attenuation ponds, soakaways and ancillaries associated with the mainline drainage will be maintained by Highways England.</p>
5.112 - 5.115 (Flood risk – mitigation)	Site layout and surface water drainage systems should cope with events that exceed the design capacity of the system, so that excess water can be safely stored on or conveyed from the site without adverse impacts.	ES Appendix 13.2 Drainage Strategy Report (TR010038/APP/6.3) details the volumes and peak flow rates and demonstrates how they would not be increased. It also details the SuDS components that have been incorporated into the design).

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<p>The surface water drainage arrangements for any project should be such that the volumes and peak flow rates of surface water leaving the site are no greater than the rates prior to the proposed project unless specific off-site arrangements are made and result in the same net effect.</p> <p>It may be necessary to provide surface water storage and infiltration to limit and reduce both the peak rate of discharge from the site and the total volume discharged from the site.</p> <p>There may be circumstances where it is appropriate for infiltration attenuation storage to be provided outside the project site, if necessary through the use of a planning obligation.</p> <p>The sequential approach should be applied to the layout and design of the project. Vulnerable uses should be located on parts of the site at lower probability and residual risk of flooding. Applicants should seek opportunities to use open space for multiple purposes such as amenity, wildlife habitat and flood storage uses. Opportunities can be taken to lower flood risk by improving flow routes, flood storage capacity and using SuDS.</p>	<p>The design incorporates flood risk reduction measures having taken into account the need to remain operational during a worst case flood event over the development's lifetime.</p> <p>The Scheme would discharge to the River Tud and its tributaries. Runoff shall be attenuated to a 1 in 100 year event (including an allowance for climate change) using oversized pipes and vegetated detention basins. The drainage has been designed for an extreme pluvial event (1 in 100 year plus 20% climate change with a sensitivity check at 40% climate change) to ensure there would be no increase flood risk to others. Flood flow pathways that are intercepted by the Scheme will be maintained to allow natural overland drainage through the construction of 'dry culverts' or cross-drains designed to 1 in 100-year plus 65% climate change allowance.</p> <p>Fluvial flood risk impacts associated with the River Tud Crossing are minimised by design including the provision of flood compensatory storage due to the loss of floodplain storage as a result of the bridge abutments. There are no adverse flood risk impacts associated with the Newgate House Culvert (Hockering tributary). Both the River Tud Crossing and Newgate House Culvert are designed for a 1 in 100-year plus 65% climate change allowance peak flood level with at least 600mm freeboard. At the Oak Farm tributary, the throttling of flood flows by the existing A47 culvert is maintained by the West Culvert Extension and the New West Culvert with no risk to flood-sensitive receptors.</p> <p>See response to NPS NN paragraph 5.100 as to how the Scheme design incorporates SuDS in accordance with the 4 pillars of CIRA guidance C753' The SuDS Manual, of quantity, quality, biodiversity and amenity.</p>
5.117 - 5.118 (Land instability)	<p>Where necessary, land stability should be considered in respect of new development, as set out in the National Planning Policy Framework and supporting planning guidance. Specifically, proposals should be appropriate for the location, including preventing unacceptable risks from land instability. If land stability could be an issue, applicants should seek appropriate technical</p>	<p>Land stability has been considered during the design of the Scheme at the following key stages:</p> <p>Route options: A review of available desk based information was undertaken to determine the likelihood of encountering natural ground hazards within the Scheme. None of significance were noted.</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<p>and environmental expert advice to assess the likely consequences of proposed developments on sites where subsidence, landslides and ground compression is known or suspected. Applicants should liaise with the Coal Authority if necessary.</p> <p>A preliminary assessment of ground instability should be carried out at the earliest possible stage before a detailed application for development consent is prepared. Applicants should ensure that any necessary investigations are undertaken to ascertain that their sites are and will remain stable or can be made so as part of the development. The site needs to be assessed in context of surrounding areas where subsidence, landslides and land compression could threaten the development during its anticipated life or damage neighbouring land or property. This could be in the form of a land stability or slope stability risk assessment report.</p>	<p>Preliminary design: the findings were subsequently supported by a comprehensive ground investigation undertaken between March to September 2020 which targeted the full Scheme extents. The design of the ground investigation considered and targeted underlying chalk bedrock, areas of possible soft compressible ground as indicated by BGS mapping, potential historical mineral extraction sites, etc.</p> <p>Areas of soft compressible ground have been observed and will require ground treatment to be designed at later stages.</p> <p>A preliminary engineering assessment has been undertaken with respect to earthworks and the feasibility of design slope geometries in relation to stability of cuttings and embankments. Slopes will be designed at a safe angle of repose where possible. Additional slope stabilisation measures will be specified if/where required.</p> <p>Detailed design: ground improvement and slope stability measures will be undertaken to ensure there are no land instability issues relating to the Scheme.</p>
<p>5.124 (The historic environment)</p>	<p>Non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to Scheduled Monuments, should be considered subject to the policies for designated heritage assets. The absence of designation for such heritage assets does not indicate lower significance.</p>	<p>ES Chapter 6 Cultural Heritage (TR010038/APP/6.1) describes the criteria used to assess the value of archaeological remains; in DMRB terminology value equates to significance. This chapter identifies how value or significance has been determined for undesignated assets.</p> <p>The assessment has been undertaken in accordance with DMRB LA 106 (Cultural Heritage Assessment⁷) and has considered designated and non-designated heritage assets including:</p> <p>A total of 277 heritage assets have been identified within the study area. These assets are made up of:</p>

⁷ Available to download from <https://www.standardsforhighways.co.uk/dmrb/search/8c51c51b-579b-405b-b583-9b584e996c80>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<ul style="list-style-type: none"> • 26 Listed Buildings • 244 non-designated assets including find spots • Seven non-designated historic landscape types in 182 individual parcels. <p>There are no Registered Parks and Gardens, Registered Battlefields or Conservation Areas within the study area.</p> <p>Designated and non-designated heritage assets are listed in ES Appendix 6.1 Cultural Heritage Information (TR010038/APP/6.3) together with an assessment of their historical background and context, value, magnitude and significance of impact.</p>
	<p>The Secretary of State should also consider the impacts on other non-designated heritage assets (as identified either through the development plan process by local authorities, including ‘local listing’, or through the nationally significant infrastructure project examination and decision making process) on the basis of clear evidence that the assets have a significance that merit consideration in that process, even though those assets are of lesser value than designated heritage assets.</p>	<p>See response to NPS NN paragraph 5.124.</p> <p>The assessment of designated and non-designated heritage assets includes: scheduled monuments, listed buildings, registered parks and gardens, non-designated locally recorded historically important buildings and landscapes, locally important buildings and structures identified during survey work, and non-designated below ground archaeological remains (see ES Chapter 6 Cultural Heritage, Section 6.8 (TR010038/APP/6.1)).</p>
5.126 - 5.127	<p>Where the development is subject to EIA the applicant should undertake an assessment of any likely significant heritage impacts of the proposed project as part of the Environmental Impact Assessment and describe these in the environmental statement.</p> <p>The applicant should describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the asset’s importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant Historic Environment Record should have</p>	<p>ES Chapter 6 Cultural Heritage (TR010038/APP/6.1) reports the potential significant effects on cultural heritage as a result of the Scheme.</p> <p>ES Appendix 6.1 Cultural Heritage Information (TR010038/APP/6.3) provides a detailed discussion of baseline information including assessment of archaeological potential, contribution of setting to value / significance and of the value / significance of all identified heritage assets designated and non-designated.</p> <p>The Scheme will have both beneficial and adverse effects on cultural heritage. Adverse impacts have been reduced or eliminated with a combination of sensitive design and targeted mitigation. Where adverse effects could not be</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<p>been consulted and the heritage assets assessed using appropriate expertise. Where a site on which development is proposed includes or has the potential to include heritage assets with archaeological interest, the applicant should include an appropriate desk-based assessment and, where necessary, a field evaluation.</p>	<p>avoided, a programme of archaeological recording and publishing is proposed to mitigate the impact.</p> <p>The level of assessment is proportionate to the importance of each asset and the likely impact of the Scheme, including an assessment of the significance of the impacts on below ground remains, built heritage assets and historic landscapes during the construction and operational phases of the scheme.</p> <p>In addition to the Historic Environment Record, a variety of other sources were consulted to establish the baseline for cultural heritage assessments. These include archival materials, historic mapping, reports of previous investigations within the study area, and site visits, including a geophysical survey and trial trenching to assess the conditions and settings of heritage assets.</p>
5.128	<p>In determining applications, the Secretary of State should seek to identify and assess the particular significance of any heritage asset that may be affected by the proposed development (including by development affecting the setting of a heritage asset), taking account of the available evidence and any necessary expertise from:</p> <ul style="list-style-type: none"> - relevant information provided with the application and, where applicable, relevant information submitted during examination of the application; - any designation records; - the relevant Historic Environment Record(s), and - similar sources of information; - representations made by interested parties during the examination; and - expert advice, where appropriate, and when the need to understand the significance of the heritage asset demands it. 	<p>See response to NPS NN paragraphs 5.126 – 5.127.</p> <p>Consultation with Historic England to discuss the assessment and potential impacts on the Grade I, II* and II listed buildings in the study area has taken place and is reported in Appendix 6.1 Cultural Heritage Information to the ES (TR010038/APP/6.3). Section 6.7 of the ES identifies the following listed buildings as key designated heritage assets in the study area:</p> <ul style="list-style-type: none"> • St Peters Church - Grade I • St Andrews Church - Grade II* • Church Farm House and Barn - Grade II • Berry Hall - Grade II <p>Norfolk County Council was consulted in relation to the design of archaeological evaluations and archaeological mitigation proposals. The areas of archaeological potential were agreed with Norfolk County Council (see Section 6.4 of ES Chapter 6 Cultural Heritage (TR010038/APP/6.1)).</p> <p>Further, the Consultation Report Annex N (TR010038/APP/5.2) provides a summary of responses provided by stakeholders such as Historic England, Norfolk County Council, the District Councils and other interested parties on heritage matters during statutory consultation. Annex K sets out the relevant</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		bodies that were consulted on heritage as part of the consultation, including Historic England.
5.129	In considering the impact of a proposed development on any heritage assets, the Secretary of State should take into account the particular nature of the significance of the heritage asset and the value that they hold for this and future generations. This understanding should be used to avoid or minimise conflict between their conservation and any aspect of the proposal.	<p>ES Appendix 6.1 Cultural Heritage Information (TR010038/APP/6.3) provides a detailed discussion of baseline information including assessment of archaeological potential, contribution of setting to value / significance and of the value / significance of all identified heritage assets designated and non-designated. ES Chapter 6 Cultural Heritage (TR010038/APP/6.1) reports the significance of effects on heritage assets as a result of the Scheme; also summarised in the response to NPS NN paragraphs 5.131, below.</p> <p>Design measures are also proposed to mitigate the significance of effects as far as possible as described in ES Chapter 6 Cultural Heritage Section 6.6 (TR010038/APP/6.1).</p>
5.130	The Secretary of State should take into account the desirability of sustaining and, where appropriate, enhancing the significance of heritage assets, the contribution of their settings and the positive contribution that their conservation can make to sustainable communities – including their economic vitality. The Secretary of State should also take into account the desirability of new development making a positive contribution to the character and local distinctiveness of the historic environment. The consideration of design should include scale, height, massing, alignment, materials, use and landscaping (for example, screen planting).	<p>Mitigation has been embedded into the Scheme design to make a positive contribution to the conservation of heritage assets. Table 3-1 REAC within the EMP (TR010038/APP/7.4) sets out mitigation relating to Cultural Heritage including planting design, recording, preservation by record, excavation, toolbox talks and restoration eg. of Milestones.</p> <p>Mitigation is also described within ES Chapter 6 Cultural Heritage Section 6.6 (TR010038/APP/6.1).</p>
5.131	When considering the impact of a proposed development on the significance of a designated heritage asset, the Secretary of State should give great weight to the asset's conservation. The more important the asset, the greater the weight should be. Once lost, heritage assets cannot be replaced and their loss has a cultural, environmental, economic and social impact. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. Given that heritage assets are irreplaceable, harm or loss affecting any	<p>ES Chapter 6 Cultural Heritage (TR010038/APP/6.1) acknowledges the importance of designated heritage assets. Section 6.11 summarises the residual effects on designated heritage assets.</p> <p>A programme of archaeological recording is proposed prior to construction to mitigate any potential unavoidable impact on archaeological heritage. This is secured by Requirement 9 to the Draft DCO (TR010038/APP/3.1).</p> <p>Significant beneficial effects during construction have been identified as a</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<p>designated heritage asset should require clear and convincing justification. Substantial harm to or loss of a grade II Listed Building or a grade II Registered Park or Garden should be exceptional. Substantial harm to or loss of designated assets of the highest significance, including World Heritage Sites, Scheduled Monuments, grade I and II* Listed Buildings, Registered Battlefields, and grade I and II* Registered Parks and Gardens should be wholly exceptional.</p>	<p>result of protection and conservation actions on two milestones (MNF62796 and MNF62797).</p> <p>There would be residual adverse effects, from construction and operation activities, on the setting of three Listed Buildings:</p> <ul style="list-style-type: none"> • St Peter’s Church (Grade I) - Moderate • St Andrew’s Church (Grade II*) - Large • Church Farm House (Grade II) - Slight • Berry Hall (Grade II) - Slight <p>The construction and operation impacts are discussed in Tables 6.3 and 6.4, respectively, of ES Chapter 6 Cultural Heritage (TR010038/APP/6.1). In particular, these tables discuss the measures taken to minimise the harm to St Andrew’s church and the benefits of the Scheme to the Church, resulting in a large adverse effect to be derived. The Scheme is a linear project and the route has been determined through several stages. At all stages environmental factors, including cultural heritage impacts, have been considered. The design of the Scheme included in the application has sought to minimise impacts on these particular assets where possible through routeing and in determining the location of the Norwich Road junction. Section 7.4 of the Case for the Scheme (TR010038/APP/7.1) explores in more detail the effects on and measures taken to minimise harm to the setting of these listed buildings. Overall, it is considered that on balance the wider benefits outweigh the harm.</p> <p>Slight beneficial effects would be achieved during operation on the following Listed Buildings due to moving the carriageway of the A47 further away:</p> <ul style="list-style-type: none"> • St Michaels Church, Grade I • Manor Farmhouse, Grade II • Manor House, Grade II • Yew Tree Farmhouse, Grade II <p>There would be no significant effects on the historic landscape.</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
5.132	Any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset, the greater the justification that will be needed for any loss.	Chapter 6 Cultural Heritage, of the ES (TR010038/APP 6.1) confirms that the Scheme will not result in substantial harm to, or the total loss of significance, of a designated heritage asset. The above response to NPS NN paragraphs 5.131 summarises the adverse and beneficial effects to designated heritage assets. The Scheme design has sought to avoid direct loss of designated heritage assets and minimise adverse effects on settings. In comparison, the range of economic, transport, environmental and community benefits are summarised in Chapters 3 to 5 of the Case for the Scheme (TR010038/APP/7.1). These benefits are considered to outweigh any effects on sensitive designated heritage asset receptors.
5.133	Where the proposed development will lead to substantial harm to or total loss of significance of a designated heritage asset, the Secretary of State should refuse consent unless it can be demonstrated that the substantial harm or loss of significance is necessary in order to deliver substantial public benefits that outweigh that loss or harm, or alternatively that all of the following apply: <ul style="list-style-type: none"> • the nature of the heritage asset prevents all reasonable uses of the site; and • no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and • conservation by grant-funding or some form of charitable or public ownership is demonstrably not possible; and - the harm or loss is outweighed by the benefit of bringing the site back into use. 	See response to NPS NN Paragraph 5.131 and 5.132.
5.134	Where the proposed development will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including securing its optimum viable use.	See response to NPS NN Paragraph 5.132

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
5.135	Not all elements of a World Heritage Site or Conservation Area will necessarily contribute to its significance. The Secretary of State should treat the loss of a building (or other element) that makes a positive contribution to the site's significance either as substantial harm or less than substantial harm, as appropriate, taking into account the relative significance of the elements affected and their contribution to the significance of the Conservation Area or World Heritage Site as a whole.	The Scheme would not result in any effects on any World Heritage Sites or Conservation Areas as confirmed in ES Chapter 6 Cultural Heritage (TR010038/APP 6.1).
5.136	Where the loss of significance of any heritage asset has been justified by the applicant based on the merits of the new development and the significance of the asset in question, the Secretary of State should consider imposing a requirement that the applicant will prevent the loss occurring until the relevant development or part of development has commenced.	<p>ES Chapter 6 Cultural Heritage Section 6.5 (TR010038/APP/6.1) reports the potential impacts on cultural heritage as a result of the Scheme. Also see response to NPS NN Paragraph 5.132.</p> <p>Noise barriers, low noise surfacing, landscaping and planting have been incorporated into the design of the Scheme to reduce adverse effects on the setting of several cultural heritage assets.</p> <p>A programme of archaeological recording is proposed prior to construction to mitigate any potential unavoidable impact on archaeological remains. Mitigation will be delivered through the Environment Management Plan (TR010038/APP/7.4) which requires preparation and implementation of a heritage mitigation strategy, referred to as the Detailed Heritage Written Scheme of Investigation (DHWSI), to be agreed with and monitored by the relevant statutory environmental bodies. The EMP commitments are secured by a Requirement in the Draft DCO (TR010038/APP/3.1).</p>
5.137	Applicants should look for opportunities for new development within Conservation Areas and World Heritage Sites, and within the setting of heritage assets, to enhance or better reveal their significance. Proposals that preserve those elements of the setting that make a positive contribution to or better reveal the significance of the asset should be treated favourably.	ES Chapter 6 Cultural Heritage (TR010038/APP/6.1) confirms there are no Conservation Areas or World Heritage Sites within the study area.
5.138	Where there is evidence of deliberate neglect of or damage to a heritage asset the Secretary of State	Section 6.7 of Appendix 6.1 Cultural Heritage Information (TR010038/APP/6.3) details the baseline conditions of the heritage assets.

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	should not take its deteriorated state into account in any decision.	Any deterioration in the assets due to deliberate neglect or damage is not considered during the assessment of effects.
5.144 - 5.146 (Landscape and visual impacts)	<p>Where the development is subject to EIA the applicant should undertake an assessment of any likely significant landscape and visual impacts in the environmental impact assessment and describe these in the environmental assessment. A number of guides have been produced to assist in addressing landscape issues. The landscape and visual assessment should include reference to any landscape character assessment and associated studies, as a means of assessing landscape impacts relevant to the proposed project. The applicant's assessment should also take account of any relevant policies based on these assessments in local development documents in England.</p> <p>The applicant's assessment should include any significant effects during construction of the project and/or the significant effects of the completed development and its operation on landscape components and landscape character (including historic landscape characterisation).</p> <p>The assessment should include the visibility and conspicuousness of the project during construction and of the presence and operation of the project and potential impacts on views and visual amenity. This should include any noise and light pollution effects, including on local amenity, tranquillity and nature conservation.</p>	<p>Chapter 7 Landscape and Visual of the ES (TR010038/APP/6.1) presents the findings of the Landscape and Visual Impact Assessment (LVIA) including baseline conditions, the potential impacts of the Scheme upon surrounding landscape and visual receptors and identification of appropriate mitigation. The assessment was carried out in accordance with the Design Manual for Roads and Bridges (DMRB), LA107 Landscape and Visual Effects and the Guidelines for Landscape and Visual Impact Assessment. The LVIA also takes account of local development plan policies in respect of landscape and visual effects.</p> <p>There are no landscape designations (statutory or local) within the Scheme study area. Two national and five local landscape character areas have been identified for the purposes of assessment as an outcome of review of published landscape character studies and site observation (see ES Appendix 7.4 Landscape Character Areas in TR010038/APP/6.3).</p> <p><u>Landscape</u> As a direct consequence of construction there would be a moderate adverse (significant) effect on landscape character associated with the proposed removal of, and change to, existing vegetation and land use to allow construction to take place.</p> <p>By year 15 of operation, with the establishment of Scheme landscape mitigation, effects on landscape features would be neutral (not significant). Effects on landscape character would also be slight adverse (not significant).</p> <p><u>Visual</u> Some receptors would be subject to significant adverse visual effects associated with views of construction activities. However, in the context of the 9km Scheme, a limited number of residential receptors would experience significant visual effects. The largest construction effects on visual receptors are in those locations in closest proximity to construction activities, particularly</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<p>residential receptors and users of footpaths.</p> <p>By year 15 of operation the establishment of Scheme planting would contribute to screening and landscape integration resulting in an overall residual minor adverse (not significant) visual effect.</p> <p>Residual moderate adverse (significant) effects on four visual individual receptors will remain, including Newgate House, Sycamore Farm properties, and properties beside Sandy Lane. Policy and guidance recognise that not all impacts are able to be resolved in large scale Schemes and the above residual impacts will be weighed against the longer term and wider benefits of the Scheme in environmental, safety, social and economic terms presented in the Case for the Scheme (TR010038/APP/7.1).</p>
5.147- 5.148	<p>Any statutory undertaker commissioning or undertaking works in relation to, or so as to affect land in a National Park or Areas of Outstanding Natural Beauty, would need to comply with the respective duties in section 11A of the National Parks and Access to Countryside Act 1949 and section 85 of the Countryside and Rights of Way Act 2000.</p> <p>For significant road widening or the building of new roads in National Parks and the Broads applicants also need to fulfil the requirements set out in Defra's English national parks and the broads: UK government vision and circular 2010 or successor documents. These requirements should also be complied with for significant road widening or the building of new roads in Areas of Outstanding Natural Beauty.</p>	The Scheme is not located within or adjacent to a National Park or AONB.
5.149	<p>Landscape effects depend on the nature of the existing landscape likely to be affected and nature of the effect likely to occur. Both of these factors need to be considered in judging the impact of a project on landscape. Projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant</p>	<p>See response to NPS NN paragraphs 5.144-5.146 above.</p> <p>Landscape and visual related design interventions and mitigation associated with the Scheme are described in ES Chapter 7 Landscape and Visual, Section 7.9 (TR010038/APP/6.1).</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<p>constraints, the aim should be to avoid or minimise harm to the landscape, providing reasonable mitigation where possible and appropriate.</p>	<p>ES Chapter 7 Landscape and Visual, Section 7.10 (TR010038/APP/6.1) evaluates and assesses the residual effects of the Scheme on landscape and visual sensitivities following the design refinement process and application of mitigation and enhancement measures.</p> <p>The EMP (TR010038/APP/7.4) includes the REAC (Table 3-1) which identifies the mitigation identified within the ES to address the potential significant environmental effects of the Scheme. During construction, measures within the REAC include: sympathetic colouring of temporary buildings; keeping a tidy site; avoiding unnecessary stockpiling and protecting retained vegetation.</p> <p>Landscaping works will include: creating safe mammal crossing points, new and replacement wildlife habitats and areas of tree and woodland planting; ensuring grasses and plants require minimum future maintenance; ensuring the design reinforces and retains the existing landscape character respects the setting of cultural heritage assets; and ensuring an appropriate diversity in species in planting plans. See Section 7.9 of ES Chapter 7 (TR010038/APP/6.1) and Environmental Masterplan (TR010038/APP/6.8).</p>
5.150 - 5.151	<p>Great weight should be given to conserving landscape and scenic beauty in nationally designated areas. National Parks, the Broads and Areas of Outstanding Natural Beauty have the highest status of protection in relation to landscape and scenic beauty. Each of these designated areas has specific statutory purposes which help ensure their continued protection and which the Secretary of State has a statutory duty to have regard to in decisions.</p> <p>The Secretary of State should refuse development consent in these areas except in exceptional circumstances and where it can be demonstrated that it is in the public interest. Consideration of such applications should include an assessment of:</p> <ul style="list-style-type: none"> the need for the development, including in terms of any national considerations, and the impact of consenting, or not consenting it, upon the local economy; 	<p>The Scheme is not located within or adjacent to a National Park, AONB or other nationally designated area.</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<ul style="list-style-type: none"> the cost of, and scope for, developing elsewhere, outside the designated area, or meeting the need for it in some other way; and any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated. <p>There is a strong presumption against any significant road widening or the building of new roads and strategic rail freight interchanges in a National Park, the Broads and Areas of Outstanding Natural Beauty, unless it can be shown there are compelling reasons for the new or enhanced capacity and with any benefits outweighing the costs very significantly. Planning of the Strategic Road Network should encourage routes that avoid National Parks, the Broads and Areas of Outstanding Natural Beauty.</p>	
5.153	Where consent is given in these areas, the Secretary of State should be satisfied that the applicant has ensured that the project will be carried out to high environmental standards and where possible includes measures to enhance other aspects of the environment. Where necessary, the Secretary of State should consider the imposition of appropriate requirements to ensure these standards are delivered.	The Scheme is not located within or adjacent to a National Park, AONB or other nationally designated area.
5.154 - 5.155	The duty to have regard to the purposes of nationally designated areas also applies when considering applications for projects outside the boundaries of these areas which may have impacts within them. The aim should be to avoid compromising the purposes of designation and such projects should be designed sensitively given the various siting, operational, and other relevant constraints. This should include projects in England which may have impacts on designated areas in Wales or on National Scenic Areas in Scotland.	ES Chapter 7 Landscape and Visual (Section 7.4, TR010038/APP/6.1) identifies the statutory or local designated landscapes considered in the assessment. There are no statutory or non-statutory designated landscapes within the study.

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	The fact that a proposed project will be visible from within a designated area should not in itself be a reason for refusing consent.	
5.156	Outside nationally designated areas, there are local landscapes that may be highly valued locally and protected by local designation. Where a local development document in England has policies based on landscape character assessment, these should be given particular consideration. However, local landscape designations should not be used in themselves as reasons to refuse consent, as this may unduly restrict acceptable development.	<p>See response to NPS NN paragraphs 5.154-5.155.</p> <p>In terms of landscape character, the majority of the study area lies within National Character Area (NCA) 84: Mid Norfolk, while a small proportion of the very eastern extent of the study area is located within NCA 78: Central North Norfolk. Five local landscape character areas have been used as the basis for assessment of landscape effects:</p> <ul style="list-style-type: none"> • Breckland character areas: <ul style="list-style-type: none"> ○ LCA B6: River Wensum and Tud Tributary Farmland (Settled Tributary Farmland Type) ○ LCA A5: Upper Tud (River Valleys Type) • Broadland character areas <ul style="list-style-type: none"> ○ LCA D2: Weston Green Tributary Farmland (Tributary Farmland Type) • South Norfolk character areas <ul style="list-style-type: none"> ○ LCA G1: Easton Fringe Farmland (Fringe Farmland Type) ○ LCA A3: Tud Rural River Valley (Rural River Valley Type) <p>Adverse effects on landscape features during the construction of the Scheme would be not significant, but there would be significant adverse effects on landscape character associated with removal of, and change to, existing vegetation and land use.</p> <p>During operation of the Scheme landscape features would not be significantly affected, but at year 1 there would be a significant adverse effect on landscape character; in particular around the with river corridors, from the residual loss of vegetation and prominence of Scheme infrastructure. However, by year 15 of operation, the establishment of the Scheme, landscape planting would reduce the landscape character impacts to 'not significant'.</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
5.157	In taking decisions, the Secretary of State should consider whether the project has been designed carefully, taking account of environmental effects on the landscape and siting, operational and other relevant constraints, to avoid adverse effects on landscape or to minimise harm to the landscape, including by reasonable mitigation.	<p>ES Chapter 7 Landscape and Visual, Section 7.9 (TR010038/APP/6.1) addresses how the Scheme has been designed to minimise harm to the landscape, sets out the environmental measures provided as part of the Scheme and the mitigation proposed.</p> <p>The following overarching landscape and visual objectives were identified and have guided the iterative development of the Scheme design. Securing these objectives is embedded within the location, scale, extent and height of the highway geometry and earthworks design:</p> <ul style="list-style-type: none"> • to minimise direct impacts on trees and woodlands through avoidance - especially mature or veteran specimen trees along roadsides • to minimise the landscape effect and visibility of the main infrastructure by limiting the elevation of new infrastructure and earthworks within this low-lying landscape and by providing adequate screen planting • to maintain the distinction between the trunk road network and the underlying peaceful, rural landscape by ensuring that elements of the Proposed Scheme away from the main trunk roads are detailed in a way which is appropriate to the local vernacular and rural character and distinct from the treatment of the A47 corridor. <p>Further detail is provided in the Environmental Masterplan (TR010038/APP/6.8). The construction and operation states will also be guided by the EMP (TR010038/APP/7.4) which includes the REAC (Table 3-1) that identifies the mitigation identified within the ES to address the potential significant environmental effects of the Scheme.</p>
5.158	The Secretary of State will have to judge whether the visual effects on sensitive receptors, such as local residents, and other receptors, such as visitors to the local area, outweigh the benefits of the development.	<p>Sections 7.7 to 7.10 of ES Chapter 7 Landscape and Visual (TR010038/APP/6.1) evaluate and assess the significance of the effects of the Scheme on sensitive receptors following the design refinement process during the EIA process and application of mitigation and enhancement measures. The majority of effects would reduce as landscape planting matures.</p> <p>See response to NPS NN paragraphs 5.144-5.146.</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
5.159	<p>Reducing the scale of a project or making changes to its operation can help to avoid or mitigate the visual and landscape effects of a proposed project. However, reducing the scale or otherwise amending the design or changing the operation of a proposed development may result in a significant operational constraint and reduction in function. There may, be exceptional circumstances, where mitigation could have a very significant benefit and warrant a small reduction in scale or function. In these circumstances, the Secretary of State may decide that the benefits of the mitigation to reduce the landscape effects outweigh the marginal loss of scale or function.</p>	<p>See response to NPS NN paragraphs 5.157 and 5.158</p> <p>There is no scope to reduce the scale of the Scheme and no mitigation that would be so significant as to warrant a reduction.</p> <p>During the appraisal of route options, summarised in Chapter 2 Scheme Development and Options Considered in the Case for Scheme (TR010038/APP/7.1) and ES Chapter 3 Consideration of Alternatives (TR010038/APP/ 6.1), landscape and visual amenity were considered as part of the environmental assessment of options, alongside performance against safety and other environmental, engineering, transportation and economic criteria.</p> <p>The evolution of the Scheme's design is described in the Scheme Design Report (TR010038/APP/7.3). The landscape design has sought to integrate the Scheme with surrounding landscape character, minimise visual intrusion and mitigate potentially harmful effects on views associated with the Scheme which will be more effective as planting matures.</p>
5.160	<p>Adverse landscape and visual effects may be minimised through appropriate siting of infrastructure, design (including choice of materials), and landscaping Schemes, depending on the size and type of proposed project. Materials and designs for infrastructure should always be given careful consideration.</p>	<p>See response to NPS NN paragraphs 5.157 and 5.159.</p> <p>Landscape and visual related design interventions and mitigation associated with the Scheme are described in Section 7.9 of ES Chapter 7 Landscape and Visual (TR010038/APP/ 6.1). The EMP (TR010038/APP/7.4) includes the REAC (Table 3-1) which details mitigation to address the potential significant environmental effects of the Scheme.</p>
5.161	<p>Depending on the topography of the surrounding terrain and areas of population it may be appropriate to undertake landscaping off site, although if such landscaping was proposed to be consented by the development consent order, it would have to be included within the order limits for that application. For example, filling in gaps in existing tree and hedge lines would mitigate the impact when viewed from a more distant vista.</p>	<p>The Order Limits do not include for off-site landscape mitigation as sufficient mitigation can be delivered within the Scheme.</p> <p>Landscape and visual mitigation measures embedded in the Scheme design are illustrated in the Environmental Masterplan (TR010038/APP/6.8) and committed to through the EMP (TR010038/APP/7.4).</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
<p>5.165 - 5.167 (Land use including open space, green infrastructure and Green Belt)</p>	<p>The applicant should identify existing and proposed land uses near the project, any effects of replacing an existing development or use of the site with the proposed project or preventing a development or use on a neighbouring site from continuing. Applicants should also assess any effects of precluding a new development or use proposed in the development plan. The assessment should be proportionate.</p> <p>Existing open space, sports and recreational buildings and land should not be developed unless the land is surplus to requirements or the loss would be replaced by equivalent or better provision in terms of quantity and quality in a suitable location. Applicants considering proposals which would involve developing such land should have regard to any local authority's assessment of need for such types of land and buildings.</p> <p>During any pre-application discussions with the applicant, the local planning authority should identify any concerns it has about the impacts of the application on land-use, having regard to the development plan and relevant applications, and including, where relevant, whether it agrees with any independent assessment that the land is surplus to requirements. These are also matters that local authorities may wish to include in their Local Impact Report which can be submitted after an application for development consent has been accepted.</p>	<p>ES Chapter 12 Population and Human Health (TR010038/APP/6.1) identifies existing land uses and receptors in the vicinity of the Scheme and assesses their sensitivity, using the criteria in Table 3.11 of DMRB LA 112, to the potential effects of the Scheme and magnitude of impact. Residential, businesses, agricultural holdings, recreational users, PRoWs, new developments and uses proposed in the Development Plan are considered.</p> <p>Discussions have taken place with Norfolk County Council as detailed in the Consultation Report (TR010038/APP/5.1)</p> <p>There are no landscape designations or national trails associated with the study area therefore the Scheme will not affect any designated landscapes (statutory or local designation).</p> <p>There would be impacts on land use and accessibility during the construction and operation of the Scheme, including:</p> <ul style="list-style-type: none"> • temporary and permanent land-take from agricultural land holdings • temporary disruption as a result of road closures and traffic management during the construction phase • temporary and permanent diversions to Public Rights of Way, such as Hockering FP7, Honingham RB1 and Ringland Lane / Dog Lane crossing • permanent changes in severance for resident and businesses in Great Witchingham, Upper Wensum, Mattishall and Easton • permanent changes in access to private and business properties, such as Hillcrest Cottage and along Church Lane, Rotten Row • creation of new footway/cycleways improving connectivity, such as between Hockering and Easton. <p>There may also be some adverse amenity effects for human health, specifically in terms of noise, dust and visual intrusion. Mitigation measures will minimise these effects. (see Chapter 12: Population and Human Health of the ES (TR010038/APP/6.1))</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<p>With regard to proposed development land within the Food Enterprise Zone (FEZ), this is discussed in the Scheme Design Report (TR010038/APP/7.3). The FEZ itself is not tied to a specific geographical location, but a local development order (LDO) made by Broadland District Council in 2017 for approximately 19 hectares south-west of Easton for the Greater Norwich FEZ. The FEZ has a permitted means of access, via Church Lane, Easton, so it is not necessary for the Scheme to provide a direct access to the A47. However, the Applicant recognises that a future developer of the FEZ site may wish to obtain consent to create their own connection to the Scheme. Therefore, the Scheme has been designed so as not to prohibit the FEZ developer creating their own direct access to the A47 via Norwich Road junction in the future. In all other respects the Scheme will not compromise the ability of the FEZ to be developed further.</p> <p>Chapter 15 Cumulative Effects Assessment of the ES (TR010038/APP/6.1) provides an assessment of the likely significant effects of the Scheme in combination with other past, present and reasonably foreseeable development (e.g. sites with planning applications) as well as impact interactions.</p>
5.168	<p>Applicants should take into account the economic and other benefits of the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification). Where significant development of agricultural land is demonstrated to be necessary, applicants should seek to use areas of poorer quality land in preference to that of a higher quality. Applicants should also identify any effects, and seek to minimise impacts, on soil quality, taking into account any mitigation measures proposed. Where possible, developments should be on previously developed (brownfield) sites provided that it is not of high environmental value. For developments on previously developed land, applicants should ensure that they have considered the risk posed by land contamination and how it is proposed to address this.</p>	<p>ES Chapter 9 Geology and Soils (TR010038/APP/6.1) states that the Scheme will result in the permanent and temporary loss of approximately 18.9 hectares (ha) Grade 2, 32.2 ha Grade 3a (good quality) and 6.2ha 3b (moderate quality) agricultural land; areas of Grade 2 and 3a agricultural land are considered to be best and most versatile (BMV) agricultural land (i.e. land that can best deliver future crops for food and non-food uses).</p> <p>The design of the Scheme has sought to minimise the area of land take and a Soil Management Plan will be developed to help preserve land quality and restore areas of temporary land take. The long-term residual effects on agricultural soils would be limited to the area of agricultural land permanently lost.</p> <p>The design and route selection process sought to minimise the footprint of the Scheme as much as practicable, without adversely affecting the design. Given the surrounding lands are of similarly high agricultural quality, the overall effect</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<p>on agricultural soils of alternatives would be very similar for other offline route options.</p> <p>ES Chapter 9 also assesses the risk posed by existing potential contaminated land. Only minor evidence of contamination from historical activities was identified, so no special remedial activities are recommended for the Scheme.</p> <p>Mitigation measures in the EMP would be secured through Requirement 4 of the draft DCO (TR010038/APP/3.1).</p>
5.169	Applicants should safeguard any mineral resources on the proposed site as far as possible.	ES Appendix 10.4 Mineral Impact Assessment (TR010038/APP/6.3), concludes it is not anticipated that any mineral safeguarding sites will be sterilised.
5.170 - 5.171	<p>The general policies controlling development in the countryside apply with equal force in Green Belts but there is, in addition, a general presumption against inappropriate development within them. Such development should not be approved except in very special circumstances. Applicants should therefore determine whether their proposal, or any part of it, is within an established Green Belt and, if so, whether their proposal may be considered inappropriate development within the meaning of Green Belt policy. Metropolitan Open Land, and land designated as Local Green Space in a local or neighbourhood plan, are subject to the same policies of protection as Green Belt, and inappropriate development should not be approved except in very special circumstances.</p> <p>Linear infrastructure linking an area near a Green Belt with other locations will often have to pass through Green Belt land. The identification of a policy need for linear infrastructure will take account of the fact that there will be an impact on the Green Belt and as far as possible, of the need to contribute to the achievement of the objectives for the use of land in Green Belts.</p>	There are no Green Belt designations within the Order Limits.
5.173	Where the project conflicts with a proposal in a development plan, the Secretary of State should take account of the stage which the development plan document has reached in deciding	Chapter 6 of the Case for the Scheme Conformity with Planning Policy and Transport Plans (TR010038/APP/7.1) sets out the planning policy justification for the proposal.

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<p>what weight to give to the plan for the purposes of determining the planning significance of what is replaced, prevented or precluded. The closer the development plan document is to being adopted by the local plan, the greater the weight which can be attached to the impact of the proposal on the plan.</p>	<p>The Scheme demonstrates compliance with the Government's strategic vision for the development of the national road network. The Scheme is included within the RIS and national, regional and local transport and planning policy. Section 3(6) of the Infrastructure Act 2015 places a duty on the SoS to comply with the provisions of the RIS.</p> <p>By increasing capacity and removing many of the constraints associated with the existing A47 North Tuddenham to Easton single carriageway, the Scheme meets many of the objectives contained in the transport and economic strategies for the area as well as the policies within the Breckland, Broadland and South Norfolk local plans.</p> <p>There is much support for improvements to the A47 at a county level, such as within in the Norfolk County Council Local Transport Plan and improvements to the SRN are considered to be key priorities for the delivery of economic growth in Norwich, Breckland, Broadland and South Norfolk as a whole.</p> <p>The respective ES Chapters assess the potential impacts of the Scheme within the relevant policy context. Policy and guidance recognise that not all impacts are able to be resolved in large scale Schemes and any residual impacts will be weighed against the longer term and wider benefits of the Scheme in environmental, safety, social and economic terms.</p>
5.174	<p>The Secretary of State should not grant consent for development on existing open space, sports and recreational buildings and land, including playing fields, unless an assessment has been undertaken either by the local authority or independently, which has shown the open space or the buildings and land to be surplus to requirements, or the Secretary of State determines that the benefits of the project (including need) outweigh the potential loss of such facilities, taking into account any positive proposals made by the applicant to provide new, improved or compensatory land or facilities.</p>	<p>Poppy Wood, west of Hockering, is a designated Public Open Space in Breckland Council's Local Plan. The Scheme will not permanently affect or need to acquire land from Poppy Wood, but the southern edge lies within the DCO boundary to allow the rights to provide a temporary construction work area / access activity to realign the local road plus remove a redundant overhead utility line. The land would be restored to open space after construction, causing no permanent loss of Public Open Space.</p>
5.175	<p>Where networks of green infrastructure have been identified in development plans, they should normally be protected from</p>	<p>Green infrastructure networks have not been identified in the vicinity of the Scheme.</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	development, and, where possible, strengthened by or integrated within it. The value of linear infrastructure and its footprint in supporting biodiversity and ecosystems should also be taken into account when assessing the impact on green infrastructure.	
5.176	The decision-maker should take into account the economic and other benefits of the best and most versatile agricultural land. The decision maker should give little weight to the loss of agricultural land in grades 3b, 4 and 5, except in areas (such as uplands) where particular agricultural practices may themselves contribute to the quality and character of the environment or the local economy.	See response to NPS NN paragraph 5.168.
5.177	In considering the impact on maintaining coastal recreation sites and features, the Secretary of State should expect applicants to have taken advantage of opportunities to maintain and enhance access to the coast. In doing so the Secretary of State should consider the implications for development of the creation of a continuous signed and managed route around the coast, as proposed in the Marine and Coastal Access Act 2009.	There are no coastal recreation sites or features impacted by the Scheme.
5.180	Where green infrastructure is affected, applicants should aim to ensure the functionality and connectivity of the green infrastructure network is maintained and any necessary works are undertaken, where possible, to mitigate any adverse impact and, where appropriate, to improve that network and other areas of open space, including appropriate access to new coastal access routes, National Trails and other public rights of way.	<p>ES Chapter 7 Landscape and Visual Effects and ES Chapter 8 Biodiversity (TR010038/APP/6.1) include mitigation and design measures that will incorporate linear and connective habitat throughout the Scheme that will support policy objectives to maintain and, where possible, improve connectivity of habitats and green infrastructure. Examples include reinforcing the existing linear and geometric character with woodland planting where this is consistent with the surroundings; and hop-overs and targeted planting at underpasses and overpasses have been designed to encourage use by bats to maintain connectivity and raise flight height above the carriageway.</p> <p>.</p> <p>Further, ES Chapter 12 Population and Human Health (TR010038/APP/6.1) identifies the walking, cycling and horse riding routes within the study area. Surveys were carried out on the use of these routes and the receptors and their sensitivity are summarised in Section 12.7. The inclusion of new or improved walking and cycling routes align to sustainable and integrated transport objectives. A summary of the new or improved routes is presented in</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		the response to NPS NN paragraph 5.184, below. No National Trails are affected by the Scheme.
5.181	The Secretary of State should also consider whether mitigation of any adverse effects on green infrastructure or open space is adequately provided for by means of any planning obligations, for example, to provide exchange land and provide for appropriate management and maintenance agreements. Any exchange land should be at least as good in terms of size, usefulness, attractiveness, quality and accessibility. Alternatively, where Sections 131 and 132 of the Planning Act 2008 apply, any replacement land provided under those sections will need to conform to the requirements of those sections.	See response to NPS NN paragraph 5.180 No additional or exchange land is required . Section 131 and 132 do not apply.
5.182	Where a proposed development has an impact on a Mineral Safeguarding Area (MSA), the Secretary of State should ensure that the applicant has put forward appropriate mitigation measures to safeguard mineral resources.	ES Appendix 10.4 Mineral Impact Assessment (TR010038/APP/6.3), concludes it is not anticipated that any mineral safeguarding sites will be sterilised. Section 10.6 states that mitigation measures in the Outline SWMP (ES Appendix 10.3, TR010038/APP/6.3) and the EMP (TR010038/APP/7.4) will include use of site-won or recycled material assets as opposed to sourcing new mineral materials. Preliminary information included in the outline SWMP will be updated and used by the principal contractor to develop the SWMP at detailed design stage. The SWMP will be included as part of the EMP (Second Iteration) (TR010038/APP/7.4).
5.183	Where a project has a sterilising effect on land use there may be scope for this to be mitigated through, for example, using the land for nature conservation or wildlife corridors or for parking and storage in employment areas.	See response to NPS NN paragraph 5.168-5.169 and 5.180.
5.184	Public rights of way (PRoW), National Trails, and other rights of access to land (for example open access land) are important recreational facilities for walkers, cyclists and equestrians.	Section 12.6 of ES Chapter 12 Population and Human Health (TR010038/APP/6.1) assesses the impacts on users of changes to the existing

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<p>Applicants are expected to take appropriate mitigation measures to address adverse effects on coastal access, National Trails, other public rights of way and open access land and, where appropriate, to consider what opportunities there may be to improve access. In considering revisions to an existing right of way consideration needs to be given to the use, character, attractiveness and convenience of the right of way. The Secretary of State should consider whether the mitigation measures put forward by an applicant are acceptable and whether requirements in respect of these measures might be attached to any grant of development consent.</p> <p>Public rights of way can be extinguished under Section 136 of the Act if the Secretary of State is satisfied that an alternative has been or will be provided or is not required.</p>	<p>public rights of way (PRoWs) for walkers, cyclists and equestrians. There are no National Trails in the study area.</p> <p>Hockering FP12 currently serves no purpose for walkers, cyclists and horse-riders and is no longer required, so will be permanently removed. A very short section of Hockering FP8, where it connects to Hockering FP7, may need to be permanently stopped up and diverted to accommodate the Scheme. Honingham RB1 would be permanently diverted via the Hall Farm access underpass as a result of the Scheme. The cycle track linking between Main Road and The Street to the west of Hockering would be replaced along the new road between Main Road and Hockering. The Scheme would also result in the permanent severance of FP7 and the closure of uncontrolled crossings at both Easton roundabout and Ringland Lane / Dog Lane.</p> <p>New cycle tracks would also be provided and Hockering FP3 upgraded to a bridleway with suitable surfacing for a cycle track. In addition, some sections of the carriageway of the de-trunked A47 would be narrowed and the speed limit of the road would be reduced to reflect the lower levels of traffic that it would carry in the future. An existing footway on the A47 in vicinity of St Andrews Church would be upgraded. These are detailed in ES Chapter 12 Population & Human Health (TR010038/APP/6.1). The new and improved routes will provide safer and more pleasant journeys for cyclists and pedestrians undertaking east to west trips between Hockering, Honingham and Easton. The new facilities would also facilitate the safe crossing on the new A47 for north to south trips, e.g. for trips between Hockering and Mattishall.</p>
5.186 (Noise and vibration)	<p>Excessive noise can have wide-ranging impacts on the quality of human life and health (e.g. owing to annoyance or sleep disturbance), use and enjoyment of areas of value (such as quiet places) and areas with high landscape quality. The Government's policy is set out in the Noise Policy Statement for England. It promotes good health and good quality of life through effective noise management. Similar considerations apply to vibration, which can also cause damage to buildings. In this section, in line with current legislation, references below to "noise" apply equally to assessment of impacts of vibration</p>	<p>ES Chapter 11 Noise and Vibration (TR010038/APP/6.1) considers the potential noise and vibration impacts of the Scheme, the with residual effects summarised in Section 11.10. Cognisance has been taken of the full legislative and policy framework as listed in Section 11.3 including the Noise Policy for England.</p> <p>Noise modelling was undertaken for all noise sensitive receptors within the corresponding study areas, reviewed against a baseline noise survey undertaken in September 2020. Receptors close to the existing A47 are already exposed to relatively high noise levels due to road traffic.</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<p>During construction, the noise assessment concluded that, with the application of best practice construction methods and temporary noise barriers, potential significant effects are unlikely at the vast majority of receptors. A significant temporary noise effect is predicted as a result of the drainage basin works adjacent to Acorn Barn, should works exceed a set timeframe.</p> <p>With the application of best practice construction methods and vibration monitoring, the Scheme is unlikely to give rise to any potential significant construction vibration effects.</p> <p>Section 11.12 in ES Chapter 11 Noise and Vibration also reports the following long-term beneficial effects at:</p> <ul style="list-style-type: none"> • Noise Important Area 5200 • Three receptors in Hockering (outside of NIA 5200) • Two receptors on Ringland Road • One receptor on Park Lane, Hockering • Two receptors on The Broadway • Three PROWs near Hockering <p>A majority of these are due to the expected change in road user behaviour (traffic re-routing) brought about by the Scheme.</p> <p>Following mitigation (low noise surfacing and four noise barriers), significant residual adverse effects only remain at 15 receptors due to:</p> <ul style="list-style-type: none"> • more road users choosing to access the improved A47 between North Tuddenham and Easton • some effects remaining significant despite mitigation being included (i.e. due to the large increase in noise levels associated with the introduction of a high-speed dual carriageway in a rural area). Further mitigation is not considered practical on the grounds of landscape and visual impact • some noise barriers are not provided where the cost-to-benefit ratio is poor or where the marginal benefit provided by a noise barrier is not

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<p>sufficient to avoid residual significant effects.</p> <p>With regard to Noise Important Areas (NIA), a significant beneficial effect is predicted at NIA 5200. The remaining NIA (5201, 5202 and 6287) are not predicted to experience any significant effects (beneficial or adverse) due to the Scheme.</p>
5.187	<p>Noise resulting from a proposed development can also have adverse impacts on wildlife and biodiversity. Noise effects of the proposed development on ecological receptors should be assessed in accordance with the Biodiversity and Geological Conservation section of this NPS.</p>	<p>Ecology is considered a sensitive receptor that can be affected by changes to noise and vibration. Effects of impacts on wildlife and biodiversity from noise have been assessed in ES Chapter 8 Biodiversity (TR010038/APP/6.1).</p> <p>There is a risk of disturbance to wildlife during foraging and breeding from construction noise, resulting in avoidance and abandonment of habitats adversely affecting the species. Mitigation measures in the EMP (TR010038/APP/7.4), such as using quieter plant, leaving a buffer zone around sensitive receptors and reducing time on noisy activities, would be secured through Requirement 4 of the draft DCO (TR010038/APP/3.1).</p>
5.189	<p>Where a development is subject to EIA and significant noise impacts are likely to arise from the proposed development, the applicant should include the following in the noise assessment, which should form part of the environment statement:</p> <ul style="list-style-type: none"> • a description of the noise sources including likely usage in terms of number of movements, fleet mix and diurnal pattern. <p>For any associated fixed structures, such as ventilation fans for tunnels, information about the noise sources including the identification of any distinctive tonal, impulsive or low frequency characteristics of the noise.</p> <ul style="list-style-type: none"> • identification of noise sensitive premises and noise sensitive areas that may be affected. • the characteristics of the existing noise environment. • a prediction on how the noise environment will change with the proposed development: <ul style="list-style-type: none"> ○ in the shorter term such as during the construction period; 	<p>ES Chapter 11 Noise and Vibration (TR010038/APP/6.1) considers the potential noise and vibration impacts of the Scheme. The assessment has been undertaken in accordance with British Standards 5228 parts 1 and 2 and DMRB HD213/11, which address the areas detailed by NPS NN paragraph 5.189. It covers daytime and night-time periods, weekdays and weekends.</p> <p>A baseline noise survey was undertaken in September 2020 (ES Appendix 11.3, in TR010038/APP/6.3). Noise modelling was then undertaken for all noise sensitive receptors within the corresponding study areas. Sensitive receptors, such as residential homes, in proximity to the Scheme have been identified.</p> <p>During construction, noise assessment concluded that, with the application of best practice construction methods and temporary noise barriers, potential significant effects are unlikely at the vast majority of receptors. A significant temporary noise effect is predicted as a result of the drainage basin works adjacent to Acorn Barn.</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<ul style="list-style-type: none"> ○ in the longer term during the operating life of the infrastructure; ○ at particular times of the day, evening and night as appropriate. • an assessment of the effect of predicted changes in the noise environment on any noise sensitive premises and noise sensitive areas. • measures to be employed in mitigating the effects of noise. Applicants should consider using best available techniques to reduce noise impacts. ○ the nature and extent of the noise assessment should be proportionate to the likely noise impact. 	<p>There will be no fixed noise source structures within the Scheme.</p> <p>With the application of best practice construction methods and vibration monitoring, the Scheme is unlikely to give rise to any potential significant construction vibration effects. A construction traffic assessment concluded that potential significant effects are unlikely (see Section 11.12).</p> <p>The operational noise impact assessment predicted significant beneficial and adverse residual effects for some properties (see Section 11.12). See response to NPS NN paragraph 5.186 for details.</p>
5.190	The potential noise impact elsewhere that is directly associated with the development, such as changes in road and rail traffic movements elsewhere on the national networks, should be considered as appropriate.	<p>ES Chapter 11 Noise and Vibration (TR010038/APP/6.1) considers the construction and operational effects and includes offline impacts. Section 11.6 describes the study area and coverage of receptors along roads affected by changes in traffic movements.</p> <p>The noise impact assessment of construction traffic flows concluded that potential significant effects are unlikely (see Section 11.12).</p> <p>See response to NPS NN paragraph 5.186 for a summary of the significant beneficial and adverse effects from the change in road traffic by the Scheme.</p>
5.191	Operational noise, with respect to human receptors, should be assessed using the principles of the relevant British Standards and other guidance. The prediction of road traffic noise should be based on the method described in Calculation of Road Traffic Noise. For the prediction, assessment and management of construction noise, reference should be made to any relevant British Standards and other guidance which also give examples of mitigation strategies.	ES Chapter 11 Noise and Vibration (TR010038/APP/6.1) states that the assessment has been undertaken in accordance with the relevant standards and guidance, in particular, British Standards 5228 parts 1 and 2 and DMRB, HD213/11 which covers the various aspects required by NPS NN paragraph 5.189, and is proportionate to the effects which are anticipated. The assessment has been produced with consideration to the above policy and guidance and in accordance with methodology within DMRB LA 111 Noise and Vibration ⁸ .
5.192	The applicant should consult Natural England with regard to assessment of noise on designated nature conservation sites,	ES Chapter 8 Biodiversity (TR010038/APP/6.1) states that consultation has been undertaken with Natural England in February 2020 for scoping and

⁸ Available to download at <https://www.standardsforhighways.co.uk/dmrb/search/cc8cfcf7-c235-4052-8d32-d5398796b364>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	protected landscapes, protected species or other wildlife. The results of any noise surveys and predictions may inform the ecological assessment. The seasonality of potentially affected species in nearby sites may also need to be taken into account.	<p>September 2020 to January 2021 during review of the assessment and mitigation proposals.</p> <p>The results of the noise assessment have (ES Chapter 11 Noise and Vibration (TR010038/APP/6.1)) informed the ecological assessment in ES Chapter 8. For example, disturbance of the foraging areas of wintering birds from construction noise and the disturbance of bats resulting in avoidance and abandonment of habitats/roosts.</p>
5.193	Developments must be undertaken in accordance with statutory requirements for noise. Due regard must have been given to the relevant sections of the Noise Policy Statement for England, National Planning Policy Framework and the government's associated planning guidance on noise.	<p>ES Appendix 11.2 Legislation and policy framework (TR010038/APP/6.3) identifies the legislation, policy, regulations, guidance and standards that are relevant to this assessment, including the Noise Policy Statement for England.</p> <p>The appendix also states where the policy requirements have been addressed as part of the Scheme assessment.</p>
5.194	The project should demonstrate good design through optimisation of Scheme layout to minimise noise emissions and, where possible, the use of landscaping, bunds or noise barriers to reduce noise transmission. The project should also consider the need for the mitigation of impacts elsewhere on the road and rail networks that have been identified as arising from the development, according to Government policy.	<p>Section 11.9 of ES Chapter 11 Noise and Vibration (TR010038/APP/6.1) details the mitigation proposed in relation to the Scheme. The Scheme Design Report (TR010038/APP/7.3) discusses how noise was considered in developing the Scheme design and inclusion of noise barriers where required. Sensitive receptors and Noise Important Areas were identified and potential impacts considered.</p> <p>See response to Paragraph 5.186 of the NPS NN above.</p> <p>Construction noise mitigation is described in the response to NPS NN paragraph 5.198 below.</p>
5.195	<p>The Secretary of State should not grant development consent unless satisfied that the proposals will meet, the following aims, within the context of Government policy on sustainable development:</p> <ul style="list-style-type: none"> • avoid significant adverse impacts on health and quality of life from noise as a result of the new development; 	<p>See response to NPS NN paragraph 5.186 above.</p> <p>The design of the Scheme has sought to avoid significant adverse effects on health and quality of life from noise by the Scheme. During construction potentially significant effects would be on one property, but measures are proposed to mitigate and minimise impacts on health and quality of life from</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<ul style="list-style-type: none"> mitigate and minimise other adverse impacts on health and quality of life from noise from the new development; and contribute to improvements to health and quality of life through the effective management and control of noise, where possible. 	<p>noise. During operation measures have been embedded into the design to reduce and minimise effects of noise where possible.</p> <p>Section 7.4 of the Case for the Scheme (TR010038/APP/7.1) explores these points in more detail. As it is not possible to incorporate further mitigation into the Scheme design, it is considered that the Secretary of State can be satisfied that the Scheme demonstrates does it meets the aims of this NPS paragraph.</p>
5.196	<p>In determining an application, the Secretary of State should consider whether requirements are needed which specify that the mitigation measures put forward by the applicant are put in place to ensure that the noise levels from the project do not exceed those described in the assessment or any other estimates on which the decision was based.</p>	<p>Section 11.5 of ES Chapter 11 Noise and Vibration (TR010038/APP/6.1) addresses potential noise impacts during construction and operation of the Scheme while Section 11.9 identifies appropriate mitigation.</p> <p>Mitigation measures during construction are also set out in the EMP (TR010038/APP/7.4). The EMP is secured by Requirement 4 to the draft DCO.</p>
5.197	<p>The Examining Authority and the Secretary of State should consider whether mitigation measures are needed both for operational and construction noise over and above any which may form part of the project application. The Secretary of State may wish to impose requirements to ensure delivery of all mitigation measures.</p>	<p>Both construction and operational noise mitigation measures are set out within the EMP (TR010038/APP/7.4) which is secured by Requirement 4 to the draft DCO.</p>
5.198	<p>Mitigation measures for the project should be proportionate and reasonable and may include one or more of the following:</p> <ul style="list-style-type: none"> engineering: containment of noise generated; materials: use of materials that reduce noise, (for example low noise road surfacing); lay-out: adequate distance between source and noise-sensitive receptors; incorporating good design to minimise noise transmission through screening by natural or purpose built barriers; administration: specifying acceptable noise limits or times of use (e.g., in the case of railway station PA systems). 	<p>The EMP (TR010038/APP/7.4) and ES Chapter 11 Noise and Vibration Section 11.9 (TR010038/APP/6.1) set out noise mitigation measures and best practice techniques that are expected to reduce the potential for significant effect occurring due to noise from the construction and operation of the Scheme. The mitigation proposed is proportionate and includes all reasonable measures (as far as sustainable).</p> <p>Embedded noise mitigation measures included in the Scheme design comprise of a low noise surface along the proposed A47 dual carriageway, plus four noise barriers/fences. For construction works, mitigation includes:</p> <ul style="list-style-type: none"> where possible limiting construction works to weekday daytime and Saturday mornings

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		<ul style="list-style-type: none"> • temporary noise barriers for construction noise where necessary • construction of permanent noise barriers as early as possible • noise monitoring during relevant periods of the construction programme • select quieter plant than the those assumed within this assessment • ensure equipment is maintained, in good working order, and is used in accordance with the manufacturer's instructions • use equipment that is fitted with silencers or mufflers • set time restrictions on certain noisy and vibratory activities such as earthworks and surfacing • manage deliveries to prevent queuing of site traffic • do not leave plant running unnecessarily • plant with highly directional sound emissions shall be angled so that the direction of highest sound emissions does not face towards receptors • materials to be lowered instead of dropped from height • alternative reversing warning systems such as white noise alarms shall be employed • the Contractor shall advise members of the construction team during toolbox talk briefings on quieter working methods • any fixed plant such as generators shall be screened and positioned at least 20 m from nearest receptors.
5.199	For most national network projects, the relevant Noise Insulation Regulations will apply. These place a duty on and provide powers to the relevant authority to offer noise mitigation through improved sound insulation to dwellings, with associated ventilation to deal with both construction and operational noise.	Section 11.9 in ES Chapter 11 Noise and Vibration (TR010038/APP/6.1) states that the required noise barrier specification has been determined in accordance with DMRB LD 119. The required category of airborne sound insulation category is specified as per BS EN 1793-2. The category of absorptive performance is specified as per BS EN 1793-1 and in accordance

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<p>An indication of the likely eligibility for such compensation should be included in the assessment. In extreme cases, the applicant may consider it appropriate to provide noise mitigation through the compulsory acquisition of affected properties in order to gain consent for what might otherwise be unacceptable development.</p> <p>Where mitigation is proposed to be dealt with through compulsory acquisition, such properties would have to be included within the development consent order land in relation to which compulsory acquisition powers are being sought.</p>	<p>with the stated requirements with DMRB LA 111.</p> <p>No properties are being acquired as a result of noise impacts from the Scheme.</p>
5.200	<p>Applicants should consider opportunities to address the noise issues associated with the Important Areas as identified through the noise action planning process.</p>	<p>Four Noise Important Areas (NIAs) are identified within the operational study area, at Hockering and to the east of Hockering, as identified in ES Figure 11.1 (TR010038/APP/6.2). These are:</p> <ul style="list-style-type: none"> • Area 5200 • Area 5201 • Area 5202 • Area 6287 <p>Embedded noise mitigation measures included in the Scheme design comprise of a low noise surface along the proposed A47 dual carriageway and provision of noise barriers/fences, where required.</p> <p>Section 11.12 of ES Chapter 11 Noise and Vibration (TR010038/APP/6.1) states the assessment of operational noise indicates a significant beneficial effect at NIA 5200. The remaining NIA (5201, NIA 5202 and 6287) are not predicted to experience any significant effects (beneficial or adverse) due to the Scheme.</p>
5.203 - 5.205 (Impacts on transport networks)	<p>Applicants should have regard to the policies set out in local plans, for example, policies on demand management being undertaken at the local level.</p>	<p>Section 6 of the Case for the Scheme (TR010038/APP/7.1) assesses the Scheme's conformity with Local Development Plans and Transport Plans.</p> <p>Norfolk County Council, the Local Highway Authority, has been consulted on the traffic modelling and the results presented in Chapter 4 Transport Assessment in the Case for the Scheme (TR010038/APP/7.1). A record of</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<p>Applicants should consult the relevant highway authority, and local planning authority, as appropriate, on the assessment of transport impacts.</p> <p>Applicants should consider reasonable opportunities to support other transport modes in developing infrastructure. As part of this, consistent with paragraph 3.21 and 3.22 above, the applicant should provide evidence that as part of the project they have used reasonable endeavours to address any existing severance issues that act as a barrier to non-motorised users.</p>	<p>meetings and items of discussion will be set out in a Statement of Common Ground.</p> <p>Effects on public transport are assessed in Chapter 4 Transport Assessment in the Case for the Scheme (TR010038/APP/7.1), with no significant impact on accessibility and journey quality assessed as neutral and slight beneficial, respectively, during operation of the Scheme.</p> <p>ES Chapter 12 Population and Human Health (TR010038/APP/6.1) considers the effects of the Scheme on walkers, cyclists and horse-riders and describes beneficial effects during operation relating to the improved transportation and movement between communities and facilities in the area.</p> <p>A Walking, Cycling, Horse-riding Assessment and Review (WCHAR) process has been undertaken as part of the Scheme. The assessment presented in ES Chapter 12 Population and Human Health (TR010038/APP/6.1) sets out the respective adverse and beneficial significance of impacts from footpath severance and altering existing public rights of way creating new footway / cycleway provision and upgrading a bridleway to improve safety for walkers and cyclists (see response to NPS NN paragraph 5.184).</p> <p>Mitigation, through the creation of six new combined footway/cycleways and the upgrade of a footpath to a bridleway, will provide safer and more pleasant journeys for cyclists and pedestrians.</p>
5.206	<p>For road and rail developments, if a development is subject to EIA and is likely to have significant environmental impacts arising from impacts on transport networks, the applicant's environmental statement should describe those impacts and mitigating commitments. In all other cases the applicant's assessment should include a proportionate assessment of the transport impacts on other networks as part of the application.</p>	<p>The application is supported by a Transport Assessment, in Section 4 of the Case for Scheme (TR010038/APP/7.1), which considers the transport impacts of the Scheme on other networks, including rail and public bus services in addition to impacts on the highway network.</p> <p>The outputs of the traffic modelling and forecasting have been considered in the relevant ES Chapters (TR010038/APP/6.1), such as air quality, noise, water environment and road drainage.</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
5.208	Where appropriate, the applicant should prepare a travel plan including management measures to mitigate transport impacts. The applicant should also provide details of proposed measures to improve access by public transport and sustainable modes where relevant, to reduce the need for any parking associated with the proposal and to mitigate transport impacts.	<p>A travel plan has not been prepared to support the Application due to the nature of the Scheme not being a generator of additional traffic in itself, rather it is re-distributing existing and future traffic flows.</p> <p>There are no proposed alterations to rail transport services as a result of the Scheme, therefore any impacts are judged to be insignificant.</p> <p>No alterations to bus public transport services are included in the Scheme. It is considered the Scheme's impact on bus transport users will be beneficial due to the congestion relief provided for all highway traffic.</p>
5.209	For schemes impacting on the Strategic Road Network, applicants should have regard to DfT Circular 02/2013 The Strategic Road Network and the delivery of sustainable development (or prevailing policy) which sets out the way in which the highway authority for the Strategic Road Network, will engage with communities and the development industry to deliver sustainable development and, therefore, economic growth, whilst safeguarding the primary function and purpose of the Strategic Road Network.	<p>All statutory and non-statutory public consultations have been carried out, as set out in the Consultation Report (TR010038/APP/5.1).</p> <p>Highways England is the operator of the Strategic Road Network and is the applicant. Norfolk County Council, the Local Highway Authority, has been consulted on the proposals and on the traffic modelling and the results presented in the Chapter 4 Transport Assessment of the Case for Scheme (TR010038/APP/7.1).</p> <p>Further consideration of plans and policies, including DfT Circular 02/2013, is set out in Section 6 of the Case for the Scheme (TR010038/APP/7.1).</p>
5.210	If new transport infrastructure is proposed, applicants should discuss with network providers the possibility of co-funding by Government for any third-party benefits. Guidance has been issued in England which explains the circumstances where this may be possible. The Government cannot guarantee in advance that funding will be available for any given uncommitted scheme at any specified time, and cannot provide financial support to a scheme that solely mitigates the impacts of a specific development. Any decisions on co-funded transport infrastructure will need to be taken in the context of the Government's wider policy of transport improvements.	Third party funding is not required as the Scheme has funding committed through the Government's RIS. Funding sources are described in the Funding Statement (TR010038/APP/4.2).
5.211	The Examining Authority and the Secretary of State should give	See response to NPS NN paragraphs 5.206, 5.208 and 5.209 above.

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	due consideration to impacts on local transport networks and policies set out in local plans, for example, policies on demand management being undertaken at the local level.	Where relevant, analysis has been included in this document and is provided in the Case for the Scheme (TR010038/APP/7.1).
5.212	Schemes should be developed and options considered in the light of relevant local policies and local plans, taking into account local models where appropriate, however the Scheme must be decided in accordance with the NPS except to the extent that one or more of sub-sections 104(4) to 104(8) of the Planning Act 2008 applies.	<p>The consideration of development plan policies is provided in the Case for the Scheme (TR010038/APP/7.1).</p> <p>Consultation has been undertaken with Norfolk County Council as the relevant Highway Authority and Breckland Council, Broadland District Council and South Norfolk Council as the local planning authorities; see the Consultation Report (TR010038/APP/5.2). The Scheme is supported by and has taken account of the various documents which include Breckland, Broadland and South Norfolk Local Plans, Norfolk CC Local Transport Plan 2011-26, the Norwich Area Transportation Strategy 2003 and the Greater Norwich Infrastructure Plan 2020.</p> <p>The Scheme is also consistent with the New Anglia Strategic Economic Plan 2014, the New Anglia LEP Economic Strategy 2017, the New Anglia LEP Integrated Transport Strategy 2018 the New Anglia Norfolk and Suffolk Ltd draft Local Industrial Strategy 2020 and meets the aims of the A47 Alliance.</p>
5.215	Mitigation measures for Schemes should be proportionate and reasonable, focused on promoting sustainable development.	<p>The ES (TR010038/APP/6.1) contains a full assessment of the relevant impacts that are likely to rise from the Scheme, and where significant impacts are identified, articulates how those impacts can be avoided, reduced or mitigated. The proposed mitigation measures take account of relevant policy and guidance, including the policy focus on promoting sustainable development.</p> <p>Mitigation measures are also set out in the EMP (TR010038/APP/7.4) (secured through Requirement 4 to the draft DCO) including why they are required, who is responsible for delivering them and detailing ongoing reporting criteria.</p> <p>The Environmental Masterplan (TR010038/APP/6.8) illustrates the environmental mitigation measures embedded as integral elements of the Scheme design including new areas of habitat creation and landscaping.</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
5.216	Where development would worsen accessibility, such impacts should be mitigated so far as reasonably possible. There is a very strong expectation that impacts on accessibility for non-motorised users should be mitigated.	See response to NPS NN paragraphs 5.203-5.205.
5.220 (Water quality and resources)	Where applicable, an application for a development consent order has to contain a plan with accompanying information identifying water bodies in a River Basin Management Plan.	<p>The Scheme lies in the Anglian River Basin Management Plan area and the assessment considers risks to the following WFD surface water bodies: River Tud; River Wensum, downstream of Norwich; and Yare (Tiffey to Wensum).</p> <p>Section 13.7 details these and other surface water features considered in ES Chapter 13 Road Drainage and Water Environment (TR010038/APP/6.1). The WFD catchments are identified in ES Figure 13.2 (WFD and IDB surface waterbodies) and ES Figure 13.4 (WFD groundwater bodies) (TR010038/APP/6.2).</p>
5.221	Applicants should make early contact with the relevant regulators, including the Environment Agency, for abstraction licensing and with water supply companies likely to supply the water. Where a development is subject to EIA and the development is likely to have significant adverse effects on the water environment, the applicant should ascertain the existing status of, and carry out an assessment of the impacts of the proposed project on water quality, water resources and physical characteristics as part of the environmental statement.	<p>The Environment Agency, Anglian Water, Norfolk Rivers Internal Drainage Board and Norfolk County Council (as the Lead Local Flood Authority) have been consulted during the development of the design and assessments; see ES Chapter 13 Road Drainage and the Water Environment (TR010038/APP/6.1). These consultation are on-going, such as working with Anglian Water to design and plan for potable water and foul water pipeline diversions.</p> <p>The appropriate consent from the relevant authority would be acquired for works within, near or over controlled surface watercourses, while temporary water discharging and dewatering activities over defined thresholds would require an discharge or abstraction licence from the Environment Agency. Article 20 of the Draft DCO provides powers for the operational discharge of water</p> <p>ES Chapter 13 Road Drainage and the Water Environment (TR010038/APP/6.1) assess the effects on surface water and groundwater receptors during the construction and operation of the Scheme.</p> <p>The Scheme is not expected to give rise to significant adverse (moderate or greater) residual effects during the construction or operational phases with the</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
		adoption of mitigation (Sections 13.9 and 13.10 of ES Chapter 13 Road Drainage and the Water Environment (TR010038/APP/6.1)) secured through measures embedded in the design and the implementation of the Environmental Management Plan (TR010038/APP/7.4) .
5.222	For those projects that are improvements to the existing infrastructure, such as road widening, opportunities should be taken, where feasible, to improve upon the quality of existing discharges where these are identified and shown to contribute towards Water Framework Directive commitments.	ES Chapter 13 Road Drainage and the Water Environment (TR010038/APP/6.1) considers the effects of the Scheme on water quality and identifies opportunities to improve the quality of existing discharges. The Water Framework Directive Assessment, in Section 13.10, concludes that the construction and operational activities affecting the Tud and indirectly the Wensum (DS Norwich) and Yare (Tiffey to Wensum) will be compliant with the requirements of the WFD. This assumes the mitigation is implemented and limits the overall effect of the Scheme to slight adverse and is localised. Due to this, construction and operational activities affecting the Tud and indirectly the Wensum (DS Norwich) and Yare (Tiffey to Wensum) are not considered to cause deterioration and should not prevent future attainment of WFD water body targets.
5.223	Any environmental statement should describe: <ul style="list-style-type: none"> • the existing quality of waters affected by the proposed project; • existing water resources affected by the proposed project and the impacts of the proposed project on water resources; • existing physical characteristics of the water environment (including quantity and dynamics of flow) affected by the proposed project, and any impact of physical modifications to these characteristics; • any impacts of the proposed project on water bodies or protected areas under the Water Framework Directive and source protection zones (SPZs) around potable groundwater abstractions; and • any cumulative effects. 	ES Chapter 13 Road Drainage and Water Environment (TR010038/APP/6.1) describes the existing water environment, potential impacts, mitigation, residual significant effects and impacts of the proposed project on water bodies or protected areas under the Water Framework Directive and source protection zones (SPZs). ES Chapter 15 Cumulative Effect Assessment (TR010038/APP/6.1) addresses the cumulative effects of the Scheme. The residual effects during the construction and operational phases of the Scheme with of all of the other developments are not anticipated to contribute beyond that of the effects identified in the preceding environmental chapters.
5.224	Activities that discharge to the water environment are subject to pollution control. The considerations set out in paragraphs 4.48-	The Scheme will require works within, adjacent, over or close to water bodies, watercourses, ponds or the fluvial floodplain, such as creating the River Tud

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	<p>4.56 on the interface between planning and pollution control therefore apply. These considerations will also apply in an analogous way to the abstraction licensing regime regulating activities that take water from the water environment, and to the control regimes relating to works to, and structures in, on, or under a controlled water.</p>	<p>crossing and new culverts into the River Tud. Below ground construction, such as for deep cuttings, and ground improvements may also intersect the water table or perched groundwater. These works may be a risk to surface and groundwater quality and abstractions.</p> <p>Pollution control has been addressed in ES Chapter 14 Road Drainage and the Water Environment (TR010038/APP/6.1). Mitigation is also set out within Table 3-1 REAC in the EMP (TR010038/APP/7.4) and includes:</p> <ul style="list-style-type: none"> • appropriate storage of construction materials including bunding of storage tanks and use of silt fencing and covering stockpiles • spill kits located on sites near to ordinary watercourses or drainage ditches and within the works compounds with staff trained in their use • emergency response procedures to handle any leakages or spillages of potentially contaminating substances • no pollution pathways between the construction sites, including material lay down areas, and ordinary watercourses or drainage ditches. <p>The appropriate consent from the relevant authority would be acquired for works within, near or over controlled surface watercourses, while temporary discharge and dewatering activities over defined thresholds would require a discharge or abstraction licence from the Environment Agency.</p>
5.225	<p>The Secretary of State will generally need to give impacts on the water environment more weight where a project would have adverse effects on the achievement of the environmental objectives established under the Water Framework Directive.</p>	<p>See response to NPS paragraph 5.223.</p>
5.226	<p>The Secretary of State should be satisfied that a proposal has had regard to the River Basin Management Plans and the requirements of the Water Framework Directive (including Article 4.7) and its daughter directives, including those on priority substances and groundwater. The specific objectives for particular river basins are set out in River Basin Management Plans. In terms of Water Framework Directive compliance, the overall aim of projects should be no deterioration of ecological</p>	<p>Table 13.3 of ES Chapter 13 Road Drainage and the Water Environment (TR010038/APP/6.1) summarises the WFD surface water bodies within the study area and indicates their targets and objectives. The current Anglian River Basin Management Plan (RBMP) is taken into consideration and a WFD Assessment has been undertaken and can be found at Section 13.10 of ES Chapter 13 (TR010038/APP/6.1). The assessment of compliance by the Scheme with the WFD objectives considers the construction and operation impacts on the ecological elements of status of the River Tud and indirectly the</p>

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	status in watercourses, ensuring that Article 4.7 of the Water Framework Directive Regulations does not need to be applied.	River Wensum (DS Norwich) and River Yare (Tiffey to Wensum). The WFD assessment concludes that, with the proposed mitigation measures in place, the construction and operational activities would be compliant with the requirements of the WFD. Therefore, there would be no deterioration in their ecological status nor any prevention of future attainment of WFD water body targets.
5.227	The Examining Authority and the Secretary of State should consider proposals put forward by the applicant to mitigate adverse effects on the water environment and whether appropriate requirements should be attached to any development consent and/or planning obligations. If the Environment Agency continues to have concerns and objects to the grant of development consent on the grounds of impacts on water quality/resources, the Secretary of State can grant consent, but will need to be satisfied before deciding whether or not to do so that all reasonable steps have been taken by the applicant and the Environment Agency to try to resolve the concerns, and that the Environment Agency is satisfied with the outcome.	<p>ES Chapter 13 Road Drainage and the Water Environment (TR010038/APP/6.1) describes consultation carried out with the Environment Agency and appropriate stakeholders (including Norfolk County Council as Lead Local Flood Authority).</p> <p>Separate Statements of Common Ground will be developed with the Environment Agency and Norfolk County Council to record the matters that have been agreed with these parties and to identify any matters where comments still need to be resolved.</p> <p>Good practice mitigation measures to protect the water environment are set out within the EMP (TR010038/APP/7.4). The EMP is secured by Requirement 4 to the draft DCO.</p>
5.229	The Secretary of State should consider whether the mitigation measures put forward by the applicant which are needed for operation and construction (and which are over and above any which may form part of the project application) are acceptable. A construction management plan may help codify mitigation.	The EMP (TR010038/APP/7.4) details the environmental mitigation measures proposed to be implemented during construction, why they are required, who is responsible for delivering them and details ongoing reporting criteria. The EMP is secured by Requirement 4 of the draft DCO.
5.230	The project should adhere to any National Standards for sustainable drainage systems (SuDs). The National SuDs Standards will introduce a hierarchical approach to drainage design that promotes the most sustainable approach but recognises feasibility and use of conventional drainage systems as part of a sustainable solution for any given site given its constraints.	See response to NPS NN paragraph 5.100. The EMP is secured by Requirement 4 of the draft DCO. Table 3-1 of the EMP states in relation to flood risk mitigation <i>“Temporary drainage systems should include appropriate Sustainable Drainage Systems (SuDS) to attenuate runoff to existing rates as well as provide water treatment; this should be incorporated into the EMP”</i> .
5.231	The risk of impacts on the water environment can be reduced through careful design to facilitate adherence to good pollution control practice. For example, designated areas for storage and	Section 13.9 of ES Chapter 13 Road Drainage and the Water Environment (TR010038/APP/6.1) describes the proposed construction and operational design interventions and mitigation. It includes measures delivered through the

NPS NN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPS NN)	Compliance with the NPS NN
	unloading, with appropriate drainage facilities, should be marked clearly.	<p>design of the Scheme and also appropriate construction methods which adhere to good practice embodied in the DMRB LA 113 Road Drainage and the Water Environment.</p> <p>Designated areas for materials storage and unloading are shown on the General Arrangement Plans (TR010038/APP/2.2).</p> <p>The EMP (TR010038/APP/7.4) details the environmental mitigation measures proposed to be implemented during construction, why they are required, who is responsible for delivering them and ongoing reporting criteria. The EMP is secured by Requirement 4 of the draft DCO.</p>