# A47 Blofield to North Burlingham Dualling

## Scheme Number: TR010040

# Volume 7
# 7.1 Case for the Scheme

APFP Regulation 5(2)(q)

Planning Act 2008

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

July 2021

Deadline 1

Infrastructure Planning

Planning Act 2008

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

# A47 Blofield to North Burlingham Development Consent Order 202[x]

## CASE FOR THE SCHEME

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| **Regulation Number:** | Regulation 5(2)(q) |
| **Planning Inspectorate Scheme Reference** | TR010040 |
| **Application Document Reference** | 7.1 |
| **BIM Document Reference** | PCF STAGE 3 \| HE551490-GTY-LSI-000-RP-TX-30018 |
| **Author:** | A47 Blofield to North Burlingham Dualling Project Team, Highways England |

| Version | Date | Status of Version |
|---|---|---|
| Rev 0 | December 2020 | Application Issue |
| Rev 1 | July 2021 | Deadline 1 submission |

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# EXECUTIVE SUMMARY

This Case for the Scheme relates to an application for a Development Consent Order (DCO) for a Nationally Significant Infrastructure Project. The application is being made by Highways England (the Applicant) to the Secretary of State for Transport (the SoS) under Section 37 of the Planning Act 2008 (PA 2008). If made, the DCO would grant consent for the A47 Blofield to North Burlingham Scheme (the Scheme).

The Scheme is Environmental Impact Assessment (EIA) development, therefore an Environmental Statement (ES) is submitted with the DCO application **(TR010040/APP/6.1)**. This assesses the potential impacts of the Scheme and proposes mitigation.

## Scheme Development

In 2014 a Corridor Feasibility Study on the A47/A12 identified 22 problem stretches of road. This Study informed the Government's Road Investment Strategy and an initial case was made to carry out a number of schemes including the dualling of the A47 Blofield to North Burlington.

Later studies identified the following problems:

- the A47 is ranked 2nd nationally for fatalities on A roads and the Blofield to North Burlingham stretch has recorded over 30-40 accidents of varying severity in various 5-year periods since 2011
- it is difficult to maintain and manage due to congestion and long diversion routes, especially at peak times and bank holidays
- the corridor is a significant constraint to growth. Although a significant number of homes and jobs are expected over the next 15 years, which will result in increased traffic levels, there are constraints to development due to the anticipated limitations on the capacity of the highway network
- routes and junctions are over-capacity, or will soon be, resulting in congestion. This impacts on route reliability and journey time delays, with speeds much lower than the daily average at peak times. This can have knock on effects, particularly in terms of safety terms, as traffic then uses the adjacent network.

For the A47 between Blofield and North Burlingham eight initial options for identified and were assessed for their engineering, environmental, transportation and economic suitability.

Four options were presented for non-statutory public consultation in early 2017 and Option 4 – building a new dual carriageway to the south of the existing A47 was adopted as the preferred route. This was favoured by the public by a significant margin as it could be built

with the least disruption to drivers, would have the least impact on the environment and the existing A47 road could remain for local traffic, pedestrians, cyclists and equestrians.

## Statutory Consultation

Statutory consultation on the preferred route was held in Autumn 2018 and 81% of the 767 responses strongly agreed with the dualling proposals. Some refinements and minor changes to the red line boundary to accommodate utilities diversions were made following this consultation.

A further project update was provided in Autumn 2020. This feedback has informed the Scheme as submitted in the DCO application.

## The Scheme

The Scheme comprises:

- 2.6km of dual carriageway on the A47;
- de-trunking of the existing A47 section between Blofield and North Burlingham;
- improvements at Yarmouth Road Junction, including closure of the central reserve, closure of High Noon Lane direct access, merge lane, realignment of Waterlow and local access improvements at the Sparrow Hall properties;
- introduction of a compact grade separated junction at B1140 junction, including the B1140 Overbridge;
- a new overbridge at Blofield traversing the proposed A47 dual carriageway, connecting Yarmouth Road with the existing A47;
- provision of new drainage systems including an infiltration basin and retention of existing drainage systems where possible;
- a retaining wall in the western extents;
- introduction of lighting at the Yarmouth Road junction and new lighting layout at the B1140 Junction;
- closure of an existing layby and provision of a new layby;
- walking and cycling routes connecting Blofield and North Burlingham via the Blofield Overbridge to the west and the B1140 Overbridge to the east;
- provision of North Burlingham Access;
- an agricultural access track;
- fencing, safety barriers and signage;
- environmental mitigation;
- diversions of an intermediate pressure gas main and other utilities.

A full description of the Scheme is provided in Chapter 2, The Proposed Scheme, of the Environmental Statement (**TR010040/APP/6.1**).

## Need for the Scheme

The A47 is important route for both commuter and longer distance east/west traffic. It forms part of the Strategic Road Network (SRN) between Yarmouth on the east coast and the A1, connecting Norwich and Peterborough, as well as the towns and villages between. The rapid economic growth along this corridor decade is expected to continue with continuing implications for traffic growth.

The objectives of the Scheme are:

- **Supporting economic growth**

  The Scheme will provide additional capacity and improved journey times underpinning sustainable economic growth in the local and wider areas, supporting opportunities for employment and housing.

- **Making a safer network**

  The Scheme will improve safety and operational issues by increasing capacity and providing new junctions.

- **A more free-flowing network**

  The Scheme will result in minimal delays and a smooth flow of traffic. Journey times will providing benefits to travellers and those accessing local facilities.

- **Protected environment -**

  The Scheme has been assessed and mitigation measures set out to minimise any impacts on biodiversity, heritage, climate, air quality, flooding, and geology, and from any cumulative effects.

- **An accessible and integrated network**

  The Scheme links into the SRN to the Midlands and North, supporting the wider economy. It provides safer routes, between villages and local facilities, for cyclists, pedestrians, and vulnerable users with new cycling and walking infrastructure.

- **Value for money**

  The Scheme is High Value for Money (VfM). It includes travel time savings, vehicle operating costs, accident savings and indirect savings relating to the reduction in greenhouse gases and improvement in air and noise quality which all support inward investment.

## Transport Case for the Scheme

The Scheme is included within the Department for Transport's RIS2 which sets out a list of schemes to be developed by Highways England (HE) in the period 2020-2025.

The Scheme accords with the objectives of National Planning Policy as set out in the National Networks National Policy Statement (NNNPS) and the National Planning Policy Framework (NPPF).

Norfolk County Council's (NCC) transport policies support the implementation of enhancements to the A47 between Blofield and North Burlingham to accommodate future planned growth, tackle congestion and improve road safety.

The modelling analysis shows that forecasted local and regional traffic growth will cause the A47 single carriageway section to be over capacity. This will result a significant increase in congestion, leading to delays, increased journey times and accidents.

The Scheme will provide the capacity improvements to allow for the forecasted traffic growth. In traffic and transport terms, the Scheme achieves the following:

- provides additional capacity, improved journey times and reliability which will contribute to network resilience and the encourage economic growth in the local area as well as across the A47 corridor between Great Yarmouth and Norwich
- improves safety operational issues by upgrading to dual carriageway and provides an overpass for the B1140
- reduces the predicted accident rates along the A47 corridor and surrounding network
- allows traffic to operate with minimal delays by supporting a smooth flow of traffic
- reduces road traffic congestion
- provides new cycling and walking infrastructure.

## Economic Case Overview

The economic assessment presents the expected benefits and disbenefits associated with the Scheme. It sets out overall value for money by comparing the benefits to users against the costs of the Scheme

The Scheme represents High Value for Money (VfM) generating a Present Value benefit of £109.9 million with the total Scheme costs at £46.4 million (PV).

The Scheme is also forecast to generate wider economic impacts and journey time reliability benefits. The value for the total wider economic impacts is approximately £40.6 million, while for journey time reliability it is £3.3 million.

## Conformity with Planning Policy and Transport Plans

### *National Policy*

The Scheme complies with national planning policy. The Government has highlighted the express need for further growth and improvements to the national networks within the NNNPS. It meets with the environmental and sustainable objectives within both the NNNPS

and NPPF, with mitigation measures to reduce any unavoidable impacts on the surrounding environment.

National policy recognises that in delivering sustainable development local impacts are sometimes unavoidable. Overall, the benefits of the Scheme are considered to outweigh any unavoidable adverse effects.

The DfT's RIS2 includes the Scheme as a required improvement to the network which will improve safety, journey times and network resilience. The Infrastructure Act 2015 places a duty on the SoS to comply with the provisions of the RIS.

### *Sub-Regional Plans*

There is a strong drive in the Norfolk and Suffolk Regions for sustained economic growth to build upon the area's strong employment rate and its specific strengths in energy generation and usage, and hi-tech sustainable agri food.

The development of the trunk road network is seen as key to economic delivery particularly along the east-west growth corridor of the Region. The New Anglia LEP Integrated Transport Strategy highlights the cross-party, cross-county support for the A47 dualling. The A47 Alliance, which brings together the Chamber of Commerce, Local Authorities, LEPs, MPs and other stakeholders, also support dualling of the A47 in its entirety.

### *Local Plans*

The Broadland Local Plan highlights existing congestion on the A47 and the limitations inherent for users and potential investors in the area where economic growth is sought. The Plan safeguards land adjacent to the existing A47 for its future upgrade.

The Plan also highlights the importance of creating attractive communities which have healthy travel choices and, notes a commitment to climate change and green infrastructure including public rights of way. The Scheme will relieve congestion for the benefit of users and potential investors, result in safer connections and a reduction in accidents and provide for improved footpath and cycle way connections to support the provision of sustainable travel.

The Blofield Neighbourhood Plan also presents concerns regarding the need for safer access to the A47 east and west of Blofield. It is an objective of this Plan to achieve the best possible road infrastructure for the Parish.

The Scheme also supports the priorities of the current and emerging NCC Local Transport Plan in supporting growth, improving a strategic connection and improving safety and access for current users while providing for future proposed and committed residential and business developments in the area.

## Conclusions

This Case for the Scheme demonstrates the strong support for the Scheme grounded in national, regional and local planning and transport policy.

The NNNPS and the RIS promote the delivery of national networks that meet the country's long-term need for safe, expeditious and resilient networks to better support social and economic activity and provide a transport network that can stimulate and underpin ongoing economic growth.

The A47 between Blofield and North Burlingham is currently operating at over capacity resulting in congestion and leading to long, unreliable journey times. Population growth and high car ownership in this rural location will exacerbate this. Safety is also compromised and a high accident rate has been an unfortunate effect.

The DfT's RIS2 sets out a commitment for the "dualling of the A47 to fill a gap in the dual carriageway section between Norwich and the Acle Straight" to resolve these issues which will unlock economic growth and development, considered essential at a regional level, and strongly promoted by the A47 Alliance.

The preferred route design has been identified as the best option to meet the defined need and Scheme objectives. It will improve safety, resilience and journey time reliability and will reduce problems associated with rat-running along alternative local routes. It is consistent with national and local planning objectives for transport, economy and the environment.

Through the increased capacity and improved journey time reliability, the Scheme will also assist in making the region more attractive for businesses and will provide the required infrastructure for development including housing and employment.

The Scheme demonstrates compliance with the NNNPS, including the Government's strategic vision for the development of the national road network, wider policies for economic performance, environment, safety, technology, sustainable transport and accessibility, as well as journey reliability and the experience of road users. Where unavoidable impacts are generated by the construction or operation of the Scheme it is demonstrated that the substantial and long lasting transportation, economic and community benefits to the public, will outweigh any post mitigation local impacts.

# 1 INTRODUCTION

## 1.1 Purpose of this Document

1.1.1 This Case for the Scheme relates to an application for a Development Consent Order ('DCO') made by Highways England Company Limited (the 'Applicant') to the Secretary of State for Transport (the 'SoS') via the Planning Inspectorate under section 37 of the Planning Act 2008 ('PA 2008'). If made the DCO would grant consent for the A47 Blofield to North Burlingham Scheme (the 'Scheme').

1.1.2 Under Section 104(2) of the PA 2008 the SoS must have regard to (among other matters) any 'relevant national policy statement' when deciding an application for a DCO. The relevant national policy statement ('NPS') for the Scheme is the National Networks National Policy Statement for ('NNNPS') which sets out the need, and Government's policies, for delivering the development of NSIPs on the national road and rail networks in England.

1.1.3 The NNNPS has particular weight in deciding this application for a DCO as, under Section 104(3) of the PA 2008, the SoS is required to decide the application in accordance with the relevant national policy statement, subject to the exceptions set out in section 104 (4) to (8). The Scheme's compliance with the NNNPS is assessed in the NNNPS Accordance Tables (TR010040/APP/7.2).

1.1.4 This document is therefore intended to supplement the assessment of the Scheme's compliance with the NNNPS and also identify 'any other matters' that are considered 'important and relevant' to the determination of the application in accordance with Section 104(2) of the PA 2008.

## 1.2 The Applicant

1.2.1 The Applicant is the strategic highway company responsible for operating, maintaining and improving the Strategic Road Network ('SRN') in England. Highways England became a Government owned company in April 2015 succeeding to the functions of the Highways Agency.

1.2.2 The SRN is made up of the motorway and major A roads network. The A47 is part of the SRN.

## 1.3 Requirement for a Development Consent Order

1.3.1 The Scheme is a nationally significant infrastructure project ("NSIP") within sections 14(1)(h) and 22(1)(b) of the PA 2008. Under section 22 an NSIP must fall within one of the three categories specified, which are expressly stated to be alternatives.

1.3.2 The Scheme satisfies section 22(3) in that:

- the highway is wholly in England
- the Applicant as strategic highways company will be the highway authority for the highway
- the area of the land on which the part of the highway to be altered is situated and any adjoining land expected to be used in connection with its alteration is greater than the relevant limit set out in subsection (4), which

in this case is 12.5 hectares, and speed limits on the Scheme will be 50mph or greater.

1.3.3 To comply with the PA 2008, Highways England is required to secure a DCO to construct and operate the Scheme.

1.3.4 An application for a DCO has been submitted to the Planning Inspectorate, who will appoint an Examining Authority or Panel ('ExA') to examine it and make a recommendation to the SoS on whether development consent should be granted. The SoS will make the final decision on whether development consent should be granted.

## 1.4 Requirement for EIA

1.4.1 The Scheme is an Environmental Impact Assessment ('EIA') development, as defined by the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.

1.4.2 An EIA Scoping Report was prepared (February 2018) to comply with Section 10 of these Regulations. The purpose of a Scoping Report was to establish the scope of the EIA and the level of detail required. A Scoping Opinion was adopted by the Secretary of State. (March 2018) (**TR010040/APP/6.6**)

1.4.3 An Environmental Statement ('ES') (**TR010040/APP/6.1**) has been submitted as part of the DCO application. The ES provides an assessment of the potential impacts of the Scheme and sets out proposals for mitigation.

1.4.4 Chapters 5 to 15 of the ES (**TR010040/APP/6.1**) provide details of the assessments that have been undertaken. They also set out the impacts, a description of the likely significant effects on the environment and identify the measures that are proposed to reduce and, if possible, offset likely significant adverse effects on the environment.

## 1.5 Planning Policy Context

1.5.1 Section 104 of the Planning Act 2008 states that, where a relevant NPS has been designated, decisions about applications for a DCO must be taken in accordance with it.

1.5.2 The NNNPS was designated on 14 January 2015. The NNNPS sets out the Government's vision and policies to deliver road networks that meet the country's long-term needs, support a prosperous and competitive economy and improve the quality of life for all.

1.5.3 Further details can also be found in Chapter 3 of this document and the NNNPS Accordance Tables (**TR010040/APP/7.2**).

1.5.4 The aims of the Scheme are directly in line with the Government's policies and illustrate the need for the Scheme on a national level. The Government has highlighted the express need for further growth and improvements to the national networks within the NNNPS. The Road Investment Strategies (both 'RIS1[1]' and 'RIS2[2]'), which explore these needs in further detail, have supported

[1] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/408514/ris-for-2015-16-road-period-web-version.pdf
[2] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/872252/road-

the Scheme as a required improvement to the SRN.

1.5.5 The Scheme will reduce congestion-related delay, improve journey time reliability and increase the overall capacity of the A47 and improve road safety and traffic flow. Journey time and reliability will be improved, making movements at the junctions more free-flowing and journey times more predictable.

1.5.6 The Scheme is also in general accordance with policies and objectives contained in the local development plan through supporting economic development. The Joint Core Strategy for Broadland, Norwich and South Norfolk 2011, as amended by the Broadland Part of the Norwich Policy Area: Local Plan 2014, acknowledges the congestion issues on the A47 to the west of Norwich caused by the single carriageway Sections of the road through the area, "*The A47 to the west provides strategic road access to the Midlands and North. It is mostly single carriageway in Norfolk and suffers from congestion and safety issues. Significant growth is proposed at East Dereham and King's Lynn*," (Para 3.19). Policy 6 of the Local Plan seeks to improve the transportation system in order to develop the role of Norwich as a Regional Transport Node, particularly through the implementation of the Norwich Area Transportation Strategy. One of the ways this will be achieved is "*by promoting improvements to the A11 and A47*". The policy recognises that supported strategic improvements to aid delivery and economic success include A47 improvements to reduce the significant stretches that remain single carriageway.

1.5.7 Further details can also be found in Chapter 6 of this document.

## 1.6 Structure of the Report

1.6.1 The Case comprises eight chapters as set out below:

- Chapter 1 - sets out the details of the application, confirms the details of the Applicant, and explains why the Scheme is a NSIP which requires the submission of a DCO application
- Chapter 2 - describes the Scheme and the surrounding area and sets out how the Scheme has developed over time. It sets out the route options that have been considered and how the preferred route option was selected
- Chapter 3 – sets out the need for the Scheme, describes the existing environment and describes the Scheme
- Chapter 4 – summarises the transport case for the Scheme
- Chapter 5 – summarises the economic case for the Scheme and describes the monetised and non-monetised benefits of the Scheme
- Chapter 6 - assesses the Scheme against national and local planning and transport policy, and considers the policy justification for the Scheme
- Chapter 7 – provides a summary, bringing together the case for the Scheme and setting out its overall compliance with the NNNPS and relevant planning policy and other important considerations.

investment-strategy-2-2020-2025.pdf

# 2 SCHEME DEVELOPMENT AND OPTIONS CONSIDERED

## 2.1 Development History and Alternative Options

2.1.1 During 2014 a A47/A12 Corridor Feasibility Study (Feasibility Study) was undertaken by AECOM, on behalf of the then Highways Agency and the Department for Transport ('DfT'), to identify issues on the SRN on the A47/A12 Corridor between the A1 west of Peterborough and Lowestoft (south of the A47's junction with the A12).

2.1.2 Twenty-two locations were identified that were considered to have current or imminent problems. These were then considered further at a high-level using criteria from the DfT's Early Assessment and Sifting Tool ('EAST'). AECOM developed the Options Assessment Report ('OAR') for each scheme and from this recommended a solution for which Strategic Outline Business Cases (SOBC) were produced.

2.1.3 The Study informed the Government's RIS and an initial case was made to carry out the following improvements:

- A47 Wansford to Sutton Dualling
- A47 Guyhirn Junction Improvements
- A47 North Tuddenham to Easton Dualling
- A47 Thickthorn Interchange Improvements
- A47 Blofield to North Burlingham Dualling
- A12 Junction Improvements

2.1.4 The 3 Stages of the Feasibility Study were published on the DfT website in March 2015 (dated February 2015) and can be found at: https://www.gov.uk/government/publications/a47-and-a12-corridor-feasibility-study-technical-report

2.1.5 Stage 1 of the Feasibility Study[3] reviewed the existing evidence to identify any problems along the corridor, which are detailed as follows:

2.1.6 "*Current Situation: The standards and level of service on the A47 vary considerably over its length with part of the network which are single and dual carriageways. It is understood that the widely held opinion by local authorities and the business community, is that the corridor in its current form is a significant constraint to growth.*

2.1.7 The A47 Acle Straight, between Acle and Great Yarmouth runs across low lying marsh land. It was a perceived poor safety record and is notoriously difficult to maintain and manage due to congestion and very long diversion routes particularly at peak holiday periods.

2.1.8 Future Situation: The area is expected to continue to grow with over 50,000 new jobs and 100,000 new homes planned for the area over the next 15 years. There are growth hotspots at several locations along the corridor, including

[3] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/411142/a47-stage-1.pdf

Peterborough, Kings Lynn, Norwich and Great Yarmouth and Lowestoft. There are several major proposed housing developments close to the A47, including a Rackheath and Wisbech, Norwich and on the fridges of Great Yarmouth and Lowestoft.

2.1.9 Growth is forecast to result in increased traffic levels on sections of the route and therefore add to congestion and other problems. At the same time, proposed developments could be constrained by the capacity limitations on the highway network to accommodate additional trip.

2.1.10 Need for intervention: There are a wide range of traffic issues along this route due to the varying nature of the corridor in terms of local environment, travel patterns and requirements. The main issues for the route relate to capacity; some of the links and junctions are currently over capacity and / or will be over capacity. The limited capacity impacts on the route reliability and creates journey time delays. It also can cause traffic to divert onto the highway network and generate further issues. There are safety issues in certain locations where there are currently high collision and incident rates that could be addressed.

2.1.11 A summary of the challenges was considered within the study which identified 32 challenges along the route with the majority being capacity issues along the full extent. Other challenges raised relate to asset condition, network operation, safety and social and environmental issues and also lack of realistic alternatives to support planned growth, hence the need for interventions to address such problems".

2.1.12 In December 2014 the DfT published the RIS for 2015-2020[4]. The RIS includes a package of 6 schemes (identified in 2.1.3 above) to be developed and constructed by the Applicant during Roads Period 1 (2015 - 2020) and the early part of the Roads Period 2 (2020 - 2025). These will improve journeys on the 115-mile section of the A47 between Peterborough and Great Yarmouth. These schemes have been branded as the A47 Improvement Programme.

2.1.13 Following the publication of the RIS, AECOM produced a high-level appraisal of benefits for the identified schemes on behalf of the DfT. This work was summarised in the A47 & A12 Corridor Feasibility Study, Stage 3: The Case for Investment (see 2.1.4 above).

2.1.14 In April 2015 the Applicant assumed responsibility for the SRN and for delivering the Government's vision for that network as set out in the RIS. As a result, the Applicant took ownership of the previously DfT led 'Strategy, Shaping and Prioritisation' phase of Scheme development.

2.1.15 In March 2015 Amey, supported by AECOM, were appointed to lead on the work to jointly progress the six schemes on the A47 and A12 in Norfolk which comprise the A47 Improvements Programme. Amey were appointed to progress four schemes including the A47 Blofield to North Burlingham Dualling.

[4] https://www.gov.uk/government/collections/road-investment-strategy

## 2.2 Options Identification

2.2.1 Initial feasibility work undertaken for the RIS East Area 6 A47 Blofield to North Burlingham[5] by Amey, identified the following issues:

2.2.2

" *1.3.1 The RIS announced the Scheme as "dualling of the single carriageway Section of the A47 between Norwich and Acle, linking together two existing sections of dual carriageway".*

*1.3.2 The section of the A47 between Blofield and North Burlingham experiences congestion and is currently operating at over capacity. Growth in Norwich and the immediate local area around Blofield will exacerbate this condition.*

*1.3.3 The A47 Blofield to North Burlingham has an average speed significantly lower than the daily average during the AM peak. This is an indicator of congestion and affects journey reliability on the link.*

*1.3.4 The A47 Blofield to North Burlingham stretch of single carriageway has a poor safety record.*

*1.3.5 Due to the lack of nearby alternative routes, the route resilience on this link is an issue.*

*1.3.6 Dualling of the section of the A47 offers a solution to the congestion and will allow economic growth in the area*."

2.2.3 Dualling the section of the A47 between Blofield and North Burlingham presented a potential solution to solve the identified transportation problems. As part of this work broad solutions were reviewed to ensure that dualling of the route represented a suitable and economically cost-effective solution.

2.2.4 A number of more defined potential route options were then identified. These potential high-level engineering routes were numbered 1-8 for reference purposes and are illustrated in Figure 2.1.

[5] https://highwaysengland.citizenspace.com/he/a47-blofield-to-north-burlingham-dualling/results/a47blofieldtonorthburlinghama47sarimps2-ame-bb-zz-do-j00061.pdf

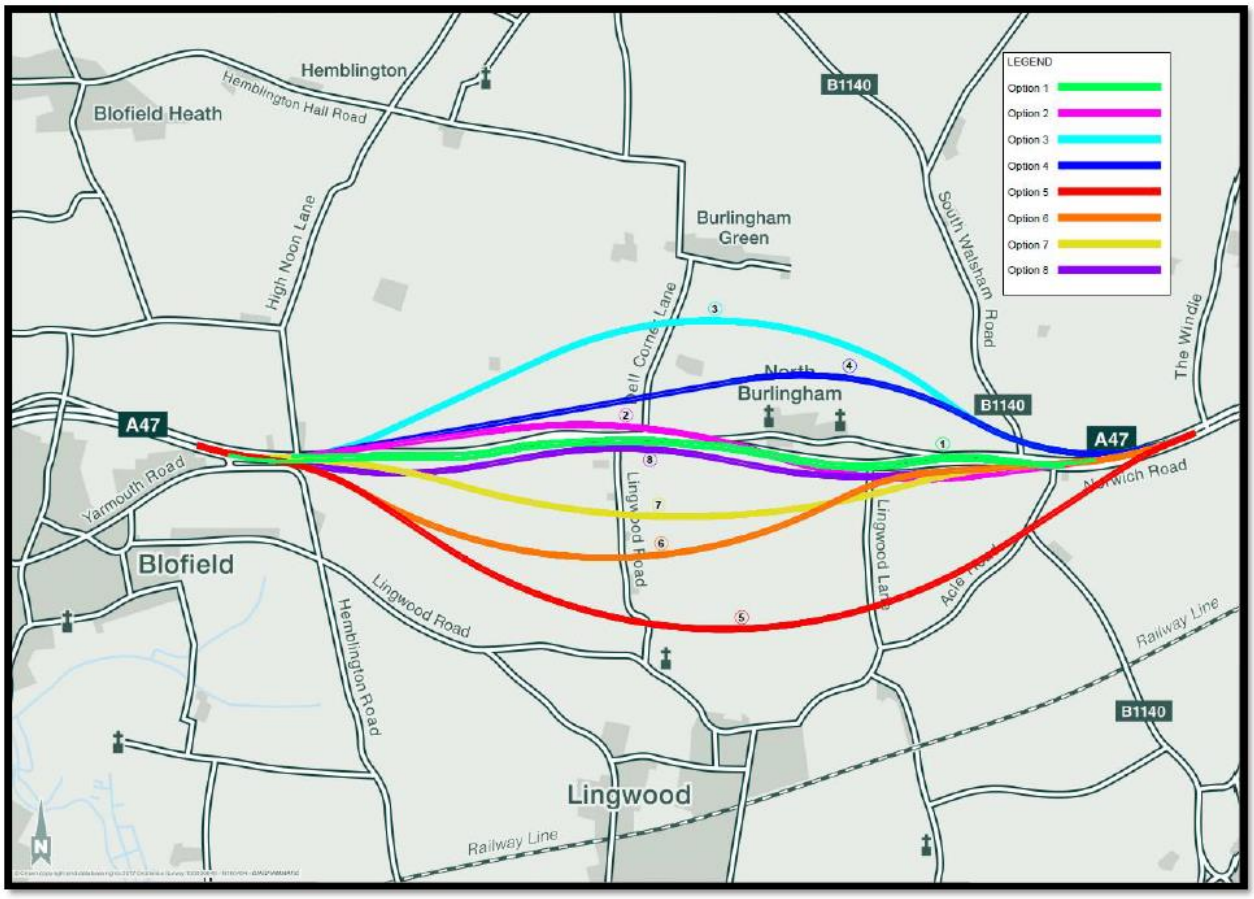



Figure 2.1 - Potential Route Options Plan[6]

## 2.3 Options Selection

2.3.1 Each of the potential route options were assessed, using Highway England's objectives, to ensure that they represented solutions which would solve the identified transportation problem and meet the commitments of the RIS.

2.3.2 The potential route options were initially assessed comparatively in terms of their engineering, environmental, transportation and economic suitability. These assessments were undertaken based on data gathered from desk-based information supplemented by initial walk over environmental surveys undertaken in 2016.

2.3.3 Each of the assessments qualitatively and comparatively rated each option as either red, amber or green. The options rated red having the least favourable outcome for the assessment, the options rated green the more favourable outcome from the assessment. Amber ratings were given where assessments were considered to be in-between the red and green ratings.

2.3.4 **Environmental Considerations**: A qualitative review of environmental issues, based on available environmental data, was undertaken and the following environmental topics considered:

- Noise

[6] Extracted from RIS East Area 6 A47 Blofield to North Burlingham 2017 Non-Technical Summary Report

- Air Quality
- Greenhouse gases
- Landscape
- Townscape
- Historic Environment
- Biodiversity
- Water Environment

2.3.5 **Transportation Considerations**: Each of the options offered a solution to the transportation problem and each provided additional capacity on the network, the consideration of transportation issues was therefore predominantly based on route length. The shorter the route, the lower likely journey times and the more favourable the option was rated in the process.

2.3.6 **Engineering**: A qualitative engineering assessment, based on the data available, was made taking the following engineering criteria into consideration:

- Buildability
- Land requirements
- General Alignment
- Accommodation Works
- Geotechnical
- Structures
- Impact on Statutory Undertakers

2.3.7 **Economic Assessment:** A comparative economic assessment of each option was made based on high level comparative estimates of scheme costs and potential benefits.

2.3.8 An updated local transportation model was developed based on the Norwich Area Transportation Strategy model which was used to further assess the Options and to provide transportation information to inform the economic analysis of each of the Options.

2.3.9 **Assessment Results**: The results from the above exercises are presented in Table 2.1. These results were reviewed by Amey and used to determine a reduced number of potential options to be taken forward for further assessment and analysis and for the non-statutory public consultation.

2.3.10

Table 2.1 - Results of Comparative Qualitative Option Assessment

| Option | Comparative Qualitative RAG Rating | | | | Option taken forward to consultation | Comment |
|---|---|---|---|---|---|---|
| | Environment | Engineering | Traffic | Economic | | |
| Option 1 | | | | | yes | option provides a feasible route offline dualling option along the existing A47 for public consultation |
| Option 2 | | | | | yes | option provides a feasible route offline dualling option to the north and the south of the existing A47 for public consultation |
| Option 3 | | | | | no | all four assessments red |
| Option 4 | | | | | no | one out of the four assessments red and two amber |
| Option 5 | | | | | no | three out of the four assessments red and one amber |
| Option 6 | | | | | no | two out of the four assessments red and two amber |
| Option 7 | | | | | yes | option provides a feasible route offline dualling option to the south of the existing A47 for public consultation |
| Option 8 | | | | | yes | option provides a feasible route offline dualling option to the south of the existing A47 for public consultation |

2.3.11

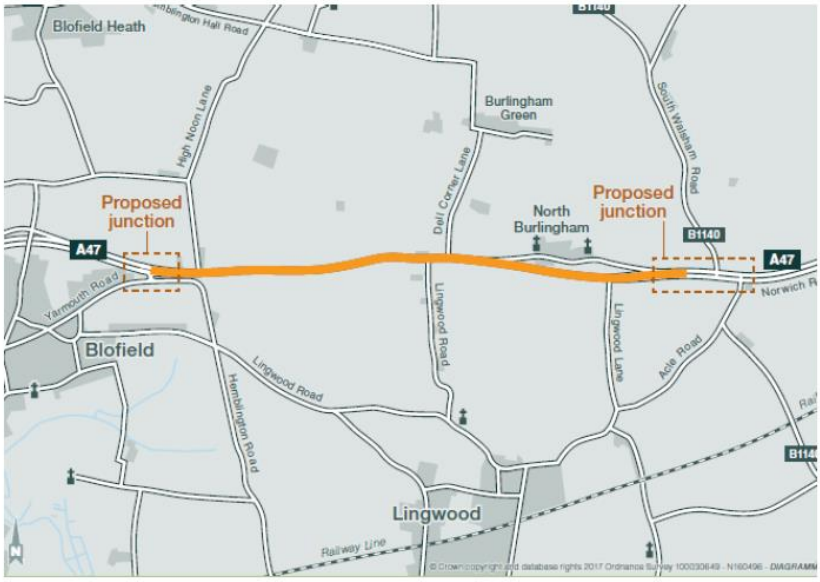
2.3.12 The Scheme Assessment Report produced by Highways England and Amey (SAR, December 2017[7]) summarises the findings of the technical, operational, safety, traffic, economic and environmental assessments. This formed the basis for recommendations for which option should be taken forward for non-statutory public consultation.

2.3.13 Four of the eight options were selected by Highways England and Amey and are listed below. For simplicity in gathering public comment and presentation at the consultation the above options were renumbered sequentially 1 to 4:

- Option 1 - Dualling the existing A47
- Option 2 - Building a new dual carriageway to the north and to the south of the existing A47
- Option 3 - Building a new dual carriageway to the south of the existing A47. (Formerly Option 7)
- Option 4 - Building a new dual carriageway to the south next to the existing A47 (Formerly Option 8)

[7] https://highwaysengland.citizenspace.com/he/a47-blofield-to-north-burlingham-dualling/results/a47blofieldtonorthburlinghama47sarimps2-ame-bb-zz-do-j00061.pdf

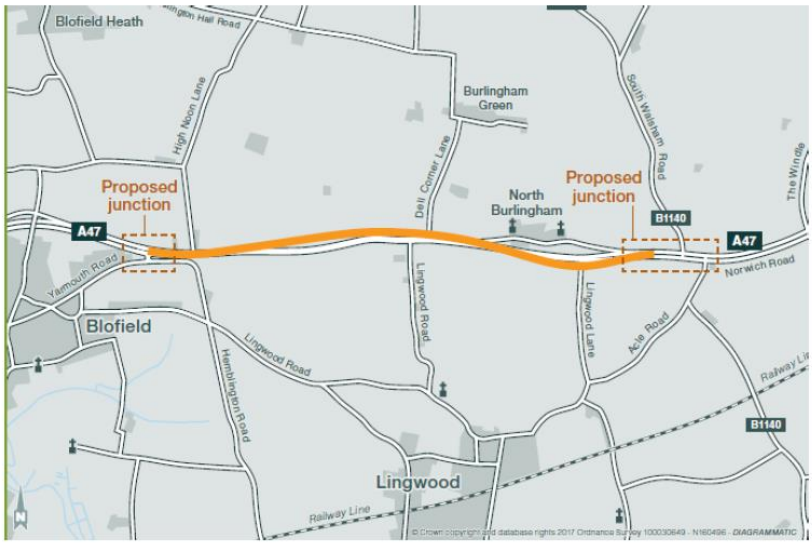
2.3.14 **Option 1** proposed to improve the single carriageway section of the A47 between Blofield and North Burlingham to dual carriageway standard by constructing a new section of dual carriageway. The new carriageway would have included new junctions. This option would have attempted to use as much of the existing carriageway as possible. However, due to the differences between single and dual carriageway standards, it may not have been possible to achieve this in all locations (Figure 2.2).




2.3.15

Figure 2.2 - Option 1

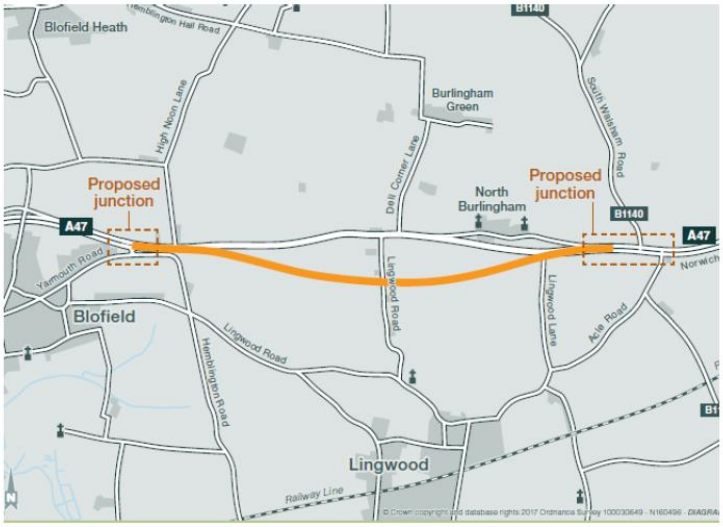
2.3.16 **Option 2** proposed building a new dual carriageway to the north and to the south with the new dual carriageway running to the north of the A47 as the route heads east away from the village of Blofield and to the south of the existing A47 as the route was proposed to pass the village of North Burlingham, crossing the existing A47 between the villages. The route would have passed predominantly through open farmland. The remaining existing A47 would, where unaffected by the new dual carriageway, have become part of the local road network (see Figure 2.3).




2.3.17

Figure 2.3 – Option 2

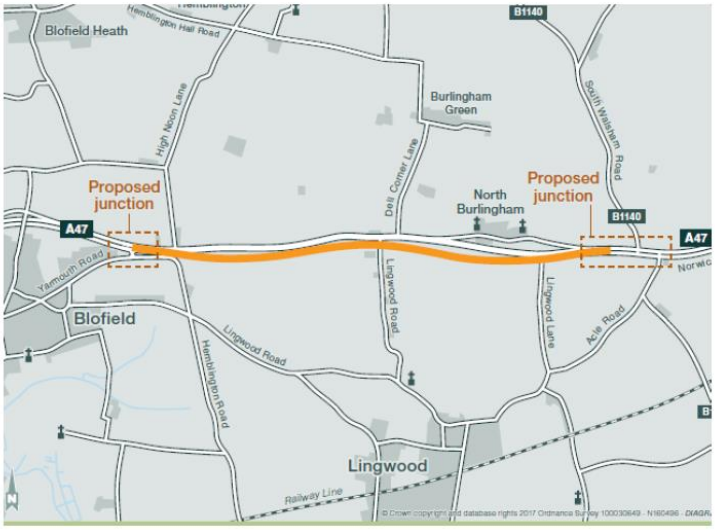
2.3.18 **Option 3** proposed building a new dual carriageway to the south. The route would have passed predominantly through open farmland. The proposed route of the A47 corridor to the south of the existing would have been effectively a new highway corridor, so Highways England would have needed to acquire land along the route to accommodate the improvements. The remaining existing A47 would, where unaffected by the new dual carriageway, have become part of the local road network (see Figure 2.4).




2.3.19

Figure 2.4 – Option 3

2.3.20 **Option 4** proposed building a new dual carriageway to the south. The route would have passed predominantly through open farmland. The proposed route of the A47 corridor to the south of the existing would have been effectively a new highway corridor, so Highways England would have needed to acquire land along the route. The remaining existing A47 would, where unaffected by the new dual carriageway, have become part of the local road network (see Figure 2.5).




2.3.21

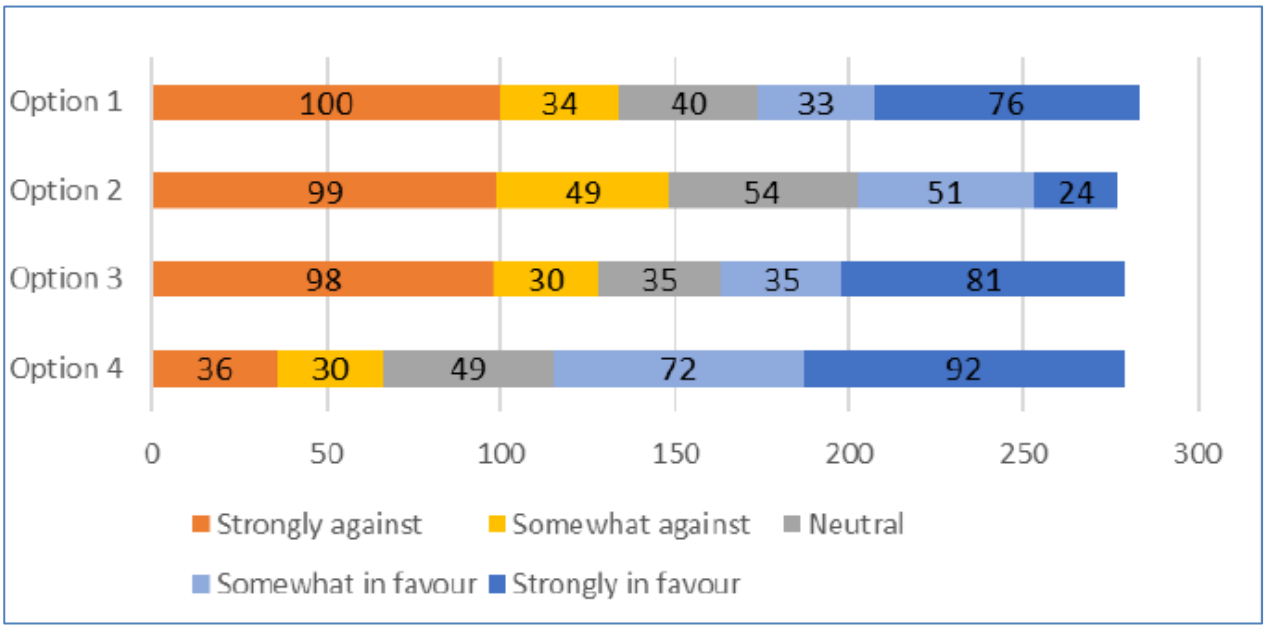
Figure 2.5 – Option 4

## 2.4 Non-statutory Public Consultation

2.4.1 The four options shown in Section 2.3 were presented at a non-statutory public consultation between March and April 2017. The purpose of the consultation was to seek views on the outline proposals from the general public, Statutory Consultees, including local authorities, and other interested bodies.

2.4.2 The total number of respondents to the consultation was 441 which included responses from stakeholders and members of the public. The consultation was reported in the 'A47 Corridor Improvement Scheme; Public Consultation Report A47 Blofield to North Burlingham (August 2017) (see Annex A to the Consultation Report (**TR010040/APP/5.2**).

2.4.3 A summary of the level of support for each of the options is provided below in Figure 2.6:




2.4.4

Figure 2.6 Summary of the level of support for each of the options at consultation

2.4.5 Following the non-statutory consultation the above options were subject to further assessment as detailed in the SAR (December 2017). This included traffic analysis and the following considerations:

- Drainage and flooding assessments
- Geotechnical considerations
- Mining assessments,
- Assessment of structures
- Assessment of public utilities
- Topography
- Buildability
- Operational, Technology and Maintenance
- Safety Assessments

- Environmental Assessments
- Cost assessments

2.4.6 The SAR included a summary of the previous assessments, reported on the non-statutory public consultation and included the further surveys, investigations and assessments undertaken.

2.4.7 The SAR recommended that Option 4 should be adopted as the preferred route.

## 2.5 Preferred Route Announcement

2.5.1 The Preferred Route, 'Option 4 - Building a new dual carriageway to the south of the existing A47', was announced on the project website on the 14 August 2017[8].

2.5.2 Option 4 (the 'Preferred Route') was the option favoured by the public in the feedback to the non-statutory consultation by a significant margin and would solve the traffic and safety problems as identified the A47/A12 Corridor Feasibility Study (see 2.1.4 above). It could be built with the least disruption to drivers during construction, would have the least impact on the environment and the existing road could remain for local traffic, pedestrians, cyclists and equestrians.

## 2.6 Statutory Consultation

2.6.1 Statutory consultation on the Preferred Route was held between 10 September and 19 October 2018. Full details of this consultation are provided in the Consultation Report (**TR010040/APP/5.1**).

2.6.2 Highways England consulted with the local community in accordance with the SoCC, provided in Annex G of the Consultation Report (**TR010040/APP/5.2**), as prescribed by Section 47(7) of the PA 2008.

2.6.3 Highways England invited all consultees, including those identified under Section 42, Section 47 and Section 48 of the Planning Act 2008 (PA 2008), to submit feedback within the consultation period noted above.

2.6.4 A total of 767 responses were received during the consultation period.

2.6.5 When asked if they supported or opposed the proposals to construct a new stretch of dual carriageway between Blofield and North Burlingham, (Question 1a) of the questionnaire, 81.3% of respondents said they strongly agreed with the dualling proposals.

## 2.7 Design Development

2.7.1 Following consideration of the responses to the statutory consultation and further design work the Preferred Option was refined. This included consideration of the land required for the necessary utilities diversions and resulted in minor changes to the red line boundary presented at the statutory consultation.

2.7.2 As the statutory consultation had taken place in 2018, a Project Update Brochure was produced (Autumn 2020) and circulated within the 2018 consultation zone and to stakeholders. A focused statutory consultation was also undertaken between 11th September and 9th October 2020 to advise newly affected parties of the

[8] https://highwaysengland.citizenspace.com/he/a47-blofield-to-north-burlingham-dualling/results/25119c-wlea-1-blofield_v2.pdf

Scheme.

2.7.3 The feedback received from the consultations, together with that from the 2020 engagement, has informed the Scheme as presented within the application documents.

2.7.4 Stakeholder engagement post the 2018 statutory consultation included a number of meetings with Norfolk County Council, Broadlands District Council and Environmental Bodies such as the Environment Agency, Natural England and Historic England.

2.7.5 Full details of engagement and consultation are set out in the Consultation Report (**TR010040/APP/5.1**).

2.7.6 The Scheme development is further detailed within ES Chapters 2 and 3 (**TR010040/APP/6.1**) and the Scheme Design Report (**TR010040/APP/7.6**) including the key features of the design presented at consultation and the Scheme which is included within the application.

# 3 THE NEED FOR THE SCHEME

## 3.1 Overview

3.1.1 The A47 is an important highway link for both local commuter traffic to and from the east of Norwich and for longer distance trips across the country travelling east and west.

3.1.2 In the wider context, the A47 and A12 trunk roads form part of the SRN and provide for a variety of local, medium and long-distance trips between the A1 and the eastern coastline. The corridor connects the cities of Norwich (population over 141,000[9]) and Peterborough (population over 201,000), the towns of Wisbech, Kings Lynn, Dereham, Great Yarmouth and Lowestoft and a succession of villages in what is largely a rural area. The A47 also links with the A11 Cambridge Norwich Tech Corridor – an initiative, supported by four District Councils, to attract up to 15,000 new jobs, £900 million private sector investment in construction and 20,000 new homes along the corridor[10]. The route of the A47 also passes through the Broads National Park east of Acle. The location of the A47 corridor, including the 6 identified schemes from the RIS is shown in Figure 3.1 below. The approximate location of the Blofield to North Burlingham Scheme is indicated with a yellow star.

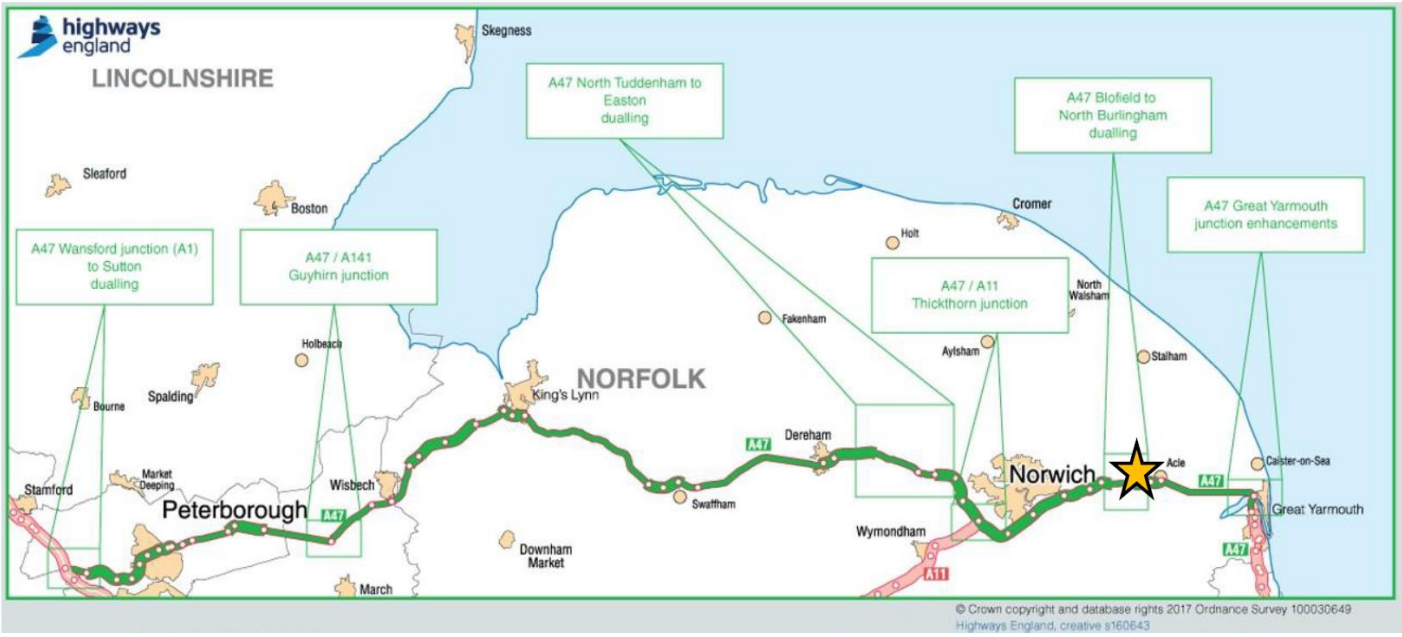



Figure 3.1: Scheme Context[11]

3.1.3 Norwich and Peterborough have developed service-based economies and the towns along the route of the A47 have retained market town and other functions including agricultural-related industry. In recognition of the potential for businesses and economic growth on the eastern coast, the Chancellor announced in the 2011 budget the establishment of the Great Yarmouth and Lowestoft Enterprise Zone particularly for energy related businesses to maximise support for the offshore energy sector. In December 2013, the Government announced a Greater Norwich

[9] ONS 2018 Population estimates for Norwich and Peterborough

[10] Cambridge Norwich Tech Corridor: Vision and Spatial Strategy Report 2020, Perkins & Will

[11] Extracted from RIS East Area 6, A47 Blofield to North Burlingham, Scheme Assessment Report, (A47 IMPS2-AMY-BB-ZZ-DO-J0006) December 2017

City Deal to enable knowledge-based industries to develop.

3.1.4 There has been a rapid growth in the economy along the A47 corridor over the past decade which is expected to continue to grow. The cities of Peterborough and Norwich attract additional traffic along the route, particularly during the morning and evening peak periods[12].

3.1.5 The A47 Corridor is around 115 miles long; 54 miles (47%) is dual carriageway while 61 miles (53%) is single carriageway.

3.1.6 Traffic is forecast to grow across the country and as set out in Section 2.1 above, and the A47 & A12 Corridor Feasibility Study (Stage 1, Page 3), this area is expected to continue to grow with over 50,000 new jobs and 100,000 new homes planned for the area over the next 15 years. There are growth hotspots at several locations along the A47 corridor, including Peterborough, Kings Lynn, Norwich and Great Yarmouth and Lowestoft. There are several major proposed housing developments close to the A47, including at Rackheath and Wisbech, Norwich and on the fringes of Great Yarmouth and Lowestoft.

3.1.7 The A47 Alliance, comprising of Local MPs, local government, businesses and other stakeholders, have been campaigning for comprehensive improvement of the A47. Their aim is to capitalise on the potential economic benefits of improved accessibility to the Midlands and the North as well as address safety issues.

3.1.8 The Blofield to North Burlingham section of the A47 is located approximately 9 kilometres to the east of Norwich and forms part of the main arterial highway route connecting Norwich with Great Yarmouth to the east. The location of Blofield to North Burlingham section of the A47 is shown in Figure 3.2.

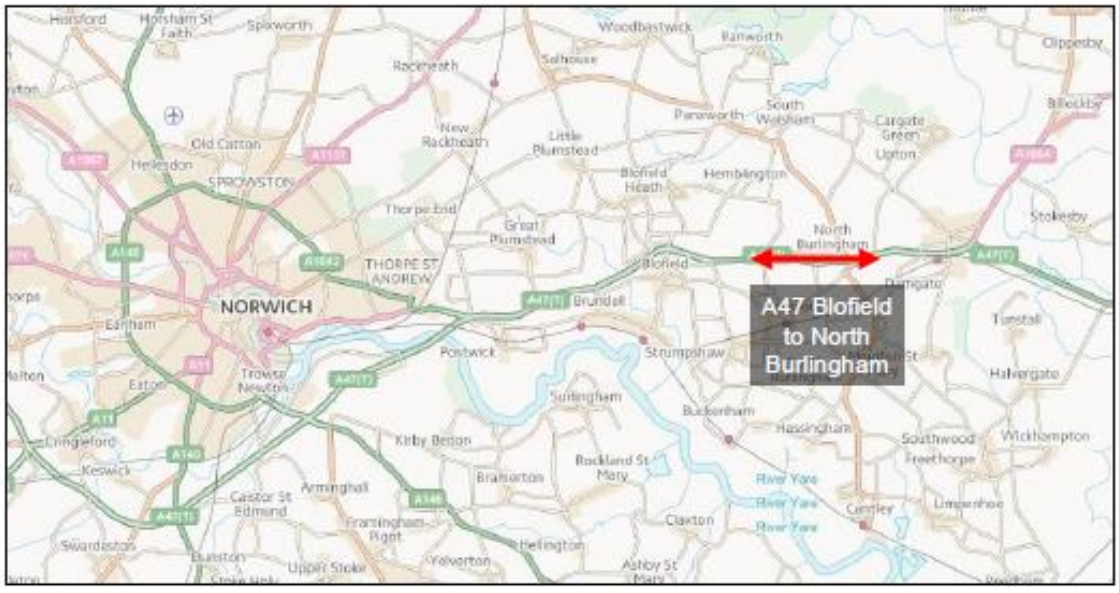



Figure 3.2: Location of the Scheme[13]

3.1.9 Travelling from west to east towards Acle, the A47 narrows from dual carriageway

[12] Extracted from A47 & A12 Corridor Stage 3: The Case for Investment, AECOM https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/411144/a47-stage-3.pdf

[13] Extracted from RIS East Area 6, A47 Blofield to North Burlingham, Scheme Assessment Report, (A47 IMPS2-AMY-BB-ZZ-DO-J0006) December 2017

to single carriageway at the eastern outskirts of the town of Blofield, returning to dual carriageway to the south east of the village of North Burlingham. The area is characterised by isolated farmsteads and small, nucleated villages with local businesses and retail outlets which are linked by a network of local access roads. Larger populations include Blofield to the west, Acle to the east and North Burlingham located centrally to the Scheme, adjacent to the eastbound carriageway of the existing A47.

3.1.10 The single carriageway section of A47 between Blofield and North Burlingham lies between two dual carriageway sections of the A47 and acts as a bottleneck, resulting in congestion and leading to longer and unreliable journey times.

3.1.11 The A47 Blofield to North Burlingham (eastbound) currently has an average speed significantly lower than the daily average during the AM peak. This is an indicator of congestion and affects journey times and journey time reliability on the road.

3.1.12 The A47 Blofield to North Burlingham stretch of single carriageway has a poor safety record. The A47 is ranked 2nd nationally for fatalities on A roads and the accident severity ratio is above average. During the period July 2011 to June 2016 a total of 1 fatal accident, 5 serious accidents and 27 slight accidents were recorded along the section of the A47 which is subject to the Scheme (RIS East Area 6 A47 Blofield to North Burlingham Non-Technical Summary Report). In the period 2014-18, STATS-19 accident records for the Scheme section recorded 42 accidents, resulting in 63 slight injuries and 6 serious injuries.

3.1.13 Due to the lack of nearby alternative routes, route resilience on this link is also an issue.

3.1.14 The proposed solution to the traffic and safety issues set out above and put forward in the RIS is; “dualling of the A47 to fill a gap in the dual carriageway section between Norwich and the Acle Straight”

3.1.15 Dualling of this section of the A47 offers a solution to the congestion and will allow economic growth in the area and has the potential to reduce the number of accidents (RIS East Area 6 A47 Blofield to North Burlingham Non-Technical Summary Report). These points are expanded upon in Sections 4 and 5 of this document).

## 3.2 Description of the Existing Road

3.2.1 The Blofield to North Burlingham section of the A47 is a single carriageway road from Yarmouth Road in the west to the east of the junction with Acle Road. The village of Acle is 2.5km east of North Burlingham (see Figure 3.3).

3.2.2 The existing single carriageway layout is in general between 7.3 and 7.9m wide with central markings to delineate east and west bound traffic. From the west the horizontal alignment of the carriageway is a series of straight sections linked by short and tight radius curves. There are no notable structures across the A47 east of Blofield until the village of Acle, two miles east of North Burlingham.

3.2.3 The speed limit on the dual carriageway at either end of the Scheme is the national speed limit; with the single carriageway section being at a 50mph limit.

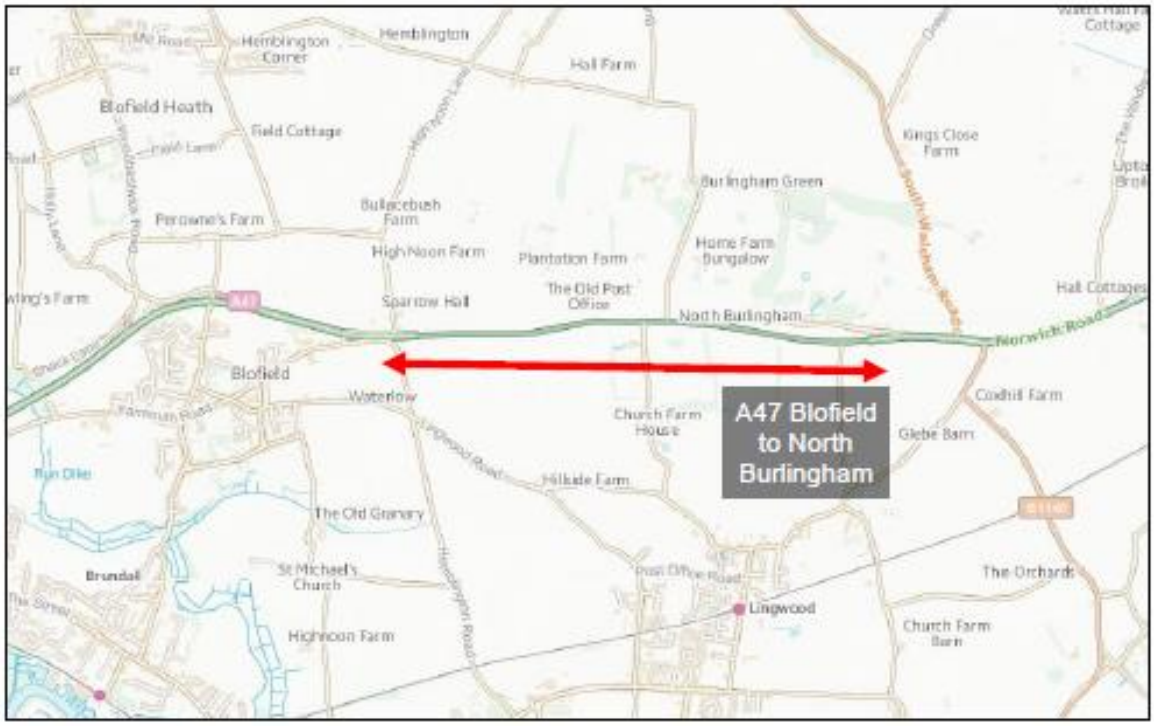



Figure 3.3: Existing Highway Network[14]

3.2.4 There are nine at grade priority junctions along the existing A47. From west to east these are:

- Yarmouth Road and High Noon Lane – Priority Junctions
- High Noon Lane - Priority Junction
- Lingwood Road – Priority Junction
- Dell Corner Lane – Priority Junction
- Main Road – Priority Junctions with eastbound exit link
- Lingwood Lane – Priority Junction
- Main Road – Priority Junction left out only
- B1140 South Walsham Road – Priority Junction
- B1140 White House Lane – Priority Junction

3.2.5 There are also direct accesses from the A47 into surrounding fields, one farm access track and one direct property access.

3.2.6 There are lay-bys on both sides of the highway at the start of the single carriageway section travelling eastbound, a lay-by on the north side mid-way and on the south side before the recommencement of the dual carriageway.

3.2.7 There is currently no lighting on this section of the existing A47 until its transition to dual carriageway at the eastern end.

[14] Extracted from RIS East Area 6, A47 Blofield to North Burlingham, Scheme Assessment Report, (A47 IMPS2-AMY-BB-ZZ-DO-J0006) December 2017

## 3.3 Walking Cycling and Horse-riding

3.3.1 Limited, discontinuous sections of footway adjacent to the highway are provided along existing roads within the Scheme area, including the provision of tactile paving and dropped kerbs. A number of Public Rights of Way (PRoW) are also present in the vicinity of the Scheme. Further details on the existing walking, cycling and horse-riding facilities are set out below in Section 4.5. A Walking, Cycling, and Horse-riding (WCHR) assessment has been undertaken and the outcome is provided in ES Chapter 12 Population and Human Health **(TR010040/APP/6.1).**

3.3.2 There are no national cycleways and no bridleways within the Scheme area.

## 3.4 Existing Land Uses & Character

3.4.1 The Scheme is located within the district of Broadland District Council and within the administrative boundary of Norfolk County Council.

### Topography

3.4.2 The surrounding area is a generally flat and low-lying landscape. It has limited topographic variation and slopes gently from west to east, becoming flatter as it merges with the Broads.

### Land use

3.4.3 The area is characterised by isolated farmsteads and small, nucleated villages with local businesses and retail outlets which are linked by a network of local access roads. Larger populations include Blofield to the west, Acle to the east and North Burlingham located centrally to the Scheme, adjacent to the eastbound carriageway of the existing A47.

3.4.4 Blofield village has a population of 3,500 with approximately 800 homes and a mixture of commercial, retail and support services. At the eastern outskirts of the village, near the junction with the A47, there are several arable field plots together with a leisure / retail area that includes a garden centre, a café, a camping and leisure store, and a farm shop. There is land currently being developed in Blofield for housing, such as the Heronsgate Development by Hopkins homes (163 dwellings). Table 4-1 of the Transport Assessment (**TR010040/APP/7.3**) provides details of the local planned developments (that have been included for transport modelling).

3.4.5 North Burlingham lies approximately 80 metres north of the A47 and is accessed via Main Road that runs through the village with connections east and west. The village has approximately 35 residential properties, two churches, two business centres (15 units total), a plant nursery, scrap dealership, farm shops and a building supply merchants.

3.4.6 In the immediate vicinity of the existing A47 there are agricultural fields enclosed by hedgerows with mature trees and small areas of woodland. The existing A47 is partially lined by mature trees and hedgerows but is more widely characterised by a context of open arable farmland with limited field boundary vegetation.

3.4.7 The surrounding countryside is predominantly rural with a bias towards arable farming. Fields tend to be large and with hedgerow or fencing along the boundaries. There are few features of interest in the landscape. Woodland is scarce, although there are locally important areas of plantation and semi-natural

woodland north of North Burlingham. Community woodland has been planted around the farm at Lingwood Road, just south of the A47.

### Ecological Designations

3.4.8 There are a number of nationally and locally designated sites within 2km of the Scheme, the closest of which are:

- Church and Drive Plantation County Wildlife Site (0.14km north)
- Belt Plantation County Wildlife Site (0.56km north)
- Woodbastwick Road Roadside Nature Reserve (0.29km north west).

### Heritage Designations

3.4.9 There are no Scheduled Monuments, Registered Parks and Gardens, Registered Battlefields or Conservation Areas in the vicinity of the Scheme.

### Landscape designations

3.4.10 There are no designated landscapes or registered parks and gardens in the vicinity of the Scheme.

### Landscape Character

3.4.11 The Scheme falls within the following landscape character areas:

- North East Norfolk and Flegg National Character Area (NCA) - The inland section of the NCA is a rich agricultural area with small to medium scale fields and is mainly unwooded. Isolated farmsteads and small villages with large medieval churches are linked by a dense network of lanes. The Scheme is located in the south west of the NCA with the main commuter villages of Brundall and Blofield close to the city of Norwich
- Blofield Tributary Farmland Landscape Character Area (LCA) and the Freethorpe Plateau Farmland LCA - the Landscape Character Assessment undertaken by the Broadland District Council describes the Blofield Tributary Farmland LCA as having a strong rural character, a mosaic of rolling arable fields and mature woodland within the grounds of old houses, and strong landscape setting of historical halls and churches. The Freethorpe Plateau Farmland LCA is described as having an open, rural character, with sparse settlement and historic landscape features.

### Water and flood risk

3.4.12 There are no canals, reservoirs or lakes within the vicinity of the Scheme.

3.4.13 The Scheme lies entirely within Flood Zone 1, which is associated with a low risk of river flooding.

3.4.14 All the water features are designated as ordinary watercourses and as such, matters pertaining to flood risk on these watercourses is the responsibility of the Lead Local Flood Authority (Norfolk County Council).

3.4.15 Existing carriageway is drained through a highway drainage network utilising a variety of drainage systems.

### Noise

3.4.16 Traffic volumes recorded at a location along the A47 (Count point 28827) recorded an Annual Average Daily Flow of 37,354 vehicles in 2015. From these figures it is likely that the existing A47 is the main source of noise in the area.

### Air quality

3.4.17 The area is largely rural in nature and the main source of air quality pollutants is from road traffic along the A47 and the minor road network. Existing air quality is deemed to be good, as the Broadland District Council has not declared any Air Quality Management Areas.

3.4.18 Background levels of nitrogen dioxide and Particulate Matter (PM) of 10 microns or less were 11µg/$m^3$ and 17µg/$m^3$ respectively in 2016. These levels fall within the required air quality objectives of 40µg/$m^3$ for nitrogen dioxide and PM10.

## 3.5 Description of the Scheme

3.5.1 The Scheme comprises:

- 2.6km of dual carriageway on the A47
- de-trunking of the existing A47 section between Blofield and North Burlingham
- improvements at Yarmouth Road Junction, including closure of the central reserve, closure of High Noon Lane direct access, merge lane, realignment of Waterlow and local access improvements at the Sparrow Hall properties
- introduction of a compact grade separated junction at B1140 junction, including the B1140 Overbridge
- a new overbridge at Blofield traversing the proposed A47 dual carriageway, connecting Yarmouth Road with the existing A47
- provision of new drainage systems including an infiltration basin and retention of existing drainage systems where possible
- a retaining wall in the western extents
- introduction of lighting at the Yarmouth Road junction and new lighting layout at the B1140 Junction
- closure of an existing layby and provision of a new layby
- walking and cycling routes connecting Blofield and North Burlingham via the Blofield Overbridge to the west and the B1140 Overbridge to the east
- provision of North Burlingham Access
- an agricultural access track
- fencing, safety barriers and signage
- environmental mitigation
- diversions of an intermediate pressure gas main and other utilities

3.5.2 A full description of the Scheme is provided in ES Chapter 2, The Proposed Scheme, (**TR010040/APP/6.1**).

## 3.6 Key Objectives of the Scheme

### Scheme Objectives

3.6.1 The objectives of the Scheme are:

**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 growth by supporting employment and residential development opportunities.*

**Making a safer network** - *Improving road safety for all road users by designing to modern highway standards appropriate for a major A road.*

**A more free-flowing network** - *Increasing the resilience of the junction in coping with incidents such as collisions, breakdowns, maintenance and extreme weather. The improved A47 Blofield to North Burlingham will be more reliable, reducing journey times and providing capacity for future traffic growth.*

**Protected environment** - *We will protect the environment by minimising adverse impacts and where possible, improving the environmental effects of transport on those living along the route of the new and existing road. We will do this by reducing the impact on the natural and built environment by the new road and any associated works.*

**An accessible and integrated network** - *To ensure the proposals consider local communities and access to the road network, providing a safer route between communities for cyclists, pedestrians, equestrians and vulnerable users where a need is identified.*

**Value for money** - *To ensure that the Scheme is affordable and delivers good value for money.*

3.6.2 Table 3.1 below sets out consideration of the Scheme against the defined Scheme objectives.

Table 3.1 Consideration of the Scheme against the Scheme Objectives

| Objectives | How the Scheme Meets the Objectives |
|---|---|
| Supporting economic growth | The Scheme will provide additional capacity and improved journey times to encourage economic growth in the local area as well as across the A47 corridor between Great Yarmouth and Norwich. This will help contribute to sustainable economic growth by supporting employment and residential development opportunities.<br><br>The Economic Case Overview (Section 5) provides more details of the economic benefits of the Scheme. |
| Making a safer network | The Scheme will improve safety and operational issues by upgrading to dual carriageway and providing a grade separated junction at the B1140.<br><br>The Transport Case for the Scheme (Section 4) of this report and the Transport Assessment (**TR010040/APP/7.3**) provide more detail on the safety benefits. |
| A more free-flowing network | The Scheme provides a new overbridge at Blofield traversing the Scheme and connecting Yarmouth Road with the existing A47 and, a compact grade separated junction at the B1140 including an overbridge.<br><br>Following construction of the Scheme, the operational modelling shows traffic operating with minimal delays, in approximate free-flow condition, supporting a smooth flow of traffic.<br><br>The Transport Case for the Scheme (Section 4) of this report and the Transport Assessment (**TR010040/APP/7.3**) provide more detail on traffic movements. |
| Protected environment | The Scheme provides a new alignment that runs parallel to the existing A47 a short distance to the south. A design has been progressed that supports mitigation of environmental impacts.<br><br>In this regard there will be improvements in the environmental effects of transport for some receptors. An ES has been undertaken (**TR010040/APP/6.1**) which assesses and proposes mitigation to minimise any impacts on biodiversity, heritage, climate, air quality, flooding, and geology, and from any cumulative effects. Mitigation measures are detailed on the Masterplan (**TR010040/APP/6.8**) and in the Environmental Management Plan (EMP) (**TR010040/APP/7.7**). |

| Objectives | How the Scheme Meets the Objectives |
|---|---|
| An accessible and integrated network | The A47 to the west provides strategic road access to the Midlands and North. It plays a vital role in supporting the economy which relies on strong transport links in this area.<br><br>The Scheme design has considered local community access to the road network, providing safer routes between villages for cyclists, pedestrians, and vulnerable users where a need is identified. The Scheme will provide new cycling and walking infrastructure as well as downgrading the existing A47 alignment to a local road status, these aspects are set out in Section 12.10 of ES Chapter 12 - Population and Human Health (**TR010040/APP/6.1**). |
| Value for money | The economic benefits of the Scheme include travel time savings and thus vehicle operating costs, accident savings and indirect savings relating to the reduction in greenhouse gases and improvement in air and noise quality. Its increased road capacity will encourage inward investment in housing and will support employment growth.<br><br>Overall, the Scheme is forecast to produce user benefits of £109.9 million (PV) over the 60-year appraisal period. As per the DfT Value for Money Framework, this is categorised as high value for money.<br><br>An overview of the economic benefits of the Scheme is provided in Section 5 of this document. |

## National Networks National Policy Statement (NNNPS)

3.6.3 The NNNPS (designated on 14 January 2015) sets out the need, and Government's policies for delivering NSIP developments on the national road network. The compliance of the Scheme with the environmental requirements of the NNNPS is considered in detail in the NNNPS Accordance Tables (**TR010040/APP/7.2**). This section sets out how the Scheme is consistent with the aims of the NNNPS at a strategic level.

3.6.4 Paragraph 2.2 of the NNNPS recognises that there is a 'critical need' to improve the national road and rail networks to address road congestion and crowding on 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.

3.6.5 Paragraph 2.6 of the NNNPS confirms that the development of the national networks helps to support national and local economic growth, and that 'improved and new transport links can facilitate economic growth by bringing businesses closer to their workers, their markets and each other'.

3.6.6 The Government has concluded that at a strategic level there is a 'compelling need' for development on the national networks, as confirmed in paragraph 2.10 of the NNNPS. The same paragraph confirms that 'The Examining Authority and the SoS should therefore start their assessment of applications for infrastructure covered

by this NPS on that basis'.

3.6.7 Identifying the need for development on the national road network, paragraph 2.13 of the NNNPS, confirms that the SRN provides critical links between cities and joins up communities, playing a vital role in people's journeys and drives prosperity by supporting new and existing development, encouraging trade and attracting investment. Paragraph 2.13 also confirms that a well-functioning SRN is 'critical in enabling safe and reliable journeys and the movement of goods in support of national and regional economies.'

3.6.8 Paragraph 2.22 of the NNNPS confirms the importance of improving the road network as without doing so '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 a strategic level there is a compelling need for development of all national road networks.

3.6.9 The Government's policy of improving the existing national road network is set out in paragraph 2.23 of the NNNPS as including:

i. junction improvements, new slip roads and upgraded technology to address congestion and improve performance and resilience at junctions which are a major source of congestion;

ii. implementing 'smart motorways' to increase capacity and improve performance;

iii. improvements to trunk roads in particular dualling of single carriageway strategic trunk roads and additional lanes on existing dual carriageways to increase capacity and to improve performance and resilience.

3.6.10 The NNNPS sets out that, subject to the detailed policies and protections contained in the NPS and the legal constraints set out in the PA 2008, there is a 'presumption in favour' of granting development consent for national network NSIPs that fall within the need for infrastructure established in the NNNPS.

3.6.11 Paragraph 4.3 of the NNNPS states that: 'in considering any proposed development, and in particular, when weighing its adverse impacts against its benefits, the ExA and SoS should consider:

- its potential benefits including the facilitation of economic development including: job creation and housing together with environmental improvements and any long-term or wider benefits
- its potential adverse effects, including any longer-term and cumulative adverse impacts, as well as measures to avoid, reduce or compensate for any adverse impacts'

3.6.12 Table 3.2 illustrates how the Scheme will respond to this identified need by fulfilling the strategic objectives of the NNNPS.

Table 3.2 – Response to the NNNPS Strategic Objectives

| NNNPS Vision and Strategic Objectives (NNNPS Page 9) | Conformity of the Scheme |
|---|---|
| The Government will deliver national networks that meet the country's long-term needs; supporting a prosperous and competitive economy and improving overall quality of life, as part of a wider transport system. | The A47 trunk road forms part of the SRN and provides for a variety of local, medium and long-distance trips between the A1 and the eastern coastline. Within this context the Scheme will form part of the main arterial highway route connecting Norwich with Great Yarmouth to the east.<br>Norwich is amongst the fastest growing cities in the country and further growth is planned[15]. There are a number of initiatives to enable growth in offshore energy and knowledge-based industries and these will be assisted by good connectivity. The Southern North Sea, with Norfolk and Suffolk at its centre, is currently the largest offshore wind development zone in the World with the Government's Offshore Wind Sector Deal[16] setting out ambitions to grow offshore wind capacity in the UK to 30GW by 2030 at a cost of £40billion. For instance, Norwich is the closest city to the 1200-1800 turbine East Anglia Array wind farm, 25km off the coast. The Norwich area provides an ideal location for companies in the supply chain including offshore, marine, and subsea engineering, drilling technology and offshore decommissioning. The New Anglia Local Enterprise Partnership supports development[17] within this sector and encourages growth.<br>As well as directly benefiting users of the A47 between Blofield and North Burlingham, the Scheme will also benefit users of the wider A47 route. The A47 dualling will deliver a 'substantial improvement' to the network that will help the A47 better fulfil its strategic role in the national transport network.<br>Section 7.14 of the Transport Assessment **(TR010040/APP/7.3)** summarises the overall benefits of the Scheme. It will improve traffic flows; provide more reliable journey times and improve the safety of the route. These improvements will contribute towards the attractiveness of areas along the A47 corridors for business and will help in promoting a competitive regional economy.<br>The Scheme also provides for walking and cycling by incorporating safe, convenient, accessible and attractive routes. |

[15] Norwich Economic Analysis, Norwich City Council, June 2017
[16] HMG (2019), Industrial Strategy, Offshore Wind Sector Deal

| NNNPS Vision and Strategic Objectives (NNNPS Page 9) | Conformity of the Scheme |
|---|---|
| Networks with the capacity, connectivity and resilience to support national and local economic activity and facilitate growth and create jobs | Section 7.14 of the Transport Assessment **(TR010040/APP/7.3)** summarises the overall benefits of the Scheme. It will improve traffic flows; provide more reliable journey times and improve the safety of the route. These improvements will contribute towards the attractiveness of areas along the A47 corridors for business and will help in promoting a competitive regional economy. |
| Networks which support and improve journey time quality, reliability and safety | The A47 Corridor is around 115 miles long; approximately 53% of which is single carriageway. The Blofield to North Burlingham section is one of the single carriageway stretches, affecting journey time and journey time reliability on the road.<br>This section of single carriageway has a poor safety record, with the A47 as a whole having an above average accident severity ratio.<br>The objectives of the Scheme are to improve journey times, improve network resilience and journey time reliability and improve safety. This is enabled through creating a two-lane carriageway and removing at-grade junctions. Quality of journeys will be improved due to less queuing leading to less driver frustration. Sections 9.5, 9.7 and 9.8 of the Transport Assessment summarise the positive impact of the Scheme on traffic conditions, accidents and network resilience/journey time reliability respectively. |
| Networks which support the delivery of environmental goals and move to a low carbon economy | The need to adapt to climate change has been taken into consideration as part of the Scheme assessment and design. Sections 14.8 and 14.9 of ES Chapter 14 Climate **(TR010040/APP/6.1)** assess the impact of the Scheme and set out mitigation to minimise carbon through design and construction. It is expected that the recent UK government announcement on ending the sale of new petrol and diesel vehicles by 2030 will further reduce the Scheme's end user carbon emissions. However, when compared with total UK carbon budget figures, the increase in emissions resulting from the Scheme are relatively minor, e.g. 0.001%. |
| Networks which join up our communities and link effectively to each other | The Scheme will help to join up communities and reduce journey times on this section of the A47.<br>Most of the community facilities are located within Blofield meaning the two to four minute journey times savings will |

| NNNPS Vision and Strategic Objectives (NNNPS Page 9) | Conformity of the Scheme |
|---|---|
| | apply to those accessing the healthcare facilities, schools and shops in Blofield.<br><br>The Scheme will improve journey times between Blofield and Acle for vehicle drivers as well as removing the need for a right turn across A47 traffic at Yarmouth Road junction via the Blofield Overbridge.<br><br>Access to community facilities further afield (for example Norwich or Great Yarmouth), via the A47 would be improved with better travel times and safer access at the Yarmouth Road junction (improved merge lane) and the B1140 grade separated junction.<br><br>The Scheme will provide two routes to cross the improved A47, via the Blofield and B1140 Overbridges for pedestrians and cyclists.<br><br>The Blofield Overbridge will be accessible from an existing Burlingham footpath via a new footpath to the south. The Scheme will also make provision for the implementation of walking and cycling facilities at the B1140 junction to facilitate improved north to south connectivity across the new A47 to the east of North Burlingham.<br><br>A new combined footway/cycleway will be provided along a section of the existing A47 to be detrunked. This will improve connectivity between Blofield and North Burlingham for pedestrians and cyclists.<br><br>Providing a network with greater capacity and journey time reliability will also help join up communities by improving the experience of local users of the A47.<br><br>Section 12 of ES Chapter 12: Population and Human Health, (**TR010040/APP/6.1**) states that he improvement of journey times between Blofield and Acle due to the Scheme would result in reduced severance and improved access to healthcare and other facilities in these communities. Use of the de-trunked existing A47 would also improve access to local facilities for residents due to reduced traffic congestion as a result of the Scheme.<br><br>For walkers and cyclists accessing facilities in Blofield from north of the existing A47, the new footway and cycleway and the Blofield Overbridge would facilitate safer access. |

| NNNPS Vision and Strategic Objectives (NNNPS Page 9) | Conformity of the Scheme |
|---|---|
| | The footway and cycleway would also provide access to areas of open space and is likely to encourage more people to access the area on foot or by bicycle, which has the potential to result in increased physical activity of the local population, and users from other communities.<br><br>Access to green and open space north and south of the existing A47 is provided by PRoW located north and south of the existing A47. Access to Burlingham Woods to the north of the A47 is maintained and access to Lingwood Community Woodland would be altered due to the severance of Burlingham FP 3, however re-provision to the south would ensure access is maintained. Access to open spaces from north and south of the existing A47 would be improved by the Blofield Overbridge, enabling safer access. Reduced traffic flows on the existing A47 as a result of the Scheme would result in improved access to green/open space for local residents. |

# 4 TRANSPORT CASE FOR THE SCHEME

## 4.1 Overview of Transport Policy

4.1.1 This section outlines the national, regional and local policies that are relevant to the Scheme. Full details of the Scheme's accordance with relevant national and local policies, local transport plans and associated supplementary plans, particularly the National Policy Statement for National Networks (NNNPS), is provided in Chapter 6 of this document and in the NNNPS Accordance Tables (**TR010040/APP/7.2**).

### National Policy

#### *The National Networks National Policy Statement*

4.1.2 The National Networks National Policy Statement (NNNPS) sets out the need for, and the Government's policies to deliver, the development of NSIPs on the national road network in England and also sets out the primary basis for making decisions of development consent for Nationally Significant Infrastructure Projects (NSIPs) in England. The Government recognises in the Appraisal of Sustainability accompanying the NNNPS that some developments may have adverse local impacts on noise, emissions, landscape and visual amenity, biodiversity, cultural heritage and water resources. The significance of these effects and the effectiveness of mitigation is uncertain at the strategic and non-locational specific level of the NNNPS. Therefore, while applicants should deliver developments in accordance with government policy and in an environmentally sensitive way, including considering opportunities to deliver environmental benefits, some adverse local effects of development may remain.

4.1.3 Outside the NSIP regime, government policy is to bring forward targeted works to address existing environmental problems on the strategic road network (SRN) 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
- addressing areas of poor air quality.

#### *The National Planning Policy Framework*

4.1.4 The National Planning Policy Framework (NPPF) states that the purpose of the planning system is to contribute to the achievement of sustainable development. In this regard there are three interdependent overarching objectives; economic, social and environmental which need to be pursued in mutually supportive ways with the aim of securing net gains across each. Accordingly, the NPPF states a *"presumption in favour of sustainable development"* (NPPF Paragraph 10).

#### *Road Investment Strategy*

4.1.5 In April 2020, the Department of Transport (DfT) published the Road Investment Strategy 2 (RIS2). The RIS2 sets out a list of schemes that are to be developed by

Highways England in the period 2020-2025.

4.1.6 Highways England, as the strategic highways company and appointed by the Secretary of State must, in exercising its functions and complying with its legal duties and other obligations, act in a manner which it considers best calculated to, among others:

- minimise the environmental impacts of operating, maintaining and improving its network and seek to protect and enhance the quality of the surrounding environment
- conform to the principles of sustainable development.

4.1.7 RIS 2 (page 100) introduces the committed schemes in the East of England committed to in Road Programme 2. RIS 2 (page 101) includes the "*A47 Blofield to North Burlingham – upgrade of the A47 east of Norwich to fill a gap in the dual carriageway section between Norwich and the Acle Straight*".

*The Strategic Road Network and the Delivery of Sustainable Development (DfT Circular 02/2013)*

4.1.8 The Strategic Road Network and the Delivery of Sustainable Development (DfT Circular 02/2013) explains how the Highways Agency (Highways England) will engage with the planning system, communities and the development industry to deliver sustainable development and, thus, economic growth, whilst safeguarding the primary function and purpose of the SRN.

4.1.9 Paragraph 8 states that "A well-functioning strategic road network enables growth by providing for safe and reliable journeys. This can help reduce business costs by providing certainty, improving access to markets, enabling competition, improving labour mobility, enabling economies of scale, and helping attract inward investment."

4.1.10 The Circular states that Highways England will work with local authorities to influence Local Plan decisions that may affect the SRN: "*Where there would be physical changes to the network, schemes must be submitted to road safety, environmental, and non-motorised user audit procedures, as well as any other assessment appropriate to the proposed development. The Design Manual for Roads and Bridges sets out details of the Secretary of State's requirements for access, design, and audit, with which proposals must conform*" (Paragraph 11).

4.1.11 Further, Paragraph 19 states that "Where a potential capacity need is identified, this will be considered and weighed alongside environmental and deliverability considerations. Additional capacity may be considered in the context of the Highways Agency's forward programme of works, balancing the needs of motorists and other road users with wider impact on the environment and the local/regional community."

4.1.12 Advice on providing access from the SRN is also provided within this document. Highways England typically adopts a graduated and less restrictive approach to creating new junctions or intensifying the use of existing points of access to non-motorway routes. There is however a presumption in favour of the use of existing junctions rather than the creation of new. However, the need to facilitate growth and the role highway accesses play in achieving development needs to be taken into account.

4.1.13 An impact assessment, describing the potential issues with implementation of the Circular, was released on the 24 September 2014 which recognised that it must be updated to reflect the changes brought about by the Localism Act 2011 and the National Planning Policy Framework (NNPF) and to emphasise the Highways Agency's role and responsibilities in being an effective delivery partner to enable economic growth. The impact assessment states that where necessary Circulars should be replaced to remove unnecessary regulation and ensure that policy for the SRN is fully compatible with the NPPF.

## Highways England Policy

### *The Highways England Licence (2015)*

4.1.14 The Highways England Licence (2015) sets out key requirements which must be complied with by the Licence holder as well as statutory guidance. In exercising its functions and complying with its legal duties and obligations, the Licence holder must act in such a manner which it considers best calculated to:

- ensure the effective operation of the network
- ensure the maintenance, resilience, renewal, and replacement of the network
- ensure the improvement, enhancement and long-term development of the network
- ensure efficiency and value for money
- protect and improve the safety of the network
- co-operate with other persons or organisations for the purposes of coordinating day-to-day operations and long-term planning
- minimise the environmental impacts of operating, maintaining and improving its network and seek to protect and enhance the quality of the surrounding environment
- conform to the principles of sustainable development
- in complying with section 4.2(g) and its general duty under section 5(2) of the Infrastructure Act 2015 the Licence holder must have regard for the environment
- ensure that protecting and enhancing the environment is embedded into its business decision-making processes and is considered at all levels of operations
- ensure the best practicable environmental outcomes across its activities, while working in the context of sustainable development and delivering value for money
- consider the cumulative environmental impact of its activities across its network and identify holistic approaches to mitigate such impacts and improve environmental performance
- where appropriate, work with others to develop solutions that can provide increased environmental benefits over those that the Licence holder can achieve alone, where this delivers value for money

- calculate and consider the carbon impact of road projects and factor carbon into design decisions and seek to minimise carbon emissions and other greenhouse gases from its operations
- adapt its network to operate in a changing climate, including assessing, managing and mitigating the potential risks posed by climate change to the operation, maintenance and improvement of the network
- develop approaches to the construction, maintenance and operation of the Licence holder's network that are consistent with the government's plans for a low carbon future
- take opportunities to influence road users to reduce the greenhouse gas emissions from their journey choices.

### *The Highways England Delivery Plan*

4.1.15 The Highways England Delivery Plan sets out Highways England's long-term plans for the modernisation and renewal of the road network over the 5-year period from 2015-2020. It provides a brief outline of what Highways England have delivered during 2015-2016 and sets out a clear programme of activity for 2016-2017, as well as annual and future commitments. It complements the original Delivery Plan (Highways England Delivery Plan 2015-2020), outlining progress made with this work.

4.1.16 Key performance indicators (KPI) and other performance indicators are set out in the January 2016 Operation Metrics Manual produced in collaboration with DfT and Office of Rail and Road. Environmental KPIs include:

- on reducing the impact of noise pollution, continue with the Noise Important Area improvement programme and consider the opportunities provided by new road surfaces and design of the soft estate, especially in sensitive areas such as National Parks and areas of high population density
- on biodiversity, ensure no net loss across Highways England's activities in RP2 and continue progress towards the target of delivering a net gain in biodiversity by 2040. New planting will be appropriate to local habitats
- on air quality, work to identify and implement measures to address NO2 exceedances on the SRN and supporting the work of local authorities to develop and implement their clean air plans, where there are interactions with the SRN
- address severance issues, (the negative effects arising from the way busy infrastructure routes can divide people, places and species because of their relative impermeability), both as part of the design of new schemes and through improvements where existing problems are severe
- continue to respect ancient woodlands and protected wildlife sites. Mitigations will be considered as part of scheme design, such as the translocation of trees and soil, wherever such areas are unavoidably affected
- ensure measures are put in place to address heritage assets at risk, or those negatively impacted by the SRN, whilst seeking to avoid and minimise harm

to heritage assets or put heritage assets at risk as a result of works to the SRN

- support efforts to tackle the shortage of lorry parking. This will help to remove the pressure of drivers to park inappropriately and the negative environmental consequences of fly-parking for local residents and drivers.

4.1.17 Furthermore, a series of ring-fenced funds for actions beyond 'business as usual' are available across environmental disciplines, including the designated funds programme. This programme is made up of 5 funds:

- air quality
- cycling, safety & integration
- innovation
- environment
- growth and housing.

## Local Transport Policy

4.1.18 There are a number of Local Transport Plans which are applicable to the Scheme:

- Norfolk County Council Local Transport Plan, 2011-2026: describes the Council's strategy and policy framework for transport and is used as a guide for investment priorities as well as being considered by other agencies when determining their planning or delivery decisions. The Council are currently refreshing the Local Transport Plan so that it covers the period 2020-2036. A consultation of the key priorities was held in early 2020. However there has been no update since this consultation.
- Norwich Area Transport Strategy, 2004, updated 2013: The current transport strategy has been in place since 2004 and has seen significant changes to the city, including transformation of the Westlegate area into a new public space and changes to St Stephens Street and Chapel Field North that have improved journey times for buses. Norfolk County Council is looking to the future of investment in the network and want to update the strategy to match the changing needs of the city and Greater Norwich as it continues to grow.
- Greater Norwich Infrastructure Plan, 2019: prepared to help coordinate and manage the delivery of strategic infrastructure to support growth.
- East Broadland Green Infrastructure Project Plan, 2012: focusing on the East Broadland area, primarily between Great Plumstead and Acle and the surrounding settlements within the Broadland District Boundary.

### *Policy Summary*

4.1.19 The aims of the Scheme are directly in line with the Government's policies and illustrate the need for the Scheme on a national level. The Government has highlighted the express need for further growth and improvements to the national networks within the NNNPS. The Road Investment Strategies (both 'RIS1 and 'RIS2'), which explore these needs in further detail, have supported the A47 Scheme as a required improvement to the SRN.

4.1.20 The Scheme complies with national planning policy within the NNNPS and NPPF.

It will reduce congestion-related delay, improve journey time reliability, increase the overall capacity of the A47 and improve road safety and traffic flow. These improvements mean that the Scheme will contribute towards making the eastern region more attractive for business and will help in promoting a competitive regional economy.

4.1.21 The Scheme supports the objectives of the various sub regional policy documents in delivering the required and supported improvements to the A47.

4.1.22 The Broadland Development Plan highlights sections of congested single carriageway on the A47 as requiring improvement to dual status and supports the proposed improvements by restricting the future development of land adjacent to the single carriageway sections to maintain its availability for potential future improvements by the Applicant.

4.1.23 The Plan also specifically identifies the single lane carriageway between Blofield and Acle as requiring improvement to dual status to support local demand and growth aspirations on the corridor. The Scheme therefore conforms to the aspirations of the development plan.

4.1.24 The Scheme is also supported by the local transport plans in terms of improving the A47 corridor.

## 4.2 Baseline Data and Development of Model

4.2.1 Section 7 of the Transport Assessment (**TR010040/APP/7.3**) reports the results of the transport model assessment, used to forecast future traffic conditions. The results of the model forecast results indicate that at the 2015 base year the A47 was operating at just below the available capacity at peak times. Peak hour flows are predicted to increase significantly, without intervention, between 2015-2025, which will cause the A47 single carriageway section to go over capacity. This will result in A47 users experiencing increased journey times. Further traffic growth is also forecasted between 2025-2040 (37% westbound between South Walsham Road and the B1140 and 48% eastbound between High Noon Lane and South Walsham Road in the am peak) further exacerbating congestion on the A47 single carriageway section.

### Baseline Data

4.2.2 The baseline data collection used for the assessment of the Scheme and the development of the highway assignment and microsimulation models includes the collection of volumetric traffic count data, network data and vehicle journey time data including:

- road network and traffic movement data
- traffic flows
- congestion and queuing
- journey times
- accidents
- public transport facilities
- pedestrian, cycling and horse-riding facilities

- parking facilities.

4.2.3 This data has been used in the model development process to calibrate and validate the baseline in order to provide a stable basis to undertake the future year assessment of the Scheme.

4.2.4 In addition to the traffic data collection, reported accident data information has been sourced to inform the road safety assessment and public transport, walking and cycle information to inform the assessment of the walking, cycling and horse-riding (WCHR) impacts Details of how the baseline data was collected are provided in Section 5 of the Transport Assessment (**TR010040/APP/7.3**).

## Modelling

4.2.5 The framework of the modelling assessment has been developed to enable the comparative analysis of the existing single carriageway section and the proposed dual carriage way improvements against the Scheme objectives.

4.2.6 The modelling assessment comprises of:

- a strategic multi-modal model which covers Broadland, Norwich and the surrounding area. The strategic modelling assessment is used as the basis to derive forecasted traffic impacts of the Scheme's performance across the wider area. The model utilised for the assessment of the Scheme is known as the Norwich Area Transport Strategy Model (referred to as the NATS Model). The NATS model, utilised for the preliminary design work, has been developed in line with the DfT's Transport Appraisal Guidance (TAG)
- local traffic models, including models of the A47/B1140 junction and Northern South Walsham Road Junction have been utilised to assess the Scheme's operational performance in the forecast year scenarios

4.2.7 Together these models have been used to evaluate current and future conditions along the A47 single carriageway section and the immediate surrounding road network. The strategic model has been used to provide the initial assessment of any strategic implications of the Scheme, as well as the basis for forecasting future year traffic demand matrices. The purpose of the local junction model is to examine the operational performance of the scheme on the A47 mainline, B1140 interchange slip road approaches as well the schemes A47\B1140 priority junctions.

4.2.8 The NATS model covers all strategic traffic movements across Broadland District and the wider Norwich area. 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.

4.2.9 The NATS model has been calibrated to represent a 2015 base year utilising the data collected as part of the Scheme assessment as well as South-east Regional Transport Model (SERTM) and mobile phone data. In order to complete a fully TAG compliant assessment of the Scheme, the existing NATS model was updated and recalibrated based on up to date survey data from 2019.

4.2.10 Key features of the NATS model include:

- AM and PM peak hours (08:00 to 09:00 and 17:00 to 18:00) and an IP average hour (10:00 to 16:00) time segments

- highway trip purposes comprised of 5 user groups: car employer business, car commute, car other, light goods vehicles (LGVs) and heavy goods vehicles (HGVs)

4.2.11 Overall, it is considered that the updated NATS base year model demonstrates a good representation of traffic behaviour in the scheme study area as well as the greater Norwich area. The model therefore provides a robust basis for the future year forecast assessment of the Scheme.

4.2.12 The traffic forecasts are dependent on household and employment growth, which were derived from both local and national growth forecasts. The local authority forecasts on development growth are derived from the uncertainty log which details the local authority development schemes in regions which are both nearby and significant to the model. This includes assumptions on local uncertainty, which is dependent on whether developments or other planned transport schemes close to the Scheme area are proposed. A core scenario is stated which represents the most unbiased and realistic set of assumptions which is a robust and evidence-based basis for decision-making. The forecasting approach involves creating initial reference case travel demand forecasts which reflect changes in car ownership, population, employment and other demographic and economic factors. However, traffic growth resulting from other sources, such as changes in generalised costs due to traffic conditions, are not included in the reference case forecasts. These impacts are evaluated through a variable demand model (VDM).

4.2.13 Based on this approach VDM is applied to derive the demand impacts of both the Do-Minimum (DM) as well as the Do-Something (DS)). The Do-Minimum represents a without Scheme scenario, it includes all the changes unrelated to the Scheme which are considered more than likely to be in place prior to the respective future year. The Do-Something scenario includes the Scheme.

4.2.14 The base and forecast years are as follows:

- 2015 Base Year
- 2025 Opening Year
- 2040 Design Year (15 years after opening)

4.2.15 In both the future year scenarios, 2025 and 2040, both a DM and a DS network scenario has been modelled. Hence the comparison of the Do-Minimum and a Do-Something provides the assessment of the Scheme's impacts in a given forecast year.

4.2.16 Details of the modelling are provided in Section 6 of the Transport Assessment (**TR010040/APP/7.3**).

## 4.3 Current Network Performance

4.3.1 In the current situation, assessed as part of the base year model, the single carriageway section of the A47 between Blofield and North Burlingham acts as a bottleneck, resulting in congestion and leading to longer and unreliable journey times.

4.3.2 Observed traffic data indicates that 2015 base year traffic flows are approaching the reasonable capacity limitations of this existing highway section. Average weekday traffic speeds on the single carriage way section drop to around 42-43

mph, which represents a 14% to 15% decrease from the speed limit.

4.3.3 Traffic modelling analysis indicates the Scheme section is operating just below the available capacity during the AM peak in the westbound direction (97%) and the PM peak (88%) in the eastbound direction. On average, vehicles experience around 1.2 to 1.4 mins of delay due to the traffic congestion along the A47 single carriageway mainline link between High Noon Lane and South Walsham Road. (Table 7-4 in the Transport Assessment **(TR010040/APP/7.3)**).

## 4.4 Future Network Performance

### Forecasted 2040 Traffic Growth

4.4.1 In 2040, without the Scheme, along the A47 mainline, traffic would increase by around 37% in both the AM and PM peaks in the westbound direction. Eastbound, traffic would increase by 48% in the AM peak and 33% in the PM peak. (Table 7-5 in the Transport Assessment **(TR010040/APP/7.3)**).

4.4.2 The increase in traffic flows along the A47 correlates with an increase in delays and V/C ratios. Delays along the A47 are forecasted to increase by approximately 0.7 to 3.0 mins without the Scheme. Furthermore, the deterioration in V/C ratio from 97% to 105% AM peak and from 73% to 99% PM peak west bound and from 68% to 101% AM peak and from 88% to 101% PM peak east bound indicates that the link is operating over the advisable capacity in both directions in both periods. (Table 7-6 in the Transport Assessment **(TR010040/APP/7.3)**).

4.4.3 The journey time results along the A47 between Beighton Road and Yarmouth Road indicate that traffic growth from 2015 to 2040 will cause journey times to deteriorate by 32% AM peak and 16% PM peak westbound (ie. from 5.0 to 6.6 mins AM peak and 4.4 to 5.1 mins PM peak). Eastbound, journey times will deteriorate by 29% AM peak and 15% PM peak (ie. From 4.2 to 5.4 mins AM peak and 4.7 to 5.4 mins PM peak) (Table 7-7 in the Transport Assessment **(TR010040/APP/7.3)**).

4.4.4 Along the A47 between Acle Roundabout and Brundall Roundabout journey traffic growth from 2015 to 2040 will cause journey times to deteriorate by 28% AM peak and 25% PM peak westbound (ie. from 7.4 to 9.5 mins AM peak and 6.8 to 8.5 mins PM peak). Eastbound, journey times will deteriorate by 17% AM peak and 10% PM peak (ie. From 6.5 to 7.6 mins AM peak and 7.0 to 7.7 mins PM peak) (Table 7-7 in the Transport Assessment **(TR010040/APP/7.3)**).

### The Impact of the Scheme on Traffic Conditions

4.4.5 Table 7-10 of the Transport Assessment **(TR010040/APP/7.3)** shows the comparative journey times between the Do-Something and Do-Minimum scenarios in both 2025 and 2040. In 2040, for the Beighton Road to Yarmouth Road stretch, with the Scheme, travel times would improve from 5.0 to 2.9 mins in the AM peak westbound and from 4.2 to 2.8 mins eastbound. In the PM peak they would improve from 4.4 to 2.8 mins westbound and from 4.7 to 2.8 eastbound. This equates to between 45% to 56% time saving depending on direction and time period.

4.4.6 In 2040, for the Acle Roundabout and Brundall Roundabout, with the Scheme, travel times would change from 7.4 to 7.5 mins in the AM peak westbound and from 6.5 to 5.0 mins eastbound. In the PM peak they would improve from 6.8 to

6.5 mins westbound and from 7.0 to 5.1 eastbound. This equates to 21% to 34% time saving depending on direction and time period.

4.4.7 Overall, across all assessed routes the Do-Something journey times are reduced to levels either comparable or below the 2015 base year model. These journey time savings are a result of upgrading the A47 to dual carriageway, as part of the Scheme improvements.

### The Impact of the Scheme on Walking and Cycling

4.4.8 The Scheme provides support to walking, cycling and vulnerable users by incorporating safe, convenient, accessible and attractive routes for pedestrians and cyclists to improve connectivity in areas local to the Scheme. Where the existing A47 is unaffected by the dualling, it is proposed to be de-trunked and serve as a local access road for residents. This will include a new combined footway/cycle. A new section of footway is also proposed on Yarmouth Road to connect to the existing footway and allow pedestrians to walk along Yarmouth Road to the allotment gardens. These new sections of infrastructure will provide improved connectivity between Blofield and North Burlingham for WCH. The Scheme also provides a new Public Right of Way (PRoW) footpath, to the south of the new A47 mainline, connecting from the Blofield Overbridge to the B1140 junction. This route connects with multiple existing north / south permissive routes and footpath Burlingham FP3. The results of the modelling assessment show that the traffic flows on the downgraded existing A47 road will be reduced as a result of the Scheme.

### The Impact of the Scheme on Accidents

4.4.9 From de-trunking the existing A47 alignment to local road status and the provision of new cycling and walking infrastructure the Scheme provides safety improvements for walking, cycling and other vulnerable users. It also improves safety along the A47 for road users by providing an upgraded dual carriageway alignment and an upgraded A47/B1140 interchange junction. In total, COBA-LT analysis indicates that, over a 60-year timeframe the improvements should save a total of 190 accidents and 29 KSIs (killed or seriously injured).

### The Impact of the Scheme on Network Resilience and Journey Time Reliability

4.4.10 The implementation of the Scheme will improve reliability and network resilience as dual carriageways are more reliable than single carriageways. Road capacity is increased, delays are shortened and accidents (and their impacts) are reduced, all of which contribute to improved reliability. In addition to this the Scheme provides additional route options, which avoid the A47, for traffic travelling between Blofield and North Burlingham as well as a grade separated junction for B1140 north-south traffic. This improves the resilience of the network and provides additional access for short distance local movements.

### Impact on Junctions, Queuing and Delay

4.4.11 The Scheme has been assessed and has been shown to have the following impact on the junctions:

4.4.12 A47 Mainline and A47/B1140 Junctions - Analysis shows that there is minimal delay on all merges and diverges. This indicates that in the 2040 design year the grade separated Scheme junction will operate satisfactorily. Furthermore, it can be

seen that the current design is suitable even during the British Sugar Plc peak season where there is a large increase in HGV demand.

4.4.13 Northern South Walsham Road Junction - Analysis of the Scheme junction performance indicates that all arms will operate well within the available capacity and that, on average, minimal delays of around 6 to 10s will be experienced even during the British Sugar Plc peak season where there is a large increase in HGV demand.

4.4.14 Acle: A1064/A47/New Road Roundabout - the Scheme's wider area impact results in an increase in traffic flow along the A47 and A1041 approach arms. This reduces the available capacity, and increases delays, for traffic accessing the roundabout from New Road. However, as there are low traffic flows along the New Road side-arm, the Scheme only has a minor impact on total delays at the junction. If a flow weighted average is taken across the delays of the junction, the Scheme's impact results in an increase in delay of approximately 0.1 to 0.2 minutes.

4.4.15 The A47/Brundall roundabout is located, approximately 1.5 kilometres to the west of Blofield village, outside of the Scheme boundary. The roundabout provides access to the A47 for the local village of Brundall via Cucumber Lane. In addition to this a retail park, including parking and a Shell garage, is located along Yarmouth Road. Following discussions with Norfolk County Council the traffic impacts of the Scheme on the Brundall roundabout have been assessed using the NATS model for the base year and the future year 2025 and 2040 scenarios.

4.4.16 Vehicles already experience congestion on the A47 between Acle Roundabout and Brundall Roundabout (2015 base year). Westbound AM peak 7.4 mins and eastbound PM peak 7.0 mins. Without the Scheme, in 2040, the westbound AM peak increases to 9.5 mins and the eastbound PM peak to 7.7 mins.

4.4.17 With the Scheme, (compared to without the Scheme), journey times decrease by around 2.0 mins in 2025 and 2.6 minutes in 2040.

4.4.18 Overall, across all assessed routes the Do-Something journey times are reduced to levels either comparable or below the 2015 base year model. These journey time savings are a result of upgrading the A47 alignment to dual carriageway, as part of the Scheme improvements.

### Impact of the Scheme on Public Transport

4.4.19 There are no proposed alterations to rail public transport services as part of the Scheme, therefore any impacts are judged to be insignificant.

4.4.20 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.

### Impact of the Scheme on the Local Road Network

4.4.21 The results of the NATs model indicate that the Scheme causes a relatively minor impact on traffic flows across the local road network. In general terms, the Scheme's impact causes local road traffic flow increases in the range of 10-250 passenger car units. This analysis shows that the change in traffic flow, brought about by the Scheme, has a negligible impact on the delays across the local road network which will have minimal impact on its operational performance.

## 4.5 Walking, Riding and Horse-riders (WCHR) Assessment

4.5.1 A Walking, Cycling, Riding and Horse-riding (WCHR) assessment has been undertaken in line with Document GG 142 of the Design Manual for Roads and Bridges (DMRB) which sets out the walking, cycling and horse-riding assessment and review (WCHR) process for highway schemes on motorways and all-purpose trunk roads. The outcome is set out in Section 12.10 of ES Chapter 12 Population and Human Health (**TR010040/APP/6.1**).

### Baseline Conditions

4.5.2 The Scheme fits within the definition of a large scheme as given in Table 2.2.1N of GG 142, “New motorway or all-purpose trunk road construction or major modification of an existing trunk road or motorway junction”.

4.5.3 Due to the high traffic volumes which it currently carries, the existing A47 acts as a barrier for walkers, cyclists and equestrians. There are currently no formal WCHR crossing points on the A47 between Acle and Blofield.

4.5.4 The following pedestrian facilities currently exist:

- a footway approximately 1.8 metres wide is provided on the northern frontage of the existing A47 between its junction with Dell Corner Lane and a point 80 metres in a westerly direction (towards the Old Post Office)
- a footway approximately 1.8m wide is provided on the northern frontage of the existing A47 between its junction with Dell Corner Lane and Main Road, a distance of 230 metres in an easterly direction
- a further section of footway approximately 1.8m wide is provided on the northern frontage of the existing A47 at a point 50m west of its junction with The Windle for 1.32km to the junction of Norwich Road via the eastbound off-slip for Acle, Reedham and Upton

4.5.5 There are a number of Public Rights of Way (PRoW) in the vicinity of the Scheme which have been identified using Norfolk County Council’s interactive PRoW mapping tool. The detailed descriptions of the routes are taken from the Definitive Statements which accompany the Definitive PRoW Map.

4.5.6 The locations of the PRoW are shown in Figure 4.1 with the routes described in Table 4.1.

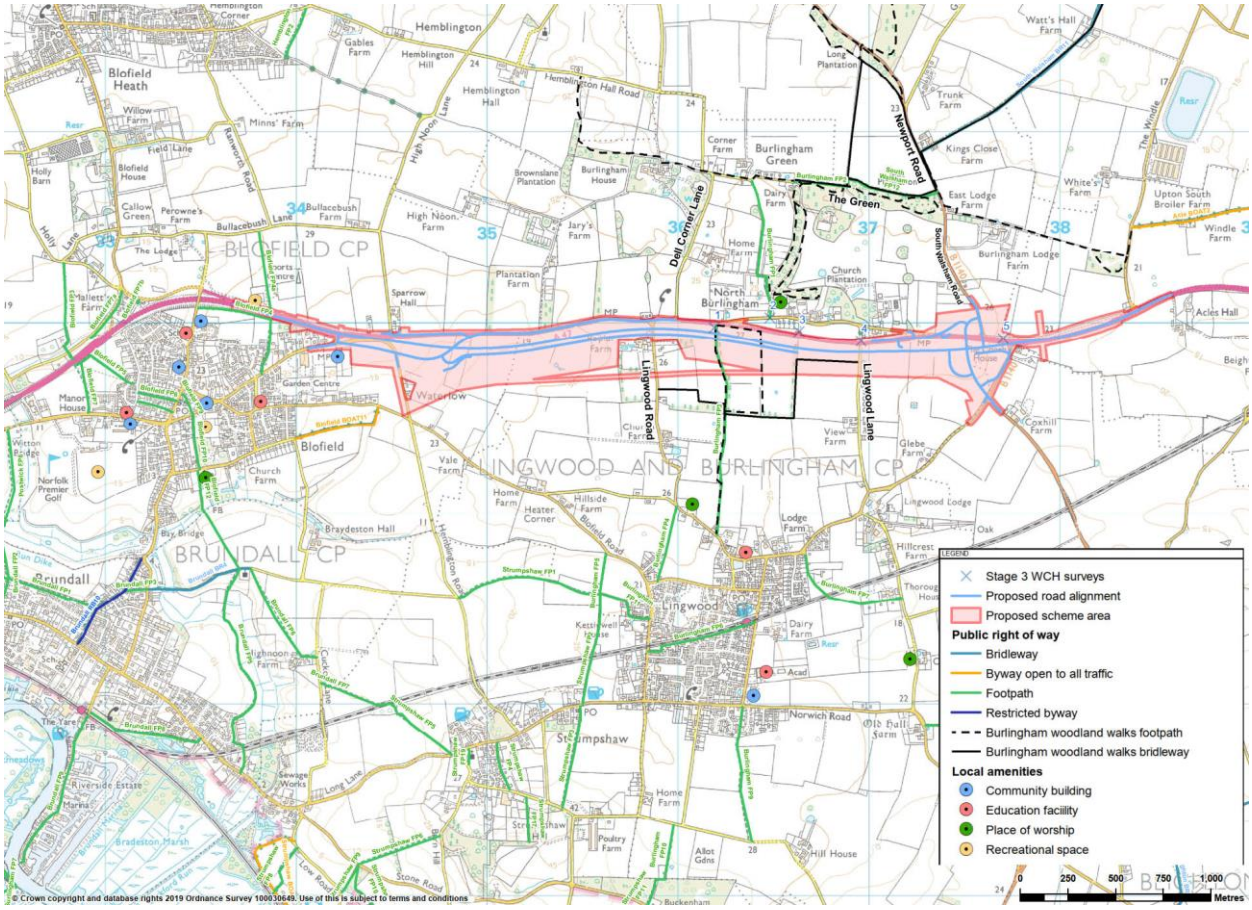



Figure 4.1: Location of PRoW and permissive routes

Table 4.1: PRoW in the Vicinity of the Scheme

| Reference | PRoW Name | Description |
|---|---|---|
| 1 | Blofield FP4 | "Footpath No. 4 (Norwich – Yarmouth Road to Plantation Road). Starts from the former Norwich-Yarmouth Road immediately to the west of Turret House and runs in a north north-easterly direction for a short distance, then turns northwards and continues to the south side of the Blofield Bypass, a distance of approximately 290 metres. It then runs mainly westwards to join Plantation Road." |
| 2 | Blofield FP4A | "Footpath No. 4A Starts on the north side of the Blofield Bypass and runs northwards to join Bullacebush Lane." |
| 3 | Blofield (BOAT) 11 | "Byway Open to All Traffic No. 11 (Pound Lane). Starts from Pound Lane at the point where Pound Lane turns southwards into Braydeston Hall Road. It leads in a generally easterly direction from some 420 metres then turns east of north from 94 metres to enter Lingwood Road slightly east of a property call Red Tiles. The total length of the route is 514 metres." |

| Reference | PRoW Name | Description |
|---|---|---|
| 4 | Burlingham FP1 | "Footpath No.1 (Burlingham Green to Norwich-Yarmouth Road). Starts from the public highway at Burlingham Green and runs southwards to a point north west of St Andrew's Church and then turns eastwards for a short distance then southwards again to enter the Norwich-Yarmouth Road at North Burlingham." |
| 5 | Burlingham FP2 | "Footpath No. 2 (Burlingham Green to Parish Boundary). Starts from the public highway at Burlingham Green by a field gate opposite Dairy Farm and runs in an easterly direction to the parish boundary where it joins South Walsham Footpath No. 12." |
| 6 | Burlingham FP3 | "Footpath No.3 (Norwich-Yarmouth Road to Lingwood Church Road). Starts from the Norwich-Yarmouth Road by a stile and runs in a southerly direction to enter Lingwood Church Road by a stile." |
| 7 | South Walsham FP12 | "Footpath No. 12 (North Burlingham Road to Parish Boundary). Starts from North Burlingham Road and runs in a westerly direction to enter Green Lane then turns southwards along Green Lane to the parish boundary where it joins Burlingham Footpath No. 2." |

4.5.7 In addition to the PRoW, a number permissive paths and bridleways are also located in the vicinity of the Scheme and have been identified from the Map of Burlingham Woodland Walks, a network of local leisure routes in the vicinity of North Burlingham. These are also shown in Figure 4.1 as a dashed black line for permissive footpaths and a solid black line for permissive bridleways. .

*Walking, cycling and horse-riding (WCHR) surveys*

4.5.8 Walking, cycling and horse-riding (WCHR) surveys were undertaken at the informal crossing points on the A47, indicated with a blue 'X' in Figure 4.1. WCHR surveys were also undertaken at the junction of Main Road with Burlingham FP1 and at the junctions of the A47 with the B1140 and South Walsham Road, also is indicated with a blue 'X' in Figure 4.1.

4.5.9 The surveys were carried out between 7am and 7pm for 9 consecutive days between Saturday 26 May and Sunday 3 June 2018 using CCTV video cameras. In the main, the weather during the surveys was dry and bright.

4.5.10 The surveys recorded very low usage of Burlingham FP3 and the connecting permissive footpath on all weekdays and at the weekends and very few crossing movements of the A47 were observed. A maximum two-way flow over the 12hr survey period of less than five users was recorded using both routes in a weekday with only three users crossing the A47. A similar situation was observed during the Saturday survey periods whereas during the Sunday survey periods, a maximum two-way flow of 10 users was recorded using Burlingham FP3, the majority of which crossed the A47. All the recorded users were either lone pedestrians or dog

walkers.

4.5.11 No users were observed crossing the A47 between the field access and the permissive footpath on any of the survey days.

4.5.12 A maximum two-way flow over the 12hr survey period of six users was recorded using the permissive bridleway on each survey day and these users were either lone pedestrians or dog walkers.

4.5.13 A maximum two-way flow over the 12hr survey period of five users was recorded crossing the A47 between Lingwood Lane and the short length of road leading to the centre of North Burlingham. On the weekdays, only pedestrians crossed the A47.

4.5.14 Burlingham FP1 runs north to south from Main Road to the north of North Burlingham. The surveys recorded frequent usage on weekdays and at weekends, especially Sunday. A maximum two-way flow over the 12hr survey period of around 70 users was observed on a weekday whereas the maximum flow on a Sunday was around 90 users. Only around 20 users were observed using the route on a Saturday. Based on the results for the various count points it can be deduced that very few or indeed none of the users of Burlingham FP1 continue on the footway of Main Road in either direction to access and cross the A47. This is not a surprising result given that one of the recommended starting points for accessing the Burlingham Woodland Walks is the St Andrew and St Peter's Church car park located just off Main Road in North Burlingham and the vast majority of the walking routes lie to the north of North Burlingham and the existing A47.

4.5.15 The low numbers of users observed crossing the A47 may, in part, reflect the severance effect of the A47.

4.5.16 Very few movements were recorded at the junctions of the A47 with the B1140 and South Walsham Road on each of the survey days. The only crossing movements of the A47 to access the side roads were undertaken by cyclists with a maximum two-way flow over the 12hr survey period of nine users and this was observed on a Saturday.

### Changes caused by the Scheme

4.5.17 The Scheme would result in

- severance of the PRoW Burlingham FP3 at its northern end to accommodate the new A47 alignment. This will prevent users crossing the new A47 at this location to access North Burlingham
- loss of northern sections of the permissive routes which form circular routes that currently run immediately south of the existing A47 alignment from PRoW Burlingham FP3.

4.5.18 The proposed improvements are shown in Figure 4.2 and comprise:

- a new section of footway is proposed on Yarmouth Road to connect to the existing footway and allow pedestrians to walk along Yarmouth Road to the allotment gardens
- where the existing A47 is unaffected by the dualling, it is proposed to be de-trunked and serve as a local access road for residents. This will include a new combined footway/cycleway adjacent to the eastbound carriageway

connecting Yarmouth Road at Blofield to the existing footway, which commences at the Dell Corner Lane junction via the Blofield Overbridge. This route will provide a link between Blofield and North Burlingham for pedestrians and cyclists.

- a new PRoW consisting of an unbound footpath running east to west:
  - adjacent to the proposed agricultural access track passing Lingwood Road to FP3
  - adjacent to the agricultural access track and then the maintenance track from FP3 to permissive Burlingham Woodland Walks
  - adjacent to the existing Burlingham Trails Network (bridleway) to Lingwood Lane with a short diversion of approximately 50m round the proposed soakaway
  - a new footpath from Lingwood Lane to the B1140
- new footway/cycleway crossing facilities to be provided as part of the proposed grade separated interchange allowing safe crossing of the new A47 for pedestrians and cyclists between South Walsham Road and the B1140. The new provision will also include a footway/cycleway link into North Burlingham via the existing A47 (to be downgraded) and Main Road.

4.5.19 No improvements to existing horse-riding facilities are proposed due to the limited activity in the area of the Scheme.

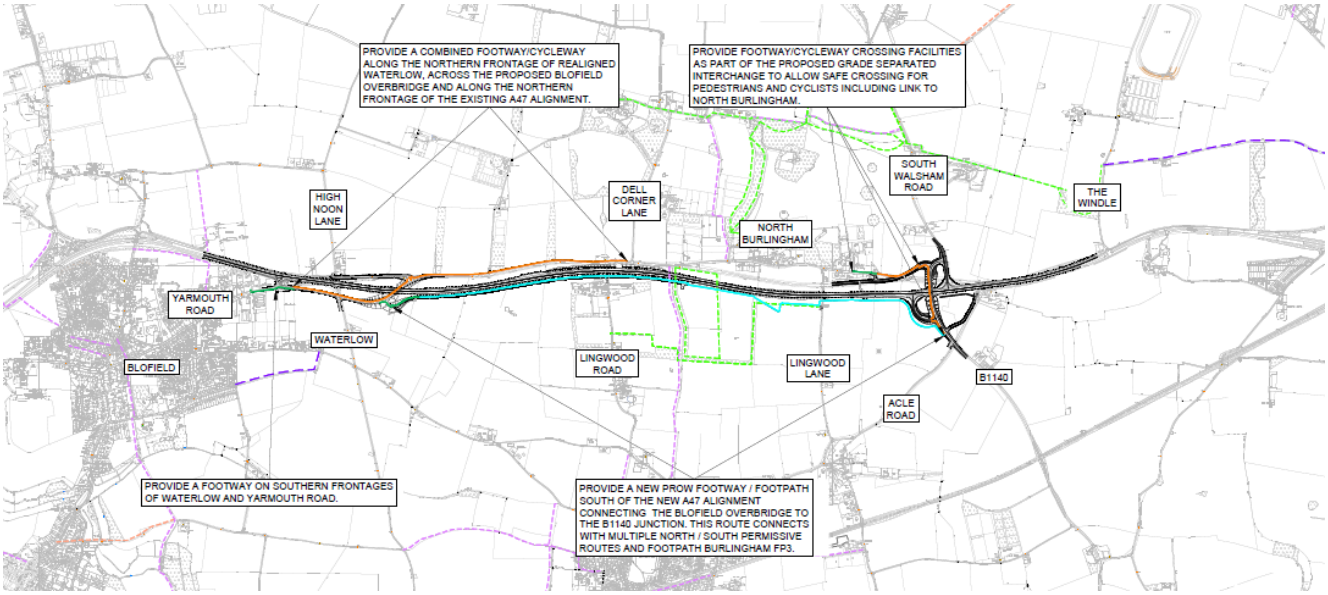



Figure 4.2: Proposed improvements to walking and cycling provision (Extract from ES Figure 12.2)

4.5.20 The resultant network of local highway connections and the facilities to be provided by the Scheme will support walking and cycling by incorporating safe, convenient, accessible and attractive routes for pedestrians and cyclists.

4.5.21 The addition of a safe crossing of the new A47 facilitated by a connection across the Blofield Overbridge to the west, and an additional crossing across the B1140 Overbridge to the east was added in response to consultation feedback during the Statutory Consultation in 2018.

4.5.22 Highways England is committed to continuing to work with Norfolk County Council (NCC) and have been in regular contact with officers to discuss the Scheme's progress and will continue further dialogue on the proposed WCHR facilities in the area.

4.5.23 During the Scheme's development, feedback has been provided by NCC with regard to the provision of a pedestrian overbridge as part of the Scheme, to seek to maintain the north-south route of the existing FP3 between Lingwood and the existing A47 at a point south of North Burlingham. The assessment concludes that there are a very low number of people in the area using the existing FP3 as outlined in paragraph 4.5.11. Even allowing for the proposed development planned in the area the number of users are unlikely to increase materially. It has therefore been concluded that the provision of a separate WCHR bridge would not be appropriate and pedestrians will instead be routed east to the new Blofield Overbridge.

## 4.6 Transport Assessment Summary

4.6.1 The Scheme fulfils its objectives by providing additional capacity, relieving congestion, improving journey times and reliability as well as network resilience.

4.6.2 The modelling analysis indicates that forecasted local and regional traffic growth will cause the A47 single carriageway section to be over capacity. This will in turn create a significant increase in delays along the section. The Scheme, however, provides the required capacity improvements to allow for the forecasted traffic growth.

4.6.3 Furthermore, the Scheme provides additional infrastructure which helps walking, cycling and other vulnerable users as well as reducing the predicted accident rates along the A47 corridor and surrounding network. The Transport Assessment should also be reviewed as this section provides only a short summary on the Scheme's relationship with the existing road network and its users. Additionally, further information on the Scheme's environmental and economic impacts can be found in the Environmental Statement **(TR010040/APP/6.1)** and Section 5 of this Case for the Scheme respectively.

4.6.4 In summary it is considered that the Scheme achieves the following objectives:

- provides additional capacity and improved journey times to encourage economic growth in the local area as well as across the A47 corridor between Great Yarmouth and Norwich
- improves safety operational issues by upgrading to dual carriageway and providing a grade separated junction for the B1140
- operational modelling shows traffic operating with minimal delays in approximate free-flow condition supporting a smooth flow of traffic

- road traffic congestion is significantly reduced, with journey times reducing in the 2040 Do-Something scenario to be equivalent to or better than 2015
- improved opportunities for cycling, walking and vulnerable users by providing new cycling and walking infrastructure as well as downgrading the existing A47 alignment to a local road status.

# 5 ECONOMIC CASE OVERVIEW

## 5.1 Introduction

5.1.1 This chapter outlines the economic assessment of the Scheme. It presents the expected benefits and disbenefits associated with the Scheme and sets out overall value for money. It estimates its economic worth, by comparing the benefits to users against the costs of procurement. It does this by comparing the economic costs and benefits of the Scheme against the equivalent costs and benefits without the Scheme.

## 5.2 Overview of Economic Assessment and Methodology Used

5.2.1 The economic assessment has been based on a 60-year appraisal period in accordance with DfT guidelines. A Benefit to Cost Ratio (BCR) is calculated from the economic assessment by comparing the Scheme cost to the benefits of the Scheme over this period.

5.2.2 As stated in the DfT's Value for Money Framework, the benefits appraised for the Scheme have been categorised as:

- established monetised impacts
- evolving monetised impacts
- indicative monetised impacts
- non-monetised impacts.

5.2.3 The benefits of the Scheme are calculated from a number of sources, including:

- user benefits during normal operation (savings relating to travel times and VOC) have been assessed using Transport User Benefit Appraisal (TUBA)
- user disbenefits during construction have also been assessed using TUBA
- accident savings have been forecast using Cost and Benefit to Accidents – Light Touch (COBA-LT).

5.2.4 In addition, monetised estimates have been made of the greenhouse gas, air quality and noise impacts and supplementary assessments have been undertaken to quantify benefits due to Journey Time Reliability (JTR) and Wider Economic Impacts (WEIs).

5.2.5 Qualitative and quantitative assessments on the social and distributional impacts resulting from the Scheme has also been carried out in full.

5.2.6 The costs of the Scheme used in the assessment comprise construction costs provided by the Highways England Commercial team.

5.2.7 Maintenance costs were taken from the July 2019 Cost and Benefit Analysis (COBA) manual default values.

5.2.8 The main economic assumptions are based on the May 2019 Transport Appraisal Guidance (TAG) Databook, which at the time of writing was the latest version.

5.2.9 In line with DfT recommendations and uncertainty of forecasting the future, scenario analysis has been undertaken supplemented with sensitivity tests. The economic appraisal has been undertaken for the core scenario as this is viewed

as the 'most likely' future scenario.

5.2.10 Two sensitivity tests were undertaken, considering changes to traffic growth and uncertainty of assumptions, as agreed with Highways England.

5.2.11 All benefits and costs were calculated in monetary terms and were expressed as present values (PV) in discounted 2010 prices. This enables direct economic comparison with other schemes which may have very different timescales.

5.2.12 The key components that make up the assessment are:

**Benefits:**

- Transport Network Impacts
  - Travel time savings
  - vehicle operating costs
  - Changes in indirect taxation
  - Accident savings
  - Construction and maintenance
- Environmental Impacts
  - Greenhouse Gases
  - Air Quality
  - Noise

**Costs**

- Scheme Costs
  - Construction Costs
  - Land Cost
  - Preparation Cost
  - Supervision Cost
  - Operating and Maintenance Cost

## 5.3 Economic Assessment Results

5.3.1 Overall, the Scheme is forecast to produce user benefits of £109.9 million (PV) over the 60-year appraisal period. These benefits comprise of travel time savings of £116.4 million with vehicle operating cost disbenefits of -£8.2 million. As the Scheme generates reductions in congestion greater time benefits are experienced although this may result in greater fuel consumption due to improvements in traffic flow rates.

5.3.2 The Scheme results in an overall reduction of fatal, serious and slight accidents and casualties. The monetary savings in terms of accidents is approximately £8.5 million over the 60-year appraisal period.

5.3.3 Construction of the Scheme generates minimal disbenefits. The impact estimated in monetary terms amounts to -£0.4 million, suggesting that the temporary traffic management solutions are expected to keep disruption to a minimum.

5.3.4 Greenhouse gas disbenefits over the 60-year appraisal period have been calculated to total -£5.6 million.

5.3.5 Air quality disbenefits have also been calculated over the 60-year appraisal period and amount to -£3.8 million.

5.3.6 The impact on noise as a result of the Scheme is also anticipated to be negative. The PV of noise benefits over 60 years is -£1.1 million.

5.3.7 Journey Time Reliability (JTR) impacts were calculated for the Scheme. Dual carriageway sections are usually more reliable than single carriageway sections and as a result, the Scheme generates JTR benefits of £3.3 million. It should be noted that these benefits are only incorporated in the level 2 BCR.

5.3.8 The monetised value for the total wider economic impacts is about £40.6 million, with the majority of these benefits being 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.

### Social Impacts Summary

5.3.9 The Social Impacts (SI)[18] of the Scheme have been assessed, either quantitatively or qualitatively. SIs include the impacts on accidents, physical activity, security, severance, journey quality, option and non-use values, accessibility and personal affordability. These are defined as follows:

- accidents - new transport schemes may result in an increase or decrease in the risk of individuals being killed or injured in an accident, for both users and non-users of transport. The Scheme is anticipated to alter the volume of traffic on the A47 and surrounding SRN and hence the number and type of accidents
- physical activity - transport provision can affect levels of physical activity. The British Medical Association notes that there is an interrelation between transport, the environment and health
- security - transport interventions can impact upon the personal security of transport users or other people. The principal security impacts on road users relate to situations where they are required to leave their vehicle or where they are forced to stop or travel at low speeds
- severance - community severance is defined as the separation of residents from facilities and services they use within their community caused by substantial changes in transport infrastructure or by changes in traffic flows
- journey quality - a measure of the real and perceived physical and social environment experience while travelling. A poor journey quality may dissuade users from using particular modes of transport; whereas interventions that improve journey quality may lead to a choice of an alternative mode

[18] Social impacts (SIs) cover the human experience of the transport system and its impact on social factors that are not considered as part of economic or environmental impacts.

- option and non-use values are assessed when a scheme includes measures that will substantially change the availability of transport services within the study area

- accessibility reflects the range of opportunities and choices people have in connecting with jobs, services and family and friends. The level of access will depend on where people choose to live, where services are located and the availability of 'home delivery' of goods or services

- personal affordability – the monetary costs of travel can be a major barrier to mobility for certain groups of people, with particularly acute effects on their ability to access key destinations.

5.3.10 Table 5.1 provides a concise summary of the findings and results of the Social Impacts Appraisal undertaken for each indicator.

Table 5.1: Social Impacts Summary

| Indicator | Assessment | Conclusion |
|---|---|---|
| Accidents | £8 million in benefits are generated through accident savings. Analysis indicates that, over a 60-year timeframe the improvements should save a total of 190 accidents and 29 KSIs (killed or seriously injured). | Moderate beneficial |
| Security | Site perimeters, entrances and exits, and landscaping are assessed as having a high importance and moderate beneficial impact. All other indicators are of lesser importance and have a neutral impact. | Moderate beneficial |
| Journey quality | The majority of journey quality impacts are related to public transport and so have been assessed as neutral. Traveller's frustration and traveller's fear of potential accidents have been assessed as moderate beneficial due to their impact on car users. | Slight beneficial |
| Physical activity | The Scheme is an inter-urban road scheme and so is not anticipated to impact active mode provision, nor discourage the use of active modes. Therefore, the impact on physical activity will be negligible. | Neutral |
| Option and non-use values | Public transport is not affected by the Scheme, therefore there is no significant impact on option and non-use values. | Neutral |
| Accessibility | The Scheme is not anticipated to impact on the level of accessibility for any particular social group to access the services they require. Changes in the cost or provision of public transport will not result from the Scheme. | Neutral |
| Severance | There is a large positive impact on a significant proportion of the population's ability to access places of | Slight adverse |

| | | |
|---|---|---|
| | worship. This is slightly outweighed by the negative impact on severance associated with accessing medical, education and leisure facilities. | |
| Personal affordability | All sectors within the study area generate disbenefits in personal affordability in relation to their population proportion. Only 15% of the population experience large disbenefits, with the rest experiencing slight disbenefits. | Slight adverse |

## Distributional Impacts Summary

5.3.11 The Distributional Impacts (DI) of the Scheme have also been assessed. Distributional impacts consider how the impacts of a proposed scheme vary across different social groups.

5.3.12 The DI have been assessed, either quantitatively or qualitatively, for user benefits, noise, air quality, accidents, security, severance and personal affordability. These are defined as follows:

- noise and air quality – noise and air quality impacts are likely to occur where a proposed scheme results in changes to traffic flows or speeds or where the physical gap between people and traffic is altered. The Scheme includes changes to the network road alignment, traffic flows and speeds

- accidents - any change to the road network can affect the number of accidents that occur. Groups that are particularly vulnerable to increases in risk of accidents include children, the elderly, young males and motorcyclists. There is also a strong link between deprivation and road accidents

- security – there are potential impacts (in personal security terms) from making changes to the transport system and these can raise specific concerns for women, young people, older people, people with disabilities and black and minority ethnic communities

- severance – consideration is given to how groups such as children, people without access to a car, older people, people with disabilities and parents with pushchairs are impacted by severance. These groups often experience longer journey times or are often required to use pedestrian routes that are inappropriate and difficult to use

- accessibility - public transport accessibility for different groups to access employment, services and social networks. The Scheme itself is not expected to have any significant impacts on public transport accessibility so this was scoped out of the assessment

- personal affordability - changes in transport costs could have disproportionate impacts on vulnerable groups due to their reliance on available, accessible and affordable transport options.

5.3.13 The distributional impacts can be summarised as:

- user benefits - moderate beneficial. The overall spread of the benefits is evenly distributed across the different ID areas that have been identified in the study area; with a large proportion of the benefits being given to the medium income groups (income decile 6)

- severance – moderate beneficial. There is a large proportion of older people that will be positively affected by the Scheme. Due to the increased capacity of the A47 mainline and the reduced traffic levels on the local road network, the elderly are 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

- security – slight beneficial. All vulnerable groups and users will experience benefits as a result of improved site perimeters, entrances, exits and landscaping. The spread of benefits is good, meaning that no particular group or users is adversely affected

- accidents – neutral. All the vulnerable groups and users considered will see no significant change in the expected number of accidents. All vulnerable groups experience changes in accidents / casualties, but this is still only a small proportion of the total assessed

- personal affordability –slight adverse. All sectors within the study area generate disbenefits in personal affordability in relation to their population proportion. Only 15% of the population experience large disbenefits, with the rest experiencing slight disbenefits

- noise – slight adverse. IMD[19] deciles 5, 6, 9 and 10 are expected to be adversely impacted due to there being a greater number of receptors with deteriorating noise levels. IMD deciles 3, 4, 7 and 8 have more receptors with improved noise however the total number of these receptors is minor in comparison. Noise changes at schools, care homes and day centres are also expected to deteriorate

- air quality – slight adverse. Most income deciles (all apart from IMD 4) within the AQ DI assessment experience worsening air quality as a result of the

[19] Index of Multiple Deprivation

Scheme. The more deprived income deciles experience air quality disbenefits. Schools in the study area also experience air quality disbenefits, where many are located within deprived income deciles.

## 5.4 Economic Assessment Summary

5.4.1 As can be seen in Table 5.3, the level 1 benefits for the Scheme generate a Present Value Benefit (PVB) of £109.9 million.

5.4.2 The total Scheme costs are £46.4 million (PV) with an assumption that none of the costs will be funded from developer contributions. The construction cost figure was correct at the time of compiling this report and may be refined as the detailed design progresses. Any significant changes in cost may require the BCR calculations to be reviewed.

5.4.3 With consideration of the effects of delays during construction, accident benefits, indirect taxation benefits, monetised environmental impacts and maintenance costs, the Scheme represents “High” Value for Money (VfM) with an initial Benefit to Cost Ratio (BCR) of 2.4.

5.4.4 The Scheme is also forecast to generate wider economic impacts and journey time reliability benefits. The value for the total wider economic impacts is about £40.6 million, whilst for journey time reliability it is £3.3 million.

5.4.5 Inclusion of journey time reliability benefits and wider economic impacts gives an adjusted BCR of 3.3. This represents “High” VfM.

5.4.6 The results of the economic appraisal for the Scheme are summarised in Table 5.3 which includes the results of the appraisal of the core scenario.

Table 5.3: Summary of economic assessment results – Core scenario, £ millions

| | | | Costs / Benefits |
|---|---|---|---|
| | | | Core |
| **Benefits** | Consumer Commuting User Benefits | Travel Time | £24.13 |
| | | Vehicle Operating Cost | -£1.21 |
| | | Construction Delays | -£0.11 |
| | | **Net Consumer User Benefits** | **£22.80** |
| | Consumer Other User Benefits | Travel Time | £41.70 |
| | | Vehicle Operating Cost | -£7.58 |
| | | Construction Delays | -£0.20 |
| | | **Net Consumer User Benefits** | **£33.92** |
| | Consumer Business User Benefits | Travel Time | £50.58 |
| | | Vehicle Operating Cost | £0.61 |
| | | Construction Delays | -£0.11 |
| | | **Net Business User Benefits** | **£51.08** |
| | Accidents Benefits | | £8.47 |
| | Indirect Tax Revenues | | £4.08 |
| | Noise | | -£1.11 |
| | Air Quality | | -£3.76 |
| | Greenhouse Gases (Carbon) | | -£5.61 |
| | **Total Level 1 Present Value Benefit** | | **£109.90** |
| **Costs** | Operating and Maintenance Costs | | £0.17 |
| | Investment Costs (including capital costs of Maintenance) | | £46.19 |
| | **Total Present Value Cost** | | **£46.36** |
| **Level 1 Net Present Value** | | | **£63.53** |
| **Level 1 BCR** | | | **2.4** |
| | | | |
| **Benefits Level 2** | Journey Time Reliability | | £3.34 |
| | Wider Economic Benefits | | £40.61 |
| | **Total Level 2 Present Value Benefit** | | **£43.95** |
| **Adjusted Present Value Benefit (Level 1 + Level 2)** | | | **£153.84** |
| **Costs** | **Total Present Value Cost** | | **£46.36** |
| **Adjusted Net Present Value (Level 1 + Level 2)** | | | **£107.48** |
| **Adjusted BCR (Level 1 + Level 2)** | | | **3.3** |

# 6 CONFORMITY WITH PLANNING POLICY AND TRANSPORT PLANS

## 6.1 Policy Context

6.1.1 This chapter provides an overview of the Scheme's compliance with national planning policy and infrastructure delivery strategies and plans.

6.1.2 As set out by the PA 2008, the primary policy consideration for a NSIP highway scheme is the NNNPS (designated on 14 January 2015). Section 104 of the PA 2008 requires the SoS to determine an application for an NSIP in accordance with a relevant NPS except in a limited number of specified circumstances.

6.1.3 In addition to the NNNPS, there are other key policy documents that may also be important and relevant matters to which the SoS will have regard. These are set out throughout this chapter, as they demonstrate the Government's continued commitment to invest in the SRN.

6.1.4 These include the following:

- National Planning Policy Framework
- National Infrastructure Delivery Plan 2016-20216
- Road Investment Strategy 2015 - 2020 (RIS1) and 2020 – 2025 (RIS2).

6.1.5 The chapter also provides an overview of the Scheme's compliance with the National Planning Policy Framework (2019) and other relevant sub regional and local planning policies.

## 6.2 National Policy

### National Networks National Policy Statement (January 2015)

6.2.1 National Policy Statements are produced by the relevant government body and provide policy on specific aspects of national infrastructure. They clarify how the infrastructure:

- contributes to sustainable development
- takes account of the mitigation of, and adaptation to, climate change
- demonstrates how objectives have been integrated with other government policies
- details how actual and projected capacity and demand have been taken into account
- considers relevant issues in relation to safety or technology
- looks at circumstances where it would be particularly important to address the adverse impacts of development.

6.2.2 On 14 January 2015, the government designated the NNNPS. This statement sets out the Government's vision and policy specifically regarding the strategic road and rail network.

6.2.3 As the Scheme meets the criteria for a NSIP and will be subject to the DCO process the application will be judged primarily against the NNNPS, according to the

decision-making framework set out in the Planning Act 2008.

6.2.4 The NNNPS sets out the need for NSIPs on the national road and rail networks in England, and the Government's policy to deliver these projects. The National Policy Statements supplement the National Planning Policy Framework. NNNPS sits alongside RIS1.

6.2.5 Paragraph 1.2 of the NNNPS states that:

6.2.6 "*The Secretary of State will use this NPS as the primary basis for making decisions on development consent applications for national networks nationally significant infrastructure projects in England. Under section 104 of the Planning Act the Secretary of State must decide an application for a national networks nationally significant infrastructure project in accordance with this NPS unless he / she is satisfied that to do so would:*

- *Lead to the UK being in breach of its international obligations;*
- *Be unlawful;*
- *Lead to the Secretary of State being in breach of any duty imposed by or under any legislation;*
- *Result in adverse impacts of the development outweighing its benefits; or*
- *Be contrary to legislation about how the decisions are to be taken*".

6.2.7 The NNNPS is not scheme specific and does not set out a programme of road schemes, but instead deals with road and rail networks and strategic rail freight interchanges. It also sets out the principles by which applications for road and rail schemes should be assessed.

6.2.8 Section 2 of the NNNPS sets out the need for development of the national networks, the Government's policy and strategic vision and objectives.

6.2.9 Paragraph 2.2 of the NNNPS states that: "*There is a critical need to improve the national networks to address road congestion and crowding on 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*".

6.2.10 Paragraph 2.10 states that the Government has concluded that, at a strategic level there is a compelling need for development of the national networks. It further states that the Examining Authority and the Secretary of State should start their assessment of applications for infrastructure covered by the NNNPS on that basis.

6.2.11 There is an assumption within NNNPS that significant improvements to the road network will be necessary in order to support the Government's vision for the national networks. Paragraph 2.21 sets out a range of alternatives to major improvements to the network including Maintenance and Asset Management, Demand Management and Modal Shift. However, it is concluded that at a strategic level there is a compelling need for development of the national road network.

6.2.12 Paragraph 2.22 states that without improving the road network, including its performance, it will be difficult to support further economic development and this will impede economic growth and reduce people's quality of life. The Government has therefore concluded that, at a strategic level, there is a compelling need for development of the national road network.

6.2.13 The Scheme comprises an essential part of a wider package of proposals for the A47 corridor to transform connectivity to and from the East of England, as described in the Roads Investment Strategy, the Transport Investment Strategy, the National Infrastructure Delivery Plan, and the Highways England Delivery Plan. The Scheme therefore helps to address the compelling and strategic need for development, identified in the NNNPS.

6.2.14 Compliance of the Scheme's objectives with the vision and strategic objectives, contained within Chapter 2 (page 9) of the NNNPS is set out in Chapter 3 above (Table 3.1).

6.2.15 Paragraph 3.1 of the NNNPS states that the need for development of the national networks, and the Government's policy for addressing that need, must be seen in the context of the Government's wider policies on economic performance, environment, safety, technology, sustainable transport and accessibility, as well as journey reliability and the experience of road users.

6.2.16 The Scheme directly addresses the Government's wider strategic policy objectives, whilst specifically addressing the historic problems in connectivity to the east. A description of these issues and the need for the Scheme is provided in Chapter 3. The Scheme fulfils this long-established need, and delivers benefits in terms of resolving local transport, economic, environmental and heritage concerns and the Government's recognised national commitment to improving the SRN.

6.2.17 The NNNPS states that the assessment of the Scheme should consider the balance of potential benefits and adverse impacts (paragraph 4.3). Benefits to be considered include the facilitation of economic development, job creation, housing and environmental improvement, and any longer-term or wider benefits. Assessment of adverse impacts should include longer-term and cumulative adverse impacts, as well as planned mitigation of these impacts.

6.2.18 The NNNPS requires environmental, safety, economic and social impacts to be considered at a national, regional and local level. The information provided will be proportionate to the development (paragraph 4.4). The Scheme has been subject to a Transport Assessment (**TR010040/APP/7.3**), Economic Assessment (included in Section 5) and the Environmental Statement (**TR010040/APP/6.1**).

6.2.19 Paragraph 4.27 of the NNNPS states that all projects should be subject to an options appraisal. The options appraisal should consider viable modal alternatives and may also consider other options.

6.2.20 The Scheme has been subject to a rigorous options appraisal process. A summary of the options considered and the appraisal process has been provided in Chapter 2 of this report. Further detail is provided in the Scheme Assessment Report[20].

6.2.21 Section 5 of NNNPS gives guidance for decision making relating to impacts on environment, habitat, landscape, accessibility and existing infrastructure. In relation to environmental impacts, the guidance is clear that development consent should not be granted for schemes which will have a detrimental impact on irreplaceable habitats, including ancient woodland (paragraph 5.32).

6.2.22 The assessment of effects on environment, habitat, landscape, accessibility and

[20] https://highwaysengland.citizenspace.com/he/a47-blofield-to-north-burlingham-dualling/results/a47blofieldtonorthburlinghama47sarimps2-ame-bb-zz-do-j00061.pdf

existing infrastructure is provided in the Environmental Statement (**TR010040/APP/6.1 – 6.4**).

6.2.23 Table 6.1 below summarises the significant environmental effects during construction and operation as presented Chapters 5-15 of the Environmental Statement (**TR010040/APP/6.1**).

Table 6.1: Summary of significant environmental effects

| Topic | Assessment of Significant Environmental Effects | |
|---|---|---|
| | Construction | Operation |
| Air Quality (ES Chapter 5) | Construction activities are programmed to last less than two years and potential impacts will be mitigated and managed through good practice during construction. It is unlikely there will be a significant effect from construction activity or traffic on air quality or on the UK's ability to comply with the Air Quality Directive and these were therefore screened out of the detailed assessment. | During operation the Scheme is expected to cause both adverse and beneficial effects on emission concentrations at sensitive human and ecological receptors.<br>The assessment concluded that these effects will not be significant.<br>Furthermore, the operation of the Scheme is not predicted to affect compliance with the European Union (EU) Directive on ambient air quality.<br>With no significant effects predicted, no mitigation is required. |
| Cultural Heritage (ES Chapter 6) | A programme of archaeological recording and publishing is proposed prior to construction to mitigate any potential unavoidable impact on archaeological heritage. This is secured by Requirement 9 to the Draft DCO (**TR01040/APP/3.1**)<br>Significant beneficial effects have been identified for the setting of the Grade I listed St Andrew's Church in North Burlingham by moving traffic further away and maintaining character through retaining/providing an appropriate density of planted screening at construction stage. | The Scheme will have both beneficial and adverse effects on cultural heritage.<br>Adverse impacts have been reduced or eliminated with a combination of sensitive design and targeted mitigation.<br>Significant beneficial effects have been identified for the setting of the Grade I listed St Andrew's Church in North Burlingham by moving traffic further away and maintaining character through retaining/providing an appropriate density of planted screening.<br>Other significant beneficial effects have been identified in the planned conservation of two mileposts and a guidepost |

| Topic | Assessment of Significant Environmental Effects | |
|---|---|---|
| | Construction | Operation |
| | | along the route of the existing A47, which Highways England will also propose for listing by Historic England.<br>Opportunities to enhance the cultural heritage of the area have been proposed in the form of a new viewpoint and potential information boards as well as renaming of the proposed layby to reference historic parkland. These measures will improve public awareness and appreciation of the history of North Burlingham. |
| Landscape and Visual<br>(ES Chapter 7) | During construction there would be a loss of existing trees and hedgerows and a change to the existing agricultural land use.<br>People's views would also be affected, including views of earthworks, construction vehicles and work associated with the installation of overbridges. | During the initial stages of operation, the Scheme carriageway, overbridge structures, junction lighting and general movement of vehicles along the highway would be visible. A planting plan, in combination with other specialist topic input (for example biodiversity and cultural heritage) has been designed to mitigate and enhance landscape and visual features of the Proposed Scheme. Once tree and hedgerow planting is established, the visibility of the Scheme and extent of associated landscape features would revert to a state comparable to that of the existing situation.<br>The assessment concluded that the Scheme would not result in a significant residual effect on landscape and visual amenity. |
| Biodiversity | Careful design in combination with mitigation measures during construction will | Careful design in combination with mitigation measures during operation will reduce |

| Topic | Assessment of Significant Environmental Effects | |
|---|---|---|
| | Construction | Operation |
| (ES Chapter 8) | reduce identified effects of the Scheme on receptors and habitats.<br>It is possible to compensate for the permanent loss of young trees within Lingwood Wood Community Woodland by replacement woodland planting. The residual effects on biodiversity are influenced by the time it takes for new and replanted habitats to mature.<br>Grasslands within the Scheme will have a beneficial effect as there will be a net gain of more biodiverse grasslands with the introduction of species-rich and marshy, wet grassland.<br><br>Following implementation of best practice and site-specific mitigation measures the assessment has concluded that residual effects will not be significant. | identified effects on receptors and habitats.<br>Avoidance of impacting trees and hedgerows was undertaken at the choosing of options stage of design planning and again at vegetation clearance planning.<br>The residual effects arise from the time it takes for replanted habitats to mature.<br>Risk to birds from road traffic collisions are not significant in EIA terms with the provision of safe crossing points (extra tall trees planted at the sides of the road at identified crossing points to keep them above traffic height). The risk to bats is significant due to the presence of barbastelle bats which are a European Protected Species (EPS).<br>To mitigate this, four proposed bat hops will be ensured consisting of tall trees either side of the new road to guide bats upwards over the wider highway at the existing crossing points used by bats.<br>New planting will be used where applicable to create new linkages between habitats to mitigate for severance of bat commuting routes.<br>Lighting at the junction will be designed with backlight shields and LED bulbs to reduce light spill onto habitats which support commuting and foraging bats.<br>All other residual effects after mitigation are not considered significant. |

| Topic | Assessment of Significant Environmental Effects | |
|---|---|---|
| | Construction | Operation |
| Geology and Soils (ES Chapter 9) | To the north and south of the proposed A47 dual carriageway the land is predominantly agricultural and much of this is used for arable production.<br>Mitigation measures will be implemented during construction and controlled through the Soil Management Plan to ensure that where agricultural soils exist within any temporary construction areas, they are protected and restored to their previous condition.<br>This is set out in the EMP (**TR010040/APP/7.7**) which is secured by Requirement 4 to the Draft DCO (**TR010040/APP/3.1**). | The Scheme would result in a significant effect on agricultural soils due to the amount of farmland required. This impact was considered at the route selection stage.<br>There are no designated geological sites in the study area. |
| Material Assets & Waste (Chapter 10) | Design, mitigation and enhancement measures will be implemented during construction and controlled through the Environmental Management Plan. Overall, the materials used are predicted to include over 40% of recycled material and over 85% of the material generated will be re-used or recycled. The residual effects will be slight adverse and not significant. | No effects are anticipated during operation |
| Noise and Vibration (ES Chapter 11) | The construction noise assessment has concluded that, with the application of best practice construction methods, temporary noise barriers and noise monitoring, potential significant effects are unlikely. These measures are set out in the EMP (**TR010040/APP/7.7**) and secured by Requirement 4 to | The assessment of operational noise indicates that significant adverse and beneficial effects are likely due to the Scheme.<br>Noise barriers at four locations and low noise surfacing for the new length of A47 carriageway have been incorporated as part of the Proposed Scheme design to mitigate against |

| Topic | Assessment of Significant Environmental Effects | |
|---|---|---|
| | Construction | Operation |
| | the Draft DCO (**TR010040/APP/3.1**)<br>An assessment of construction vibration impacts has concluded that the Scheme is unlikely to give rise to any potential significant effects.<br>The construction traffic assessment has concluded that, with the application of best practice construction methods and vibration monitoring, the Scheme is unlikely to give rise to any potential significant effects.<br>A construction traffic assessment has been undertaken. It is concluded that, providing the anticipated vehicle movements and routes are restricted as described, potential significant effects are unlikely. | adverse effects from the new roads.<br>Significant adverse noise effects are predicted, again due to traffic re-routing, at: eighteen dwellings on the B1140 (High Road) between the Cock Tavern and the junction with Sandy Lane; and at thirty-seven dwellings on Yarmouth Road between the junction with the A47 and the crossroads with Doctors Road / Danesbower Lane.<br>However, adverse noise effects are not predicted to occur at receptors affected by new road links or road links physically changed or bypassed by the project, but due to predicted increases in road traffic flows and speeds beyond the RLB as a result of the Scheme.<br>Despite the significant adverse noise effects predicted in the vicinity of Yarmouth Road and B1140 High Road, the absolute road traffic noise level at opening year will be comparable to local B roads in the vicinity in and around Blofield.<br>The assessment also identifies that there are no properties forecast to be eligible for insulation under the Noise Insulation Regulations. |
| Population and Human Health (Chapter 12) | During construction, access along the local road network for local residents and businesses across the study area may be temporarily disrupted whilst traffic management measures are in place. This may result in | During operation, users of one footpath (Burlingham FP3) are anticipated to experience significant residual adverse effects as a result of a section of the footpath being lost.<br>A new public right of way is included in the design south of |

| Topic | Assessment of Significant Environmental Effects | |
|---|---|---|
| | Construction | Operation |
| | longer journey times and a degree of temporary severance between communities, businesses and their facilities.<br>Temporary land take would be required from the curtilage of four properties on Yarmouth Road.<br>Walkers, cyclists and horse-riders (WCHR) would also experience temporary diversions of footpaths, with some increases in journey length.<br>Construction activities could result in some adverse amenity effects for human health, specifically in terms of noise, dust and visual intrusion. Mitigation measures will be put in place to minimise these effects. Some adverse temporary effects are likely to still occur to the health of local residents during construction of the Scheme.<br>During construction, the Scheme would result in the temporary loss of agricultural holdings and these are likely to experience disruption to farming operations. In some cases, access to farmyards and fields would be temporarily severed.<br>There will be some temporary impacts on human health during the construction phase including visual, noise, vibration, airquality, reduced accessibility to services and open space and on wellbeing relating to construction activities. Mitigation will be | the proposed A47 mainline running east to west. This footpath would provide a new route from Blofield to the B1140 junction and connects with multiple existing north / south permissive routes and Burlingham footpath FP3.<br>A combined footway/cycleway would be provided along a section of detrunked A47, to improve connectivity between Blofield and North Burlingham for pedestrians and cyclists.<br>A new crossing of the A47 would be facilitated by the Blofield Overbridge, which would connect to WCH routes. The Scheme would also make provision for the future implementation of walking and cycling facilities at the B1140 junction to facilitate improved north to south connectivity across the new A47 to the east of North Burlingham.<br>Permanent effects which occur during construction would result in changes in severance for private property and housing, community land, community facilities, development land and businesses in the communities of Blofield with South Walsham, Burlingham and Acle. Access to some private properties and businesses would change as a result of the Scheme, however none of these changes are considered to be significant.<br>Permanent land-take is required from the allotment gardens car park in Blofield, however alternative parking |

| Topic | Assessment of Significant Environmental Effects | |
|---|---|---|
| | Construction | Operation |
| | put in place to minimise noise, dust and visual effects while at the allotments fencing will be installed to prevent dust or airbourne material from entering the gardens. Following mitigation, the residual effects on human health outcomes are found to be neutral. | would be provided as part of the Scheme.<br>Permanent land take of agricultural land is required. This would result in a reduction in turnover, profitability, and in some cases, viability of affected agricultural holdings. |
| Road Drainage and the Water Environment (Chapter 13) | No significant adverse effects are predicted during construction subject to the mitigation measures included in the Environmental Management Plan (**TR010040/APP/7.7**), secured by Requirement 4 to the Draft DCO (**TR01004/APP/3.1**) and the Proposed Scheme design. | No significant adverse effects are predicted during operation subject to the mitigation measures included in the Environmental Management Plan (**TR010040/APP/7.7**), secured by Requirement 4 to the Draft DCO (**TR01004/APP/3.1**) and the Scheme design.<br>The new carriageway would discharge surface water to an infiltration basin and trenches, designed to attenuate a 1 in 100-year storm event (plus a 20% climate change allowance) in line with DMRB guidance.<br>Water levels will not exceed ground levels of the infiltration trenches or the capacity of the infiltration basin for the 1 in 100-year including a 40% climate change allowance.<br>The Scheme design incorporates treatment of road drainage prior to discharging to groundwater. This includes:<br>• the containment of sediments and pollutants to mitigate against the potential impact on groundwater quality from routine runoff<br>• outfall shut-off valves to mitigate against any |

| Topic | Assessment of Significant Environmental Effects | |
|---|---|---|
| | Construction | Operation |
| | | accidental spillages from reaching groundwater<br>Flood flow pathways 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 in line with National Planning Policy Guidance.<br>Where a direct connection to existing surface water pathways was not possible, clean water soakaways, designed to accommodate a 1 in 10-year flow plus 20% climate change allowance, have been proposed in order to dissipate surface water overland flows. Any exceedance will be directed towards existing overland flow pathways at a lower rate and volume due to the attenuation provided. Where surface water pathways are diverted away from the existing catchment by the Proposed Scheme, flood flows are attenuated to avoid impact to downstream flood receptors.<br>Mitigation, in the form of a replacement pond, is required for the loss of the pond near to Lingwood Road.<br><br>Below ground structures, such as foundations, shall be designed so as not to impede groundwater flow. |
| Climate (ES Chapter 14) | The construction, operation and use of the Proposed Scheme is predicted to increase carbon emissions by | The vulnerability of the Scheme to projected changes in climate during operation has been assessed and the |

| Topic | Assessment of Significant Environmental Effects | |
|---|---|---|
| | Construction | Operation |
| | approximately 159,102 tonnes carbon dioxide equivalent ($tCO_2e$) over the appraisal period of 60 years (up to 2085).<br>As carbon budgets do not exist for the majority of the appraisal period, a definitive assessment of materiality is not possible, however DMRB guidance also requires all projects to minimise carbon emissions. For the Proposed Scheme, the selection of a two-span bridge option for both overbridges resulted in carbon savings associated with reduced earthworks and structural material quantities. The use of the Highways England Carbon Tool to monitor and manage carbon will continue throughout the construction period to ensure an ongoing focus on climate change mitigation. | Scheme has been deemed resilient to the current projections provided by the Met Office. Therefore, no significant effects as a result of climate change are anticipated, however, this should be reviewed at an appropriate stage once updated projections are published. |
| Cumulative Effects (Chapter 15) | The assessment of cumulative effects considered the identification and assessment of impact interactions arising from the Scheme on receptors and resources. It also includes potential impacts arising from other developments in combination with the Scheme. | *Intra Project Cumulative Effects*<br>Six receptors or groups of receptors have been identified as experiencing multiple effects a result of the Scheme:<br><br>Adverse effects:<br>• Properties at Yarmouth Road<br>• Poplar Farm<br>• Lingwood Road<br>• Lingwood Community Woodland<br>• Lingwood Lane<br><br>Beneficial effects: |

| Topic | Assessment of Significant Environmental Effects | |
|---|---|---|
| | Construction | Operation |
| | | • North Burlingham<br>A combination of proposed mitigation for the relevant topics, best standard practice construction and community liaison would likely help to mitigate the cumulative impact of the effects from the Proposed Scheme.<br><br>*Inter-project Cumulative Effects*<br>There are no identified projects within the study area anticipated to result in significant cumulative effects with the Scheme and therefore no additional mitigation is proposed. |

6.2.24 The NNNPS Accordance Table **(TR010040/APP/7.2)** provides a more detailed analysis of these effects and the wide-ranging benefits of the Scheme. In each case, it can be concluded that the selection of the Scheme from reasonable alternatives and the proposed mitigation will minimise adverse impacts.

### National Planning Policy Framework 2019

6.2.25 The National Planning Policy Framework (NPPF) sets out the government's national planning policies for England and how these should be applied strategically in the development plan system and in the management of development. The revised NPPF, published on 19 February 2019, replaces the second Framework published on 24 July 2018.

6.2.26 The NPPF is explicit about the role of NPS being the primary decision-making document for NSIP under the PA 2008. Paragraph 5 of the NPPF states: "*The Framework does not contain specific policies for nationally significant infrastructure projects. These are determined in accordance with the decision-making framework in the Planning Act 2008 (as amended) and relevant national policy statements for major infrastructure, as well as any other matters that are relevant (which may include the National Planning Policy Framework)*."

6.2.27 Paragraph 1.17 of the NNNPS states that the overall strategic aims of the NNNPS and NPPF are consistent. Paragraph 1.18 goes on to say that the NPPF will be an important and relevant consideration 'but only to the extent relevant to [the] project'. Therefore, it is necessary to consider the extent of any such relevance and compliance with the policies that it contains.

6.2.28 The NPPF confirms that the purpose of the planning system is to contribute to the achievement of sustainable development (paragraph 7), and that a presumption in

favour of sustainable development lies at the heart of the NPPF (paragraph 10).

6.2.29 Paragraph 8 of the NPPF confirms that sustainable development is to be achieved by three overarching objectives: economic, social and environmental. These objectives are interdependent and need to be pursued in mutually supportive ways.

6.2.30 With regards to promoting sustainable transport, the NPPF, Chapter 9 states that transport issues should be considered from the earliest stages of plan-making and development proposals, so that opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised and the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains (paragraph 102).

6.2.31 Paragraph 104 states that planning policies should: "*Be prepared with the active involvement of local highways authorities, other transport infrastructure providers and operators and neighbouring councils, so that strategies and investments for supporting sustainable transport and development patterns are aligned; and identify and protect, where there is robust evidence, sites and routes which could be critical in developing infrastructure to widen transport choice and realise opportunities for large scale development;' they should also provide for any large scale transport facilities that need to be located in the area, and the infrastructure and wider development required to support their operation, expansion and contribution to the wider economy. In doing so they should take into account whether such development is likely to be a nationally significant infrastructure project and any relevant national policy statements*."

6.2.32 Paragraph 148 states that the planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure.

6.2.33 Paragraph 150 states that new development should be planned for in ways that:

a) "*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 planning of green infrastructure; and*

*b) can help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings should reflect the Government's policy for national technical standards."*

6.2.34 With regards to the need to adapt to climate change, the environmental effects of the Scheme have been carefully assessed. One of its objectives is to protect the environment by minimising adverse impacts and where possible, improve the environmental effects of transport on those living along the route of the new and existing road. This will be achieved through design, reducing any impacts on the natural and built environment. When compared with total UK carbon budget

figures, the increase in emissions resulting from the Scheme are relatively minor, e.g. 0.001%.

6.2.35 The Scheme would improve the quality of the SRN in the east by improving connectivity, reliability, safety and resilience on the A47 between Blofield and Acle which accords with the social objective of the NPPF. The Scheme supports the NPPF economic objective and strategic policy in making adequate provision for transport infrastructure and supporting future economic growth. The Scheme therefore accords with the key aims of the NPPF by providing improved infrastructure to support economic growth.

### Road Investment Strategy (RIS)

6.2.36 The DfT's RIS defines a national programme of improvements to the SRN.

6.2.37 **The Road Investment Strategy 2015 to 2020 ('RIS1')** introduces long-term strategic planning and funding for the SRN, underpinned by a significant increase in investment in the SRN. It is the ambition of Highways England to substantially modernise the SRN within 25 years. This vision for improvement of the SRN is outlined in more detail through Performance Specification targets and Key Performance Indicators (KPI's) related to: the environment; cyclists, walkers and other vulnerable users; efficiency; network condition; road safety; user satisfaction; traffic flow; and economic growth.

6.2.38 The RIS1 stated that 127 major schemes would be undertaken over the course of the first Road Period (2015-2020), in order to deliver benefits quickly.

6.2.39 In the longer term up to 2040, Highways England look to achieve an upgraded network which makes use of the latest technology in line with KPI's in order to fulfil the Performance Specification (February 2015).

6.2.40 **Road Investment Strategy 2: 2020 to 2025 ('RIS2')** sets a long-term strategic vision for the network. With that vision in mind, it then: specifies the performance standards Highways England must meet; lists planned enhancement schemes we expect to be built; and states the funding that we will make available during the Second Road Period ('RP2'), covering the financial years 2020/21 to 2024/25.

6.2.41 It describes a long-term vision for what the SRN should be like in 2050 and the steps that will help them achieve it. The RIS2 sets out the list of schemes that are to be developed by Highways England over the period covered by the RIS and a number of specific locations for improvements to the SRN. The Scheme is included for RIS1, and the early part of RIS2, to complete a gap in dual carriageway between Norwich and Acle.

6.2.42 Highways England, as the strategic highways company appointed by the Secretary of State must,, in exercising its functions and complying with its legal duties and other obligations, act in a manner which it considers best calculated to, among others:

- minimise the environmental impacts of operating, maintaining and improving its network and seek to protect and enhance the quality of the surrounding environment
- conform to the principles of sustainable development.

## The Strategic Road Network and the Delivery of Sustainable Development (DfT Circular 02/2013)

6.2.43 This Circular explains how the Highways Agency (Highways England) will engage with the planning system, communities and the development industry to deliver sustainable development and, thus, economic growth, whilst safeguarding the primary function and purpose of the SRN.

6.2.44 The document states that Highways England will work with local authorities to influence Local Plan decisions that may affect the SRN.

## Highways England Delivery Plan and Strategic Business Plans

### *Highways England Strategic Business Plan 2015-2020 and 2020-2025*

6.2.45 The Applicant is responsible for planning the long-term future and development of the SRN including its maintenance, operation and improvement.

6.2.46 In 2014 the Applicant published its Strategic Business Plan 2015-2020 ('SPB') in response to the Government's RIS (RIS1). The SBP set out the Applicant's main activities and strategic outcomes and sets how the Applicant will deliver the investment plan and performance requirements for the network for the next five years, together with a long term commitment to capital funding totaling more than £11bn.

6.2.47 The SPB 2015-2020 defined KPIs against which the performance of the Applicant will be measured, based on the Performance Specification included in the RIS.

6.2.48 Section 4 of the SBP gave the background to the subsequent publication of the Route Strategies for the entire national network. The East of England Route Strategy, April 2015[21] considered the A47, including the issues, key opportunities and challenges for the Route.

6.2.49 The Strategic Business Plan 2020-2025 was published in March 2020 and responds to and aligns with government's RIS2. It provides the high-level direction for every part of Highways England for the second road period (2020 to 2025), setting the outcomes Highways England will work to deliver and the strategic priorities for the business. This SBP includes similar KPIs as agreed with DfT, Transport Focus and ORR, the framework reflects how the following six outcomes will be delivered:

1. improving safety for all
2. providing fast and reliable journeys
3. a well-maintained and resilient network
4. delivering better environmental outcomes
5. meeting the needs of all users
6. achieving efficient delivery

[21] Highways Agency developed a Route Based Strategy approach to identify key investment needs on the SRN. The Route Based Strategy brought together both national and local priorities in 18 Route-Based Strategy Evidence Reports, used to inform the RIS. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/416730/East_of_England.pdf

6.2.50 These outcomes respond to and align with government's priorities, as set out in RIS2: a network that supports the economy; a greener network; a safer and more reliable network; a more integrated network; and a smarter network.

*Highways England Delivery Plan, 2015-2020 and 2020-2025*

6.2.51 The Delivery Plan 2015-2020 built on the SBP, sets out in detail how the strategic outcomes and the RIS1 will be delivered and success measured, while identifying future goals and plans. The Applicant's SBP and Delivery Plan (2015-2020) responds directly to RIS1.

6.2.52 The A47 Blofield to North Burlingham is listed under the "Major Improvements Investment Plan Scheme Schedule 2015-2020" as one of the "Schemes identified following the outcomes from the six feasibility studies". The feasibility study relevant to the A47 corridor being The A47/A12 Corridor Feasibility Study (see 2.1.4 above).

6.2.53 The Strategic Business Plan 2020-2025 is supported by the Highways England Delivery Plan 2020-2025 which provides the detail of specific funding, activities and projects Highways England will deliver over the five years. It also discusses how Highways England approach efficiency and risk management. The Delivery plan includes a performance framework, which brings together all the delivery aims for the Second Road Period.

### National Infrastructure Delivery Plan, 2016- 2021

6.2.54 The National Infrastructure Delivery Plan (NIDP) 2016-2021 (produced by the Infrastructure and Projects Authority) outlines details of £483 billion of investment in over 600 infrastructure projects and programmes across the UK to 2020-21 and beyond.

6.2.55 The NIDP focuses specifically on nearly £300 billion of infrastructure that will be delivered over the next 5 years to 2020-21.

6.2.56 Chapter 3 of the NIDP sets out how the Government is investing over £15 billion to support the transformation of the SRN, with over 100 major schemes completed or in construction by the end of 2020-21. Ministers have established a clear regulatory framework, setting up investment periods with legally-guaranteed funding levels. The first of these, Road Period 1, runs from 2015 to 2020. The goals and objectives of Road Period 1 are detailed within RIS1.

6.2.57 Currently there is no National Infrastructure Plan for beyond 2020, however the Government have produced the National Infrastructure and Construction Procurement Pipeline 2020/21 in June 2020, which is a forward-looking pipeline of planned procurements for the 2020/21 financial year in economic and social infrastructure. This analysis document, published alongside the procurement pipeline data, provides insights across the wide range of infrastructure the UK is planning to procure over the coming year. The A47 is not included in the projects for this year.

### National Infrastructure Strategy Plan, November 2020

6.2.58 HM Treasury, advised by the National Infrastructure Commission, presented the National Infrastructure Strategy Plan to Parliament in November 2020. It sets out the government's plans to deliver a radical improvement to the UK's infrastructure system delivering projects better, greener and faster, underpinned by high levels

of government investment. It aims to:

- boost growth and productivity across the whole of the UK, levelling up and strengthening the Union
- put the UK on the path to meeting its net zero emissions target by 2050
- support private investment
- accelerate and improve delivery.

6.2.59 The foundational role of high quality infrastructure in relation to economic growth is emphasised, particularly in current times in the Uk's recovery from the COVID-19 pandemic. The 2020 Spending Review pledges £27 billion in 2021 to develop the economic infrastructure sectors, including transport. Further, it states, *"continuing to progress the UK's ambitious infrastructure plans in all parts of the country is vital to the recovery of the construction sector, and the economy as a whole"*.

### Summary

6.2.60 The Scheme complies with national planning policy identified above in that the Government has highlighted the express need for further growth and improvements to the national networks within the NNNPS and the recently published National Infrastructure Strategy Plan.

6.2.61 The criteria identified within NNNPS are met with mitigation measures incorporated into the Scheme to reduce unavoidable impacts on the surrounding environment. Any residual impacts are not without sufficient justification.

6.2.62 The DfT's RIS supports the Scheme as a required improvement to the network. The Highways England Delivery Plan, built on the HE Strategic Business Plan, lists the A47 Blofield to North Burlingham under the "*Major Improvements Investment Plan Scheme Schedule 2015-2020*".

6.2.63 The Scheme meets the environmental and sustainable objectives of the NPPF, providing mitigation where unavoidable impacts occur. The Scheme as submitted will improve safety along this section of the A47, improved journey times and network resilience.

6.2.64 Highways England has engaged with the planning system, communities and the development industry to ensure the delivery of sustainable development and, thus, economic growth, whilst safeguarding the primary function and purpose of the SRN in line with the requirements of Circular 2/2013.

## 6.3 Conformity of the Scheme with Sub-regional Plans

### Sub-regional Policy

*New Anglia Strategic Economic Plan, 2014*

6.3.1 The New Anglia Strategic Economic Plan produced in 201422 seeks to transform the economy of Norfolk and Suffolk and establish the New Anglia area as a centre of global business excellence. It states '*Our Strategic Economic Plan (SEP) sets out our ambition to harness our distinct sector strengths and our natural assets to deliver more jobs, new businesses and housing'*.

[22] https://newanglia.co.uk/wp-content/uploads/2020/03/New-Anglia-Strategic-Economic-Plan.pdf

6.3.2 The Plan describes the A47 Alliance which "brings together stakeholders from all along the route including GCGP LEP, has a list of priorities, a number of which are already programmed for 2015-2021. These could release at least 10,000 jobs and at least an increase in GVA of £400m per annum across the New Anglia area. We welcome the Government's commitment to Route Based Strategies across the whole of the trunk road network and to the Feasibility Study (February 2015) on the A47. These studies, together with the SEP, should provide the basis for future investment decisions on the trunk road network."

6.3.3 The Plan also states that the LEP's local transport priorities reflect the adopted Norwich Area Transportation Strategy and identifies Blofield to North Burlingham as a National Network Improvement (Road) for 'dualling'. It states that improvements at the A47 are needed to improve access to enterprise zone sites, such as those in Great Yarmouth and Lowestoft.

*New Anglia Local Enterprise Partnership (LEP) Norfolk and Suffolk Unlimited Economic Strategy, 2017*

6.3.4 The Economic Strategy produced by the New Anglia LEP in November 2017 is based on the Strategic Economic Plan 2014 and provides a plan for growth in Norfolk and Suffolk[23]. This is a shared endeavour between businesses, education providers, local councils, the voluntary and community sector and is led by New Anglia LEP. It outlines ambitious plans for future growth across Norfolk and Suffolk

6.3.5 The Strategy sets out to address the regions' shortfalls and growth opportunities, demonstrating housing and employment commitments and potential growth locations with reference to specific improvements on the SRN.

6.3.6 Improvements to the A47 are identified as key to improve the region's internal connectivity and links to wider markets. The document states "*We are committed to securing the full dualling of this major artery between East Anglia to the Midlands, which would unlock growth along its route, including significant commercial and housing developments as well as improve job opportunities in locations."*

6.3.7 In May 2019 a Norfolk and Suffolk Economic Strategy Progress Report was produced by the LEP which provides an overview of progress being made since the Norfolk and Suffolk Economic Strategy was published in November 2017.

6.3.8 It sets indicators for the area to deliver and measure progress towards the LEP's goals and ambitions using eight economic indicators, Gross Value Added (GVA), jobs, businesses, housing, median wage, employment rate and skills.

6.3.9 The results show that there has been low to moderate GVA growth, and the growth in GVA per hour worked in Norfolk and Suffolk was strong against both the national average and comparator LEP areas. However, Norfolk and Suffolk have seen depressed wage growth, in real terms, over the past two years.

6.3.10 Norfolk and Suffolk have however seen particularly strong levels of growth in the employment rate over the past decade. The Economic Strategy sets a qualitative target of maintaining a consistently higher employment rate than the national average. Though this exceeds the indicator target of 0.5% growth in both 2016

[23] https://newanglia.co.uk/wp-content/uploads/2020/03/New-Anglia_Norfolk-Suffolk-Unlimited_Economic-Strategy-Brochure-1-1.pdf

(2.03%) and 2017 (0.52%) there was a net slowing of business growth and rate of housing completions. Norfolk and Suffolk improved the skills base at a faster rate in 2017 than the national average and all of the comparator LEP area.

### *New Anglia LEP Integrated Transport Strategy, 2018*

6.3.11 In May 2018, the New Anglia LEP produced An Integrated Transport Strategy for Norfolk And Suffolk ('ITS') which highlighted the congestion in, amongst others, the critical east-west growth corridor along the A47 from Lowestoft and Great Yarmouth to King's Lynn. The ITS aims to '*Ensure a resilient SRN that is agile to future opportunities, the timely delivery of already committed schemes and certainty that the …. A47 amongst others would feature prominently in future Roads Investment Strategies by strengthening relationships with Highways England.*

6.3.12 The ITS discusses the A47 Alliance, a "successful lobbying group which is pushing for full dualling of the A47 between Peterborough and Lowestoft. The dualling of the A47 has cross-party, cross-county support and in 2014, the government awarded a £300m funding package for dualling and junction improvement schemes along the A47. The A47 Alliance brings together the Chambers of Commerce, local authorities, LEPs and MPs along the route and is also supported by other stakeholders including the RAC, Eastern Daily Press and local businesses. The Eastern Daily Press, Norfolk Chamber of Commerce and Norfolk County Council are currently spearheading the 'Just Dual It' campaign to push government to invest further in the A47 and get a commitment for full dualling of the A47 by 2030."

6.3.13 The Scheme is therefore supported by the Local Enterprise Partnership which see the improvements to the A47 as a key to economic prosperity.

### *New Anglia Norfolk and Suffolk Limited, Draft Local Industrial Strategy, 2020*

6.3.14 The Draft Local Industrial Strategy has been adopted by local partners. It has been submitted to Government and awaits approval. It reflects the opportunities and needs of Norfolk and Suffolk's growing economy and how it will respond in a fast-changing world. It has a strong local partnership with a track record of delivery and shows how Norfolk and Suffolk will continue to collaborate across disciplines and boundaries to provide new solutions and the infrastructure that its communities and businesses need.

6.3.15 Norfolk and Suffolk is at the forefront of tackling the challenges and opportunities of climate change and the document identifies that 'Clean Growth' sits at the heart of the Local Industrial Strategy. The area's major strengths in energy generation and usage, and high-tech sustainable agri-food, present major opportunities. The Strategy sets out specific actions that will drive productivity and growth across the economy as a whole. Improvements to the A47 are mentioned and it is states that Committed improvements to date through the RIS will deliver significant benefits, but additional investment on the A47 could further drive growth opportunities for Norfolk and Suffolk.

### *The A47 Alliance*

6.3.16 The A47 Alliance brings together the business community, local authorities, MPs and stakeholders along the whole of the trunk road route between Peterborough and Lowestoft. The Alliance states that they are working together to make the case

for improvements and to secure the investment required to make it happen.

6.3.17 The A47 Alliance is calling on the Government to commit funding to fully dual the A47 by 2030 and specifically to prioritise upgrading sections from single to dual carriageway by 2025.

6.3.18 A number of technical papers supporting the case for improvements are on the A47 Alliance website. In 2019 the Alliance produced its latest brochure: *The A47 Investing in East-West Success* which details why in their opinion getting the A47 fully dualled is vital to the East of England's businesses and economic growth.

### Summary

6.3.19 There is a strong drive in the Norfolk and Suffolk Regions for sustained economic transformation and growth to build upon the area's strong employment rate and its specific strengths in energy generation and usage, and hi-tech sustainable agri food. The development of the trunk road network is seen as key to economic delivery – jobs, business and housing, including access to Enterprise Zones, particularly along the critical east-west growth corridor of the Region. The New Anglia LEP Integrated Transport Strategy highlights the cross-party, cross-county support for the A47 dualling while the A47 Alliance in particular brings together the Chamber of Commerce, Local Authorities, LEPs, MPs and other stakeholders who support dualling of the A47 in its entirety. The Scheme is therefore an essential and integral part of the Region's drive for economic success articulated in the objectives of the various sub regional policy documents.

## 6.4 Conformity of the Scheme with Local Development Plans and Local Transport Plans

### Local Development Plans

6.4.1 The Scheme is wholly located in the Broadland District Council area, within the county of Norfolk.

6.4.2 Broadland's current local plan is made up of several documents:

- The JCS adopted 2011, amendments adopted January 2014
- Development Management Development Plan Document (DPD) adopted August 2015
- Site Allocations DPD adopted May 2016
- Growth Triangle Area Action Plan adopted July 2016
- Neighbourhood Plans – Blofield Neighbourhood Plan adopted July 2016
- Supplementary Planning Documents (SPD), including Landscape Character Assessment SPD September 2013

6.4.3 These documents set out the general and specific planning policies and also contain detailed local policies. They aim to help planning officers and applicants to achieve high standard of development in the district and they are the main guide to determining planning applications.

*Joint Core Strategy for Broadland, Norwich and South Norfolk, 2011, amended 2014*

6.4.4 The Joint Core Strategy for Broadland, Norwich and South Norfolk, 2011 ('JCS') as amended 2014, is the key planning policy document for the Greater Norwich area. It forms part of the Local Plans for the districts of Broadland, Norwich and South Norfolk setting out the broad vision for the growth of the area and containing strategic policies for the period 2008 – 2026.

6.4.5 The complete adopted JCS for Broadland, Norwich and South Norfolk comprises the JCS document adopted in March 2011, as amended by the Broadland Part of the Norwich Policy Area: Local Plan, adopted in January 2014.

6.4.6 Para 3.19 of the JCS acknowledges the congestion issues on the A47 to the east of Norwich "The A47 and A12 to the east of the JCS area, connect to Great Yarmouth and Lowestoft, which are coastal resorts and industrial towns with significant regeneration needs. The development of Eastport at Great Yarmouth will provide access to continental Europe. However, the A47 to the east of Norwich has significant limitations."

6.4.7 The Spatial Vision outlines the aspiration to make all communities attractive and sustainable places where people will have access to jobs and both essential services and community facilities. Indeed, Objective 11 of the spatial planning objectives, outlines the need for people to be offered the best opportunities to make healthy travel choices as part of their daily lives. The Scheme offers improvements to connectivity along the A47 corridor, including new pedestrian links that support this vision.

6.4.8 *Policy 1: Addressing Climate Change and Protecting Environment Assets* recognises the importance of minimising the need to travel and give priority to low impact modes of travel and highlights the need to develop and maintain green infrastructure networks.

6.4.9 Policy 5 seeks to develop the local economy in a sustainable way to support jobs and economic growth both in urban and rural locations. The JCS states that achieving the full economic potential of the area is dependent on improved connectivity, including the implementation of the priorities set out in the sustainable transport policy and maintaining and enhancing the environment and quality of life in the area.

6.4.10 Policy 6 of the JCS seeks to improve the transportation system in order to develop the role of Norwich as a Regional Transport Node, particularly through the implementation of the Norwich Area Transportation Strategy (2003) and will improve access to rural areas. One of the ways this will be achieved is "*by promoting improvements to the A11 and A47*". The policy recognises that supported strategic improvements to aid delivery and economic success include A47 improvements to reduce the significant stretches that remain single carriageway.

6.4.11 *Policy 9: Strategy for growth in the Norwich Policy Area* states that opportunities will be sought to enhance green infrastructure throughout the area, with particular emphasis on priority areas. This includes public rights of ways including local footpaths. Blofield is within the Norwich Policy Area.

6.4.12 *Policy 10: Locations for major new or expanded communities in the Norwich Policy Area* states that most of the growth within the plan will be located in the Norwich

Policy Area (NPA), where it can be best served by greatly enhanced public transport, walking and cycling.

*Development Management DPD adopted August 2015*

6.4.13 Development Management Development Plan Document (DPD) adopted August 2015 sets out the generic policies that are to be applied throughout the Broadland planning authority area. It should be read alongside the JCS. The policies set out within the Development Management DPD do not repeat but seek to further the aims and objectives set out within the NPPF and JCS. It therefore includes more detailed local policies for the management of development.

*Site Allocations DPD adopted May 2016*

6.4.14 The Site Allocations Development Plan Document DDP adopted 2016 sets out those sites across the district that are suitable for certain forms of development such as housing, employment, community facilities etc. The scale of development reflects the requirements set out in the JCS. It also includes the definition of development boundaries or "settlement limits" for those places where some growth may take place.

6.4.15 There are certain sites identified within the site Allocations DPD adjacent to the A47 such as site reference BLO1: Land south of A47 and north of Yarmouth Road, Blofield, approximately 9.9ha to be developed in accordance with planning permission reference 20111303. This will include a mixed used development to deliver 175 dwellings, a maximum floor space of 4000m$^2$ B1 Class Use and open space.

*Growth Triangle Area Action Plan adopted July 2016*

6.4.16 The Growth Triangle Area Action Plan (AAP) has been specifically for an area identified as a growth area including Old Catton, Sprowston, Rackheath and Thorpe St Andrew. It is to the west of the Scheme and does not include Blofield or North Burlingham. The purpose of the AAP is to enable a coordinate sustainable strategic scale development to the north east of Norwich in accordance with the requirements of the JCS.

*Blofield Neighbourhood Plan, 2016*

6.4.17 Blofield's Plan was fully adopted by Broadland District Council on 26th July 2016 following a 91% vote by Blofield residents. The plan covers the period up to 2036 and now forms part of the development plan for the District and is one of the main considerations in determining any future planning applications submitted in Blofield. The Neighbourhood Plan went through a number of stages before being adopted. The Blofield parish Neighbourhood Plan is a community---led document for guiding the future development of the parish. Commissioned by Blofield Parish Council, the Neighbourhood Plan has been developed by a Steering Group of local residents

6.4.18 The Plan states that "The parish of Blofield is bisected by the A47 trunk road, which severs Blofield Heath from Blofield. Safe access from and onto the A47 at the east end of Blofield is of concern to residents and businesses. Delays joining the A47 at the west end of Blofield (Brundall parish) getting onto the roundabout, are most likely to increase with a growing parish population." As a rural parish there is a high dependency on the car. Public transport is not convenient enough to alleviate this.

Car ownership is high with only 10% of households having no access to a car or a van. An objective of the Plan is to achieve the best possible road infrastructure for the parish. Policy TRA1 Local Traffic Generation.

*Supplementary Planning Documents (SPD), including Landscape Character Assessment SPD September 2013*

6.4.19 The Landscape Character Assessment SPD is supplementary to the Joint Core Strategy Development Plan Document (DPD) Policy - 1 Addressing Climate Change and Protecting Environmental Assets and as such forms part of Broadland's emerging Local Plan.

6.4.20 As detailed in Chapter 7, Landscape and Visual of the Environmental Statement (**TR010040/APP/6.1**), the study area for the Scheme lies within the Tributary Farmland' and 'Freethorpe Plateau Farmland' LCAs.

*Greater Norwich Local Plan (yet to be adopted):*

6.4.21 Broadland District Council, Norwich City Council, South Norfolk Council and Norfolk County Council are working together to prepare the Greater Norwich Local Plan ('GNLP'). The GNLP is therefore emerging policy.

6.4.22 The GNLP builds on the joint working arrangements for Greater Norwich, which have delivered the current JCS for the area. The JCS plans for the housing and job needs of the area to 2026 and the GNLP will ensure that these needs continue to be met to 2036.

6.4.23 The GNLP will include strategic planning policies to guide future development and plans to protect the environment. It will look to ensure that delivery of development is done in a way which promotes sustainability and the effective functioning of the whole area. The Plan will also allocate land for development.

6.4.24 Initial work to develop the Greater Norwich Local Plan has begun and the councils have begun preparing evidence to enable them to assess what the main needs and constraints of the three districts.

### Green Belt Policy

6.4.25 The Scheme is not located within adopted Green Belt.

### Local Transport Policy

*Norfolk County Council Local Transport Plan, 2011-2026:*

6.4.26 Norfolk County Council's (third) Local Transport Plan ('LTP3') was adopted in 2011. It describes the county's strategy and policy framework for delivery up to 2026 with an Implementation Plan covering the period 2015-2021 includes a number of objectives which seek to address transport issues.

6.4.27 The six strategic aims of LTP3 are: Managing and maintaining the transport network; Sustainable growth; Strategic connections; Transport emissions; Road safety; and Accessibility.

6.4.28 The Council are currently refreshing the Local Transport Plan so that it will cover the period 2020-2036. A consultation on the key priorities was held in January – February 2020. The A47 is listed within the draft document as a priority for dualling and details the commitment to over £30million of investment for this work. The document states that the County Council will continue to work with partners and

key stakeholders to improve transport links such as working with the A47 Alliance to secure improvements to the A47 trunk road.

*Norwich Area Transportation Strategy, 2003, updated in 2004 with Implementation Plan in 2010*

6.4.29 The Norwich Area Transportation Strategy (NATS) summarises the characteristics of the Norwich Area, existing and predicted future travel patterns, and transport problems and issues in the Norwich area

6.4.30 The work was compiled by Norfolk County Council in partnership with Norwich City Council, Broadland District Council and South Norfolk District Council. Extensive use was made of previous consultations carried out in the Norwich Area

6.4.31 The Norwich Area Transportation Strategy (NATS) has evolved and delivered improvements over a number of years. NATS4, the latest version of the Strategy, was adopted in 2004 and its Implementation Plan (NATSIP) was adopted in March 2010. The NATSIP Update identifies progress on delivery, sets out the current and emerging programme and highlights the relationship between NATS schemes and the wider growth and development agenda. It takes account of the implications of emerging funding opportunities including the Community Infrastructure Levy.

6.4.32 The Implementation Plan also includes major junction enhancements at the Thickthorn Interchange post-2015 (part of the A47 Improvements Programme). Blofield to North Burlingham is not specifically mentioned within the document.

6.4.33 The County Council are looking to update NATS4 to match the changing needs of the city and Greater Norwich as it continues to grow. The next phase of the strategy review project will involve working with the Greater Norwich authorities and local stakeholders to develop a revised strategy and implementation plan which addresses the issues and priorities identified from an initial consultation held in 2018.

6.4.34 Although the Scheme is not specifically mentioned in this document there is support for other parts of the A47 Improvement Programme.

*Greater Norwich Infrastructure Plan, 2020*

6.4.35 The Greater Norwich Infrastructure Plan ('GNIP') adopted May 2020, which covers the districts of Broadland, Norwich and South Norfolk, has been prepared to help coordinate and manage the delivery of strategic infrastructure to support growth. The purpose of the document is to inform prioritisation of investment and delivery and support the JCS.

6.4.36 The GNIP discusses housing growth and identifies the delivery of approximately 500 dwellings at various sites around Blofield and Brundall. Appendix A within the GNIP identifies all the currently planned strategic infrastructure projects. Approximately 500 dwellings are permitted and underway in the Blofield / Brundall area.

6.4.37 Under '*Green Infrastructure – Projects being progressed and delivered*', the Plan identifies three projects that are relevant to the Scheme (all of which also feature in the East Broadlands Green Infrastructure Plan). These are the Burlingham Trails Cycling and Walking Routes, the A47 Safe Foot and Cycle Crossing and the Link from Blofield to Blofield Heath.

### Conformity of the Scheme

6.4.38 The Broadland's Development Plan highlights existing congestion on the A47 and the limitations inherent for users and potential investors in the area where economic growth is sought. This is interdependent with improved connectivity particularly in rural areas where there is high car dependency and a growing population. The Blofield Neighbourhood Plan also presents concerns regarding the need for safer access to the A47 east and west of Blofield. It is an objective of this Plan to achieve the best possible road infrastructure for the Parish.

6.4.39 The Broadland's Development Plan actively supports dualling improvements by restricting the development of land adjacent to the single carriageway sections so that it is available for potential future improvements by the Applicant. The single lane carriageway between Blofield and Acle is specifically identified as requiring improvement to dual status to support local demand and growth aspirations on the corridor.

6.4.40 The Plan also highlights the importance of creating attractive communities where healthy travel choices are available, noting the commitment to climate change and green infrastructure including public rights of way.

6.4.41 The Scheme meets Development Plan objectives in relieving congestion for the benefit of users and potential investors, will result in safer connections and a reduction in accidents and provides for improved footpath and cycle way connections to support the provision of sustainable travel.

6.4.42 The Scheme also supports the priorities of the current and emerging NCC Local Transport Plan in supporting growth, improving a strategic connection and improving safety and access for current users while providing for future proposed and committed residential and business developments in the area.

## 6.5 Planning Balance

6.5.1 Section 104(7) of the Planning Act 2008 (as amended) requires that the application should be determined in accordance with relevant National Policy Statement unless the adverse impact of the proposed development would outweigh its benefits. This Case for the Scheme document provides an overview of the economic, social and environmental benefits of the Scheme. The potential impacts of the Scheme have also been comprehensively considered and addressed through the management and mitigation measures described in the Environmental Statement (**TR010040/APP/6.1**). The balance of benefits and adverse impacts is also considered through the Applicant's response to the balancing exercises for relevant topic areas expressed within the NNNPS, set out in the NNNPS Accordance Table (**TR010040/APP/7.2**).

6.5.2 The Environmental Statement (**TR010040/APP/6.1**) has considered each impact assessment topic according to whether there are likely to be significant environmental effects, in line with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended). The conclusions from the ES have been reviewed in order to consider the conformity of the Scheme with the NNNPS, the NPPF, the development plan, plus other infrastructure and transport plans and strategies, as set out in Appendices to this document.

6.5.3 In terms of adherence to national policy requirements, the Scheme demonstrates

compliance with the Government's strategic vision for the development of the national road network. The benefits of the Scheme are demonstrated by its inclusion within the RIS and within 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.

6.5.4 By increasing capacity and removing many of the constraints associated with the existing single carriageway between Blofield and North Burlingham, the Scheme meets the objectives contained in the transport and economic strategies for the area as well as policies within the Broadland local development Plans. The Scheme is strongly supported 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 Norfolk and the East of England as a whole.

6.5.5 The Scheme will help to support economic growth by encouraging inward investment in business and residential development and will tackle a range of identified issues including congestion, safety and journey times along this stretch of the A47. It also provides for the improvement of green infrastructure for sustainable transport modes. Table 3.1 of this Case sets out how the Scheme has been designed to meet the objectives of the NNNPS in the above regards as well as protecting the environment, ensuring a more accessible and integrated network which represents value for money.

6.5.6 The Scheme's benefits have been assessed in the context of unavoidable impacts that are identified in the Environmental Statement (TR010040/APP/6.1). It is acknowledged that, for example, the Scheme will result in some impacts to the climate and air quality in certain areas. Suitable mitigation is proposed to manage these impacts where they occur and overall the benefits of the Scheme are considered to outweigh any unavoidable adverse effects.

6.5.7 Following public consultation and feedback the Scheme is considered by the Applicant to be the best available option for the dualling of the A47 between Blofield and North Burlingham. It is fully funded as illustrated in the Funding Statement (**TR010040/APP/4.2**) and if granted, the DCO will include the compulsory acquisition powers required to deliver the Scheme.

6.5.8 The Scheme therefore comprises an opportunity to secure a deliverable and fully funded A47 Blofield to North Burlingham Scheme in accordance with the RIS, and current and emerging planning and transport policies.

# 7 CONCLUSIONS

## 7.1 Overview

7.1.1 This Case for the Scheme, and accompanying NNNPS Accordance Tables, (**TR010040/APP/7.2**) set out the policy context against which the Scheme should be viewed. Together, they demonstrate a clear justification for the Scheme grounded in national, regional and local planning and transport policy.

7.1.2 The NNNPS, NIDP and the RIS set out a strong position of support in delivering national networks that meet the country's long-term needs, whilst supporting a prosperous and competitive economy and improving the quality of life for all.

## 7.2 Need and Scheme Objectives

7.2.1 The single carriageway section of the A47 between Blofield and North Burlingham experiences congestion and is currently operating at over capacity, leading to longer and unreliable journey times.

7.2.2 Further population growth in Peterborough and Norwich and the immediate local area around Blofield will exacerbate this as, in this rural location, car ownership is high.

7.2.3 Safety is also currently compromised and a high accident rate has been an unfortunate effect. The A47 is ranked 2nd nationally for fatalities on A roads and the accident severity ratio is above average. During the period July 2011 to June 2016 a total of 1 fatal accident, 5 serious accidents and 27 slight accidents have been recorded along the Scheme section of the A47.

7.2.4 The proposed solution to the traffic and safety issue, which is defined in the RIS is; "dualling of the A47 to fill a gap in the dual carriageway section between Norwich and the Acle Straight"

7.2.5 Dualling of this section of the A47 offers a solution to the above issues and, further, will unlock economic growth and development in the area which is considered essential at a regional level and is promoted strongly by the A47 Alliance.

## 7.3 Alternatives, the Scheme and its benefits

7.3.1 A wide ranging and detailed optioneering process, involving extensive study and consultation, has considered reasonable alternatives, ultimately resulting in the announcement of the preferred route in August 2018 "*Building a new dual carriageway to the south of the existing A47*'.

7.3.2 The Scheme has been further developed since the preferred route announcement. Taking on board feedback received and from ongoing stakeholder engagement the design of the Scheme has been developed to that now set out within the DCO application.

7.3.3 The Scheme has been identified as the best option to meet the defined need and objectives, including the delivery of a comprehensive set of benefits as detailed in this document.

7.3.4 Transportation benefits include reduced journey times, reduction of problems associated with rat-running along alternative local routes and improved safety, resilience and journey time reliability consistent with national and local planning

objectives for transport, economy and the environment.

7.3.5 Through the increased capacity and improved journey time reliability, the Scheme would assist in making the region more attractive for businesses and provide the required infrastructure for development including housing and employment.

7.3.6 The Scheme is supported by an Environmental Impact Assessment to establish the impacts and mitigation measures needed to meet the Scheme objective of avoiding unacceptable impacts on the surrounding natural and historic environment and landscape and optimise opportunities for enhancement. For more details see the Environmental Statement (**TR010040/APP/6.1**).

## 7.4 Compatibility with NNNPS

7.4.1 The Scheme demonstrates compliance with the NNNPS, including the Government's strategic vision for the development of the national road network, wider policies for economic performance, environment, safety, technology, sustainable transport and accessibility, as well as journey reliability and the experience of road users. Where impacts are generated by the construction or operation of the Scheme, it has been demonstrated through careful and comprehensive assessment that the substantial and long lasting benefits, such as the extensive transportation, economic and community benefits, will outweigh the limited impacts identified.

7.4.2 The detailed NNNPS Accordance Tables (**TR010040/APP/7.2**) demonstrates the conformity of the Scheme with the NNNPS. Overall, it is considered that the public benefits provided by the Scheme are clear, founded in factual evidence and outweigh any unavoidable impacts. This document has shown that, where the NNNPS requires a balanced judgement between harm and benefits, the evidence demonstrates that the Scheme fully complies with the NPS and that benefits significantly outweigh impacts.

## 7.5 Delivery of Government Policy and Programmes

7.5.1 The Scheme forms part of the Government's vision and strategic objectives for improving the UK's transport infrastructure as set out in detail in Chapter 3 of this Statement. The Scheme would meet the identified need to provide safe, expeditious and resilient networks that better support social and economic activity; and to provide a transport network that can stimulate and support economic growth as set out in the NNNPS.

7.5.2 The A47 Blofield to North Burlingham is a Committed Scheme in the RIS. The Scheme also fulfils the aims of the NIDP and the Highways England Delivery Plan.

## 7.6 Delivery of Local Planning and Transport Policy

7.6.1 The Scheme delivers the aims of the existing Broadland development plan and local transport plans. Within the plans there is broad support for improvements to the A47 and specifically the section between Norwich and the Acle Straight.

## 7.7 The Planning Act 2008

7.7.1 The Planning Act 2008 requires that, in determining DCO applications, the SoS must have regard to the relevant NPS, the Local Impact Report, any prescribed matters and any other matters the SoS thinks are important and relevant.

Paragraph 4.2 of the NNNPS confirms that there is a presumption in favour of granting development consent for national networks.

7.7.2 The Planning Act 2008 also states that DCO applications should be determined in accordance with the relevant NPS except in certain circumstances including where adverse impacts would outweigh benefits, or where to do so would be unlawful, in breach of duty or condition, or in breach of international obligations.

7.7.3 The Scheme complies with the NNNPS and accords with all other relevant and important matters might need to take into consideration, including the adopted development plan for the local area and the NPPF.