

EXECUTIVE SUMMARY



INTRODUCTION

This document is the Strategic Outline Business Case (SOBC) for the Ipswich Northern Route (INR) project – a proposed new road linking the A14 and the A12 to the north of Ipswich. Three route options are being considered, ranging in cost from £342,210,000 to £385,055,000.¹

The SOBC is the first phase of the Department for Transport's (DfT) decision making process. The SOBC defines the scope of work, makes the case for change and assesses options to tackle the problem. The outcome of this work provides a framework to inform the decision of whether or not to proceed with the project; the next stage would be phase 2 the Outline Business Case (OBC). The form and content of the SOBC follows published DfT guidance, including Transport Analysis Guidance (TAG) and the HM Treasury guidance in the Green Book.

The SOBC is made of five separate cases, which together make a compelling case for the project:

- Strategic case
- Economic case
- Financial case
- Commercial case
- Management case

The SOBC would support a possible application by scheme promoters Suffolk County Council (SCC) and partners: Babergh and Mid Suffolk District Councils, East Suffolk Council, Ipswich Borough Council and West Suffolk Council, to the DfT for funding from the Large Local Majors (LLM) fund.

¹ The costs presented in this SOBC are in a different price base to those presented during the public consultation on the project. The costs in the public consultation were in 2027 prices whereas the costs presented here are in 2019 prices.

HISTORY OF THE PROJECT

- **2016** - Stage 1 Strategic Study report produced to assess the strategic viability of transport capacity improvements to support growth in the wider Ipswich area.
- **2019** - Options Assessment Report (OAR) considered a wide range of options
- **2019** - Public consultation
- **2019** - Strategic Outline Business Case (SOBC) assesses three shortlisted options

PROJECT LOCATION

The INR would be located north of Ipswich in the County of Suffolk, as shown below.



KEY
TRAINLINE - - - - - TOWN/CITY ●

The INR would provide additional connectivity between the A12 (London to Lowestoft and Great Yarmouth Road) with the nationally significant A14 trunk road which links the Port of Felixstowe with the Midlands. The proximity of Ipswich to the east coast of England and its strategic position between London, Cambridge and Norwich enhances the expected area of influence for this project.

PROJECT DESCRIPTION

The INR would provide a new strategic transport link connecting the A14 and A12 to the north of Ipswich. The project has significant potential to relieve congestion on the existing east-west links and the A14, and to facilitate movements in and around Ipswich, enabling connectivity to key routes, easing bottlenecks around Ipswich and the wider area. It would improve accessibility and is expected to enable new development, helping Ipswich to maintain its role as a key driver of economic growth.

OPTIONS ASSESSED

The Options Appraisal Report (OAR) considered a total of 32 options, including bus, rail, road, smart technology and other solutions, which could deliver better, more reliable journeys and facilitate and support the delivery of housing and employment growth across Suffolk. The project objectives were developed and refined by SCC in partnership with the local Borough and District Councils and assessed using the DfT Early Assessment and Sifting Tool (EAST). Following this assessment, three Highway Route options have been identified, and taken forward in this SOBC:

- **Outer Route** – this is the most northern option and connects the A14 near Coddenham via the A140 to the A12 at Woods Lane.
- **Middle Route** – this option is south of the outer route and connects the A14 near Claydon to the A12 at Woodbridge.
- **Inner Route** – this option is the closest to Ipswich and connects the A14 near Claydon to the A12 near Martlesham.



EXISTING PROBLEMS

The project aims to address problems in the following categories:

- Congestion and lack of network resilience
- "Rat-running" traffic on unsuitable rural roads
- Increasing traffic growth and car dependent commuting patterns
- Highway network resilience problems associated with closures of Orwell Bridge
- Noise and air pollution in the Ipswich area
- Housing demand outstripping supply in the wider Ipswich area
- Inadequate supply of affordable housing
- Widening productivity gap in Suffolk compared to the rest of the UK

In the longer term, the combination of impacts outlined above present barriers to economic growth and would have a significant impact on the region's productivity and economic growth. The road infrastructure is essential to Suffolk affecting journey quality and experience for all road users - businesses, residents, employees and tourists.

THE NEED FOR THE PROJECT

The project is needed to address existing problems of congestion in and around Ipswich, to support planned growth in housing and to unlock the long-term potential for economic growth. This aligns with the Government's strategy to continue investment in Britain's transport infrastructure to support housing and employment development and unlock future growth opportunities.

THE SITUATION WITHOUT THE INR

Without the INR, the problems of congestion, rat-running, and poor resilience of the transport network would continue and worsen. Connectivity between the A12, A14, Ipswich town centre and the rest of Suffolk would remain limited, making it difficult to accommodate housing growth, and constraining economic activity. The anticipated growth in Suffolk's population and the need to provide housing and employment would add to the problems of an already constrained housing market, if the transport network is unable to accommodate this demand.

EXPECTED BENEFITS OF THE INR

The benefits expected from the INR include:

- Reduced congestion on the local and strategic road network
- Improved journey time reliability and network resilience for all users
- Increased opportunities for sustainable travel modes
- Improved air quality and health of the population
- Potential future development of low carbon alternatives
- Enable delivery of 10,000 to 15,000 additional new homes
- Local development and economic growth within Ipswich and wider Suffolk area

POLICY CONTEXT

The project has a good strategic fit with current plans and policies at a national, regional and local level:

NATIONAL

The Government's vision, highlighted in the 2017 Transport Investment Strategy, is reflected by the INR project which would reduce congestion on the local and strategic road network, and help create a better connected, more reliable transport network for those who depend on it. The design would avoid as far as possible communities and the environmentally sensitive habitats located along the proposed routes, an important requirement of the 2019 National Planning Policy Framework (NPPF). The project would provide additional transport capacity and improve resilience, reflecting the emphasis in the National Infrastructure Delivery Plan (2016-2021) on infrastructure as a platform for economic growth.

REGIONAL

The transport strategies relevant to the East of England, East Anglia and Suffolk set out ambitious growth targets for this region. Suffolk's Local Transport Plan (LTP) (2011-2031) sets out how transport would support sustainable economic growth, an objective referred to across the other regional policy documents. The LTP describes how this would be achieved through the maintenance of transport networks, tackling congestion, improving access to jobs and encouraging a shift to more sustainable travel patterns. The INR would contribute to all these aims and would help support the expected regional growth. This is reiterated in the Transport East Strategic Transport Plan (2019), which highlights the need for enhanced transport links between the region's fastest growing places and business clusters to create an 'Energised Coastal Community'.

LOCAL

The local plans of the Borough and District Councils supporting this stage of the project share a similar vision for Suffolk - to create an accessible, economically active town that is well-connected and enables the efficient transport of people, whilst promoting healthy and active lifestyles. The strategic infrastructure priorities in the Suffolk Coastal Final Draft Local Plan (January 2019) indicate that new and improved infrastructure is key to ensuring the planned growth is sustainable. The A12 and A14 are congestion hotspots in need of investment, and there are areas with potential to attract further development if the INR is implemented. The current Ipswich Local Plan highlights the aspirations for Ipswich town as a place to live, visit, work, study and invest in. The INR would help achieve this vision. The INR is not required for the delivery of growth in the current and emerging local plans.

OBJECTIVES

Four strategic objectives have been developed for the project:

- Improve business' and people's experience of using the A14 and provide additional route resilience;
- Support the existing local economy through improved connectivity, making Suffolk the best place to do business;
- Provide additional travel options, helping to optimise existing road capacity in Ipswich, leading to environmental improvements; and
- Directly support new homes and jobs growth to ensure the future success of Suffolk.

These align closely with the objectives of the LLM programme and the government's Transport Investment Strategy. The SOBC also includes project specific objectives, which set out in more detail how the strategic objectives would be achieved.

CONSTRAINTS

The following types of constraint have been identified, and would be managed by SCC and Borough and District Councils as part of the detailed design process as the project develops:

- **Cultural Heritage** – key sites include listed properties and scheduled monuments
- **Agricultural and Greenfield Land** – proposed routes would pass through farming land
- **Transport Infrastructure** – crossing rail corridors and key connecting roads would be considered
- **Commercial and residential properties** – village centres, farms and commercial properties would need to be avoided as much as possible
- **Environmental** – air quality, noise, landscape, woodland, rivers, flood zones and biodiversity constraints have been identified and design would be sympathetic to these constraints
- **Financial** - The cost of the project would exceed local funding capacity and therefore to deliver the project, funding support would be required from the Government. A number of options have been identified that could provide the 15% local contribution
- **Public acceptability** – there is a considerable level of opposition to the project in addition to strong areas of support, at this early stage.

THE ECONOMIC CASE FOR THE PROJECT

TRANSPORT IMPACTS

The economic case adopts a holistic approach to identifying and assessing the various impacts of the project to determine the overall value for money for the route options. It considers the costs of developing, building, operating and maintaining the project, and the full range of its impacts, consistent with the level of detail available at this early stage, including those which can and cannot be monetised.

Benefits

Journey time savings are the most significant contributor to the forecast transport-related benefits of the INR. The INR is also expected to reduce greenhouse gas emissions by reducing congestion. Impacts of induced demand would be considered at the next phase of the project. Economic benefits would also arise from savings in fuel and vehicle operating costs and indirect tax revenues. Wider economic benefits from increased business output are calculated and used to produce an adjusted value of the benefits. These economic benefits represent the economic value of the project to society.

Costs

The benefits have been compared with the whole life economic costs of the project (over the DfT standard of 60 years), including design, land and construction costs and future maintenance costs. The economic costs include allowances for risk and optimism bias. They represent the economic cost to society of delivering and maintaining the scheme.

Benefit-cost ratio (BCR)

The three route options have been assessed in accordance with DfT's Transport Appraisal Guidance (TAG). In the appraisal, both costs and benefits over a 60-year appraisal period are adjusted to 2010 prices and values and discounted to 2010, enabling the DfT to compare prospective schemes on a level playing field when making funding decisions.

The present values of benefits, costs, BCR and adjusted BCR for each of the three options are shown below:

£000's	Outer Route	Middle Route	Inner Route
Initial Present Value of Benefits (PVB)	352,480	514,274	611,425
Present Value of Costs (PVC)	272,446	300,091	306,980
Initial Net Present Value (NPV)	80,013	214,183	304,445
Initial BCR	1.3:1	1.7:1	2.0:1
Adjusted Present Value of Benefits (PVB)	362,091	528,177	628,697
Adjusted Net Present Value (NPV)	89,625	228,086	321,717
Adjusted BCR	1.3:1	1.8:1	2.1:1
Value for money category	Low	Medium	High

The Inner Route would deliver the greatest benefits relative to costs, with a BCR at 2.1:1. This represents high value for money, assessed in line with the guidance. Depending on the option, the value for money category could be "Low" (Outer Route), "Medium" (Middle Route) or "High" (Inner Route). The high value for money of the Inner Route is facilitated by the route's proximity to both Ipswich town centre and the existing A14 bypass to the south of Ipswich. The INR supports the local road users making shorter trips on the local east/west network.

Sensitivity analysis undertaken shows that the project occupies a strong likelihood of achieving 'Medium' value for money, under a range of circumstances, with the potential for this to achieve 'High' for the Inner Route. If the project progresses to the OBC stage, further assessments to determine value for money would be carried out.

ENVIRONMENTAL IMPACTS

Using TAG's recommended 7-point scoring system, each of the three shortlisted route options has been scored against the following impacts:

- Noise
- Air Quality
- Greenhouse gases
- Landscape
- Historic environment
- Biodiversity
- Water Environment

The table below presents a summary of the findings of the early desktop environmental impacts appraisal of the three corridors for each of the above.

Option	Noise	Air Quality	Greenhouse Gases	Landscape	Historic Environment	Biodiversity	Water Environment
Outer Route	Slight Adverse	Slight Adverse	Neutral	Moderate Adverse	Large Adverse	Large adverse	Slight Adverse
Middle Route	Slight Adverse	Slight Adverse	Neutral	Moderate Adverse	Moderate Adverse	Large adverse	Moderate Adverse
Inner Route	Slight Adverse	Slight Adverse	Neutral	Moderate Adverse	Moderate Adverse	Large adverse	Moderate Adverse

The scoring guide used to conduct the environmental option appraisal is presented below:

- Beneficial (Slight, Moderate and Large): The proposed option is expected to have a positive impact.
- Neutral effects: The proposed option is not expected to have noticeable change on the environment.
- Slight Adverse (negative) effect: This may require additional standard mitigation measures.
- Moderate Adverse (negative) effect: This may require a change in design or the implementation of additional specific mitigation measures.
- Large Adverse (negative) effect: The proposed option is very likely to require a change in design in addition to the implementation of standard mitigation measures.

THE FINANCIAL CASE FOR THE PROJECT

The costs of each option have been estimated and include:

- Construction Contracts
- Design Investigations, Surveys, Procurement, Supervision and Client Costs
- Statutory Undertakers Works
- Land and Compensation

The costs in the financial case include allowances for risk (10%) and inflation, but not optimism bias, and are expressed at out-turn (completion) prices. They represent the amount of money that would need to be spent in order to deliver the project.

Subject to funding and planning consents, the earliest the project could be delivered is by the financial year 2027/2028, with the opening date in late 2027. Some land and compensation costs would be incurred after that date.

The costs associated with each option are set out below. Cost estimates would be revised following selection of a preferred option and detailed design.

Project Elements	Outer Route (£,000)	Middle Route (£,000)	Inner Route (£,000)
Construction Contracts	176,316	195,983	203,842
Design Investigations, Surveys, Procurement, Supervision and Client Costs	52,898	58,793	61,152
Statutory Undertakers Works	13,224	14,699	10,191
Land and Compensation	15,700	14,800	15,300
Risk (10%)	25,815	28,428	29,052
Adjustment to out-turn (inflation)	58,257	64,061	65,518
Project Cost (out-turn prices)	342,210	376,764	385,055

The INR would be a major new route which would result in operation and maintenance requirements. All maintenance and operation costs would be fulfilled as part of the maintenance regime operated by SCC. The average cost per annum would be circa £710,000 in current prices.

Currently the main source of funding (85%) identified to deliver this project is the DfT's Local Large Majors (LLM) fund. The rest of the funding would comprise of funding from SCC, although SCC and the supporting district councils are willing to discuss alternative funding methods with the Department to increase the contributions of match funding locally or via third parties. As the project develops potential funding routes would be considered further.

THE COMMERCIAL CASE FOR THE PROJECT

The project is commercially viable with a robust contracting and procurement strategy. The commercial viability of the project is important for ensuring that the project is delivered within budget and the opportunities exist to maximise the development and economic objectives associated with the project. The future economic prosperity of Suffolk would be used as an indicator to determine the success of the INR project.

At this early stage, the commercial case for this SOBC is limited and no formal document for procurement has been produced. It is expected that project would use an OJEU 'restricted procedure' procurement tendering process, which has been utilised by SCC on other large-scale transport infrastructure projects. The UK Government Construction 2025 strategy recommends that projects such as this one should be procured using a two-stage approach with Early Contractor Involvement. For the construction contract to be tendered, the detailed design needs to be completed.

The main objective is to ensure that the project is delivered within budget and maximises the opportunities to achieve the economic objectives associated with the INR project. The method of procurement for this project has not yet been developed.

The construction contract would include clauses to facilitate the transfer of appropriate risks from the Council to the contractor, such as risks associated with construction costs increasing above those predicted in the financial case.

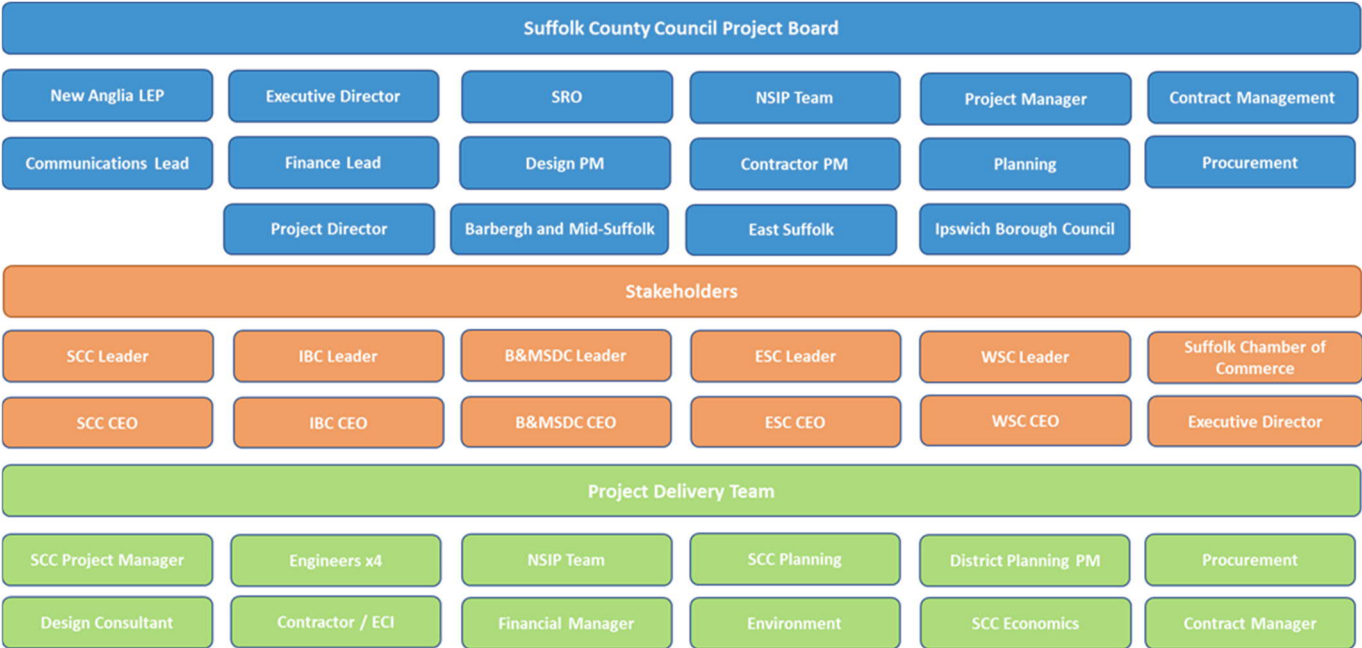
THE MANAGEMENT CASE FOR THE PROJECT

EXPERIENCE

The delivery of the project would build upon experience gained with several major highway and transport schemes delivered by SCC in recent times.

GOVERNANCE

A well-functioning governance structure would be crucial to the successful delivery of the project. SCC would establish a Project Board, a Project Delivery Team and a Stakeholder Group to work together to successfully deliver the project. The high-level governance structure for the project is illustrated below. As the project develops members of staff would be assigned to the roles identified.



PROGRAMME

A project programme has been developed setting out all the key project tasks and their duration, the interactions between each of the tasks, and key milestones. The earliest that construction could begin is 2024, with estimated completion by the end of 2027, subject to approvals and funding.

CONSULTATION AND ENGAGEMENT

Stakeholders who are likely to be affected by the project, or who have the potential to influence the outcome, would be consulted as the project progresses to help guide option development. The individual/groups of stakeholders consulted includes:

- Department for Transport (DfT)
- Local authorities and councillors in Suffolk, i.e. borough, district, town and parish councils
- Highways England
- Network Rail
- Local MPs
- Local businesses including Utility companies and Freight Transport Association
- New Anglia Local Enterprise Partnerships (LEP)
- Landowners
- Statutory bodies, i.e. Environment Agency, Natural England, Historic England
- Interest groups and societies, i.e. environment, cycling, Ipswich Society
- Education
- Residents and community members including minority groups
- Developers

Respondents in favour of the project, were focussed in and around Ipswich, these areas would benefit directly from the project and experience limited negative impacts. Some key stakeholders, including Suffolk Chamber of Commerce and Ipswich Borough Council were also very supportive of the project and the economic and transport benefits it would bring. There is also a high level of opposition from some individuals and groups. The results of the consultation are summarised in the Management Case.

RISK

At this early stage of the business case development, the project risks have been assessed and a risk register prepared to quantify the risks. Risks have been identified during multi-disciplinary discussions with technical experts and a project risk register has been produced. The risk management strategy is in line with the HM Treasury Green Book's four-stage process, as outlined below:

- Identification of risk
- Quantification of risk- assessing the impacts and likelihood of risk
- Establish response plan and responsibilities
- Implement and review

The adoption of this strategy is to ensure that there is an ongoing review of the risk register to ensure that mitigation is identified, and updates are made if necessary and effective controls are implemented during project development and delivery. The project risks have been scored based on their likelihood and severity and appropriate mitigation proposed as a result.

CONCLUSION

The outcome of the DfT assessment of options indicates that there is a case for continuing to develop the INR project. There is a clear need to address existing problems of congestion and delay, to support planned housing development without making existing problems worse, and to stimulate economic activity and growth. This SOBC has identified options to provide additional capacity that would address this need. The project aligns well with local, regional and national policy objectives. Clear objectives have been set, and extensive option assessment undertaken to identify three potential routes.

A detailed economic assessment shows that the project would offer value for money in economic terms to society, justifying the expenditure.

Subject to funding approval, the project would be affordable and commercially deliverable. A management structure has been identified that could develop and in due course deliver the scheme, with a robust approach to the management of risk. Extensive first stage/early consultation has already taken place. If the project continues there would be ongoing engagement relating to a preferred route and developing a design that is sensitive to community and environmental issues.

Suffolk County Council announced a Climate Emergency in March 2019, after work commenced on the SOBC. Therefore, this will be a key factor when considering whether or not to progress with the project.