Suffolk County Council

IPSWICH NORTHERN ROUTE

Economic Narrative

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Suffolk County Council

IPSWICH NORTHERN ROUTES

Appendix D - Economic Narrative

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Introduction

The purpose of this economic narrative is to set out the expected economic and other wider impacts of the Ipswich Northern Routes (INR) scheme and to outline the proposed appraisal methods which will be used to assess these impacts and capture any scheme benefits. The narrative covers the following:

- The economic context in Suffolk and Ipswich;
- The public policy context in relation to the scheme;
- The expected impacts of the scheme; and
- The scheme appraisal methodology.

Ipswich is both a non-metropolitan district and a county town in Suffolk. It is located at the crossroads of the A12 London to Great Yarmouth road and the A14 trunk road linking the Port of Felixstowe with Cambridgeshire and the Midlands. In the 2011 Census, the town had a population of 133,384[1], which makes Ipswich the largest district in Suffolk and the fourth largest conurbation in the East of England.[2] As it is located between Cambridge and Norwich, the town is well positioned geographically to benefit from other nearby local economic centres of activity. Similarly, it is well positioned to benefit from and support growth at the Ports of Lowestoft and Felixstowe as well as providing a supply of labour and a market for goods and services.

Ipswich also continues to feature as one of the fastest growing towns in the UK in terms of population and annualised Gross Value Added (GVA) per head. This level of growth is such that it has outpaced nearby Norwich[3]. Economic activity is especially strong in regionally important sectors, such as finance, professional services, tourism, and the ports and logistics sectors. The town is home to a large concentration of national and international insurance companies – with a particular specialism in maritime insurance, and it has the UK's largest port for grain export[4]. Ipswich's proximity to the east coast of England, to Areas of Outstanding Natural Beauty and a strong night-time economy also means that the tourism and associated sectors (accommodation and food service sector) are strong. T

The growth in population is set to continue. In the Ipswich Strategic Planning Area (ISPA)[5], for example, there is forecast to be an additional 15,000 dwellings, as well as significant regeneration of existing neighbourhoods in the town centre (where the highest levels of employment growth are expected). These developments, as well as those elsewhere in Suffolk, will put additional pressure on key strategic routes (such as the A12 and A14) in and around Ipswich. These routes already experience significant congestion and delay; this growth is therefore likely to exacerbate the current transport problems, and constrain economic growth.

An Ipswich northern route (as described within the Strategic Outline Business Case) will provide crucial additional capacity, relieving pressure on existing east-west links (and the A14) as well as facilitating movements in and around the north of Ipswich. The proposed bypass will link the A14, which is part of Highways England's Strategic Road Network (SRN), and the A12. The A14 trunk route links the Port of Felixstowe, which is the UK's largest container port handling over 40% of the UK's containerised trade, with the Midlands. The A12 is a key north-south road that connects London to Lowestoft.

The scheme, depending on the selected option, will also enable the delivery of both full market-priced and affordable housing in the northern parts of Ipswich, where Ipswich Borough Council designated approximately 195ha of land for redevelopment. The new Ipswich Garden Suburb will comprise three new neighbourhoods, approximately 3,500 dwellings (of which 31% will be affordable) and associated amenities. The INR will therefore support housing

[1] Office for National Statistics (2011), 2011 Census

[2] Office for National Statistics (2011), 2011 Census: Characteristics of Built-Up Areas

[3] Irwin Mitchell Solicitors (2018), UK Powerhouse The Consumer Economy 2018/2019

[4] New Anglia Local Enterprise Partnership (2017), Strategic Economic Plan

[5] The Ipswich Strategic Planning Area covers the geographic areas of Ipswich Borough Council, Babergh District Council, Mid Suffolk District Council and the former Suffolk Coastal District area of East Suffolk Council (the Ipswich Housing Market Area and Ipswich Functional Economic Area).

development, remove capacity constraints that currently exist on local roads, and accommodate newly created demand.

Economic Context of Suffolk and Ipswich

Suffolk

Suffolk's economy has been on a steady growth trajectory since 2010: the county's GVA per head index grew by 2.6% on average between 2010 and 2017, outpacing nearby Norfolk and the East of England as a whole. The sustained growth is the by-product of higher overall economic activity and growth in the number of high skill jobs in the county. Between January 2010 and December 2017, Suffolk added 18% more National Vocational Qualification Level 4 or above (NVQ4+) jobs compared to Norfolk. However, the proportion of workers educated to NVQ4+ in Suffolk is still lower than the national average[5].

The lower proportion of highly educated employees is also the result of a buoyant services sector, with typically lower-value and lower-paying customer and client-facing services. Sectoral growth here accounted for 3 in 10 additional jobs since the recession, and this trend is likely to continue, with up to two-thirds of all jobs in Suffolk by 2036 expected to be in low pay industries[6].

In terms of wage growth, although Suffolk has been struggling with sluggish growth, increases in earnings have been slightly stronger than the UK average. For the median Suffolk resident in full-time employment, however, earnings are still below what they were in 2010[7]. Longer term evidence suggests that this might be due to wage growth at the opposite ends of the earnings spectrum – i.e. in higher-skilled roles and lower value customer service positions – and the declines in mid-skilled, labour-intensive jobs.

Spatially, job growth in Suffolk since 2010 has centred around established urban cores and traffic arteries. The A12 and A14 corridors have become increasingly important, due to the Greater Ipswich area seeing solid growth in total jobs and due to the growing importance of other regional urban centres such as Bury St. Edmunds and Cambridge. To some extent, spatial changes have been occurring due to city centre jobs moving out (the 'doughnut effect'), relocating to business parks and out-of-town workspaces, as well as ancillary services supporting the growing population around urban centres.

Additionally, there is a degree of insularity in terms of commuting into and out of Suffolk, despite the relatively close proximity to the job markets of Greater London and the South East. This is because the majority of Suffolk residents work and live in the county, as shown in Figure 1. The compound effect of growing regional urban centres, existing employment and commuting patterns, and envisaged economic growth mean that the role of existing transport links is likely to grow in the future. [8]

[5] New Anglia Local Enterprise Partnership (2017), Economic Evidence Report

[6] Ibid.

[7] Ibid.

[8] New Anglia Local Enterprise Partnership (2017), Economic Evidence Report

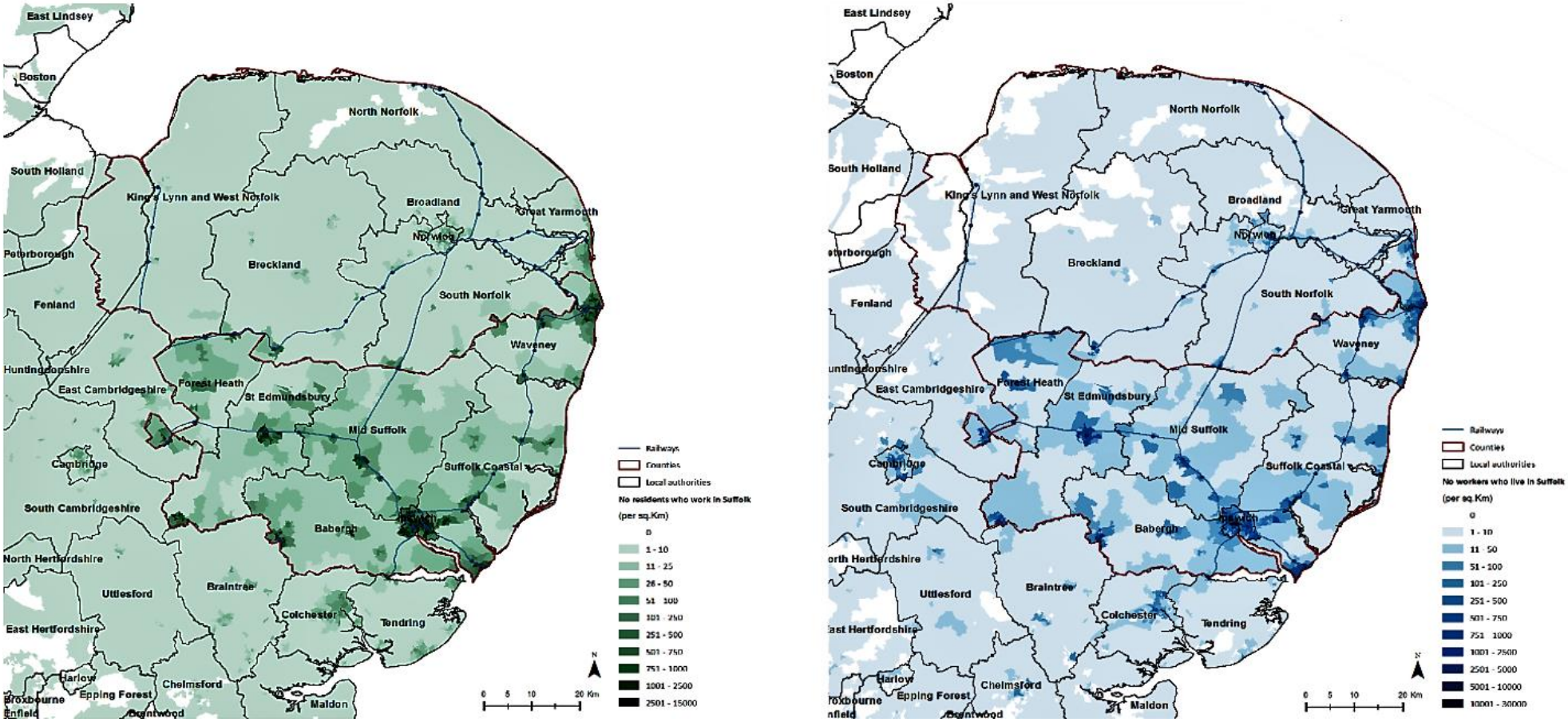

Figure 1: Where Suffolk residents work (left-hand side) and where Suffolk workers live (right-hand side), 2017

Historically, the Norfolk-Suffolk cluster of economic activity has had strong trade links with international markets, albeit the value of the cluster's export market is comparatively small: export value per job is less than half of the LEP average in England and about 40% smaller than that of nearby Greater Cambridge and Greater Peterborough LEP[9]. This is due to the high share of low value bulk products in the agricultural and food and drinks sectors, where food and live animals account for almost three-quarters of all local goods exports[10].

Conversely, in terms of attracting Foreign Direct Investment (FDI), Norfolk and Suffolk have displayed a relatively strong recent record compared to large parts of England, including 'powerhouse' areas such as Oxfordshire, Greater Cambridge, Greater Peterborough and the home counties. Inward investment was led by the buoyant energy and advanced engineering and manufacturing sectors, ensuring that the two counties had the second-highest ratio of jobs created per individual FDI project in the country between 2013 and 2015[11].

Ipswich

Ipswich and the Greater Ipswich area is the largest conurbation in Suffolk and a key economic driver in the wider sub-region. The town is home to the UK's busiest grain export port, a nationally significant ICT cluster at Adastral Park, a growing cluster of finance, insurance, and legal services firms, and it is ideally located to support port and logistics-related operations at the Port of Felixstowe. The town centre is a hub for office-based activity, retail and leisure with the areas around the university and the port also being important centres of economic activity.

The town is one of the fastest growing urban centres in England: economic activity (expressed as growth in GVA) has been outpacing other 'powerhouse' areas and UK averages in the last two quarters, with the trend expected to continue in 2019[12]. Over three-quarters of Ipswich's economically active population are employed, and jobs density data shows that the number of jobs per person is in line with the national average. Retail, finance, education and public administration are the largest employment sectors whilst there is significant growth potential in high value-added sectors, such as advanced manufacturing, ICT, biotechnology, and agri-tech, building on existing business and knowledge centres[13].

Economic growth is expected to be accompanied by sizeable population growth: in the 12-year period between 2014 and 2036, it is estimated that the population of Ipswich will grow by 34,021. This represents approximately one third of the town's population at the 2011 Census[14]. The influx of new residents necessitates an ambitious housing delivery profile, which annually will bring 40% more dwellings to the market between 2014 and 2036 compared to the previous period between 2001 and 2013[15]. A large proportion of these new homes have been developed in the central areas of Ipswich, where much of the recent redevelopment and regeneration in Ipswich has been concentrated in recent years. However, due to the lack of land available for redevelopment within the tight urban boundary of Ipswich, future growth of the town will concentrate on greenfield sites on the periphery of the town. The largest of these developments will be the Ipswich Garden Suburb scheme.

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[9] New Anglia Local Enterprise Partnership (2017), Economic Evidence Report

[10] Ibid.

[11] Ibid.

[12] Irwin Mitchell Solicitors (2018), UK Powerhouse The Consumer Economy 2018/2019

[13] New Anglia Local Enterprise Partnership (2017), Strategic Economic Plan

[14] Office for National Statistics (2011), 2011 Census

[15] Ipswich Borough Council (2018), Ipswich Housing Report

The current spatial distribution of economic activity in the Ipswich Economic Area (IEA) – which comprises Ipswich, Babergh, Mid Suffolk, and Suffolk Coastal Suffolk – centres around Greater Ipswich, the A12 and A14 trunk roads. It is estimated that commercial and industrial activity in Suffolk will expand at these employment hubs between 2016 and 2036, hence the relative importance of Ipswich in the regional economy will continue to grow[16]. The town is expected to add half of all new jobs and one quarter of all new housing in the IEA. This growth will require enhancements to be made to the existing highway network to deliver the strategic priorities outlined in Ipswich Borough Council's Economic Development Strategy[17]. These are as follows:

- Strategic Priority 1 – Promote Ipswich as a prominent and sustainable place to invest and grow businesses;
- Strategic Priority 2 – Stimulate a successful town centre and retail experience;
- Strategic Priority 3 – Inspire Ipswich to be the best place to live, work, learn and visit; and
- Strategic Priority 4 – Prioritise Ipswich's Strategic Infrastructure.

Concurrent with the economic growth, it is expected that traffic levels along the key roads in the area could grow by as much as 15% in the 10-year period until 2021[18]. This will result in greater levels of congestion, more delays, and a consequent deterioration in air quality. Due to additional local, Ipswich-bound traffic on the A12 and A14 trunk roads, further pressure will be placed on these key regional links, degrading network resilience in Suffolk. A large proportion of economic activity is concentrated along the SRN, therefore economic performance will be impacted by worsening traffic conditions, not only in Ipswich and neighbouring employment areas, but further afield as well. Overall, the likely impact of forecast traffic growth in and around Ipswich will be higher transport costs for road users, lower economic efficiency, and restricted local and regional economic growth.

Due to the strategic importance of the road network for the regional economy, ensuring the local road network has sufficient capacity to accommodate new local, Ipswich-bound traffic on the network is of great importance for the whole of the region.

The Suffolk Public Sectors Leaders group therefore engaged in a process to assess three indicative broad highway routes to the north of Ipswich, which will add additional highway capacity for local traffic, as well as capacity for through traffic travelling between the Port of Felixstowe, the east coast of England, and Cambridgeshire.

Public Policy Context in Relation to the Scheme

As an important regional hub, Ipswich attracts and generates high levels of vehicular traffic, which poses a growing challenge for the wider urban area. Alongside areas with high economic growth and/or growing population levels such as Bury St Edmunds, Felixstowe, and Stowmarket, Ipswich has been identified as a key centre of growth where transport interventions can have a significant impact. Some of these growth opportunities have already been estimated: a study for the East of England Development Agency (EEDA) from 2008 monetised the estimated impacts of congestion and found that it will cost the Ipswich economy approximately £17 million per year by 2021[19].

Highways England, in their East of England Route Strategy from March 2017[20], corroborated the EEDA's findings and found that congestion is an issue on various parts of the road network in the wider Ipswich area, leading to journey time reliability issues which in turn act as constraints on economic growth in the region. If Ipswich, and the wider Norfolk-Suffolk-Cambridgeshire cluster, keeps on growing at current forecast rates, employment and housing growth and resulting traffic levels will put extra pressure on existing road links and interchanges.

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[16] Lichfields (2017), Ipswich Economic Area Sector Needs Assessment Final Report

[17] Ipswich Borough Council (2018), Local Plan

[18] Suffolk County Council (2011), Suffolk Local Transport Plan 2011-2031 Part 1 – Transport Strategy

[19] Suffolk County Council (2018), Transforming Cities Fund Application form

[20] Highways England (2017), East of England Route Strategy

To improve network resilience, a northern relief road with three indicative broad alignments has been proposed (the INR), linking the A12 and A14 trunk roads to the north of the Greater Ipswich area. The scheme would directly support the northern fringes of the town where a large proportion of the housing developments will be focused, while also supporting through traffic and traffic on the radial routes towards employment areas in the town centre.

The scheme is supported by the New Anglia LEP, East Suffolk Council, Suffolk County Council, Suffolk Chamber of Commerce, West Suffolk Council, Babergh and Mid Suffolk District Council and Ipswich Borough Council. The table below contains the relevant policies and strategies and summarises their connection to the scheme.

Table 1: Local Policies relevant to INR

Policy/Strategy	Relationship to scheme
Highways England (2017): The Road to Growth – Our strategic economic growth plan	Sets out Highways England's role in economic growth, identifying four strategic economic roles. The scheme will support the majority of these roles, especially around increasing business productivity and competitiveness and providing efficient routes to global markets through international gateways such as the Port of Felixstowe and the Port of Ipswich.
Highways England (2017): East of England Route Strategy	Describes the current traffic constraints, challenges, and their effect on productivity and the environment in the region. The region is heavily reliant on the A12 trunk road, which provides north-south access for commuters and business users to the labour markets of London, Colchester, and Ipswich, as well as access to the rest of the regional SRN. The A12, like the rest of the regional road network, struggles with demand and safety related issues – these are caused by higher overall demand, congestion/traffic queuing, as well as delays caused by accidents. The INR would help create crucial east-west capacity and thus relieve the A14 to the south of Ipswich where the A12 and A14 trunk roads meet and where there are several pinch points on the SRN in Suffolk.
New Anglia LEP (2014): New Anglia Strategic Economic Plan	Describes existing road network conditions in the Ipswich area that the scheme would help address. The Plan argues that the impact of congestion is worse connectivity and lower economic growth in Suffolk – it is estimated that eliminating congestion from the local section of the A14 alone would enable up to £509 million additional local GVA per annum. The INR will help create east-west capacity and thus relieve congestion on the A14 to the south of Ipswich.
New Anglia LEP (2018): Integrated Transport Strategy for Norfolk and Suffolk	Identifies the scheme as a key element in delivering a more reliable Major Road Network and better overall connectivity in the region. The LEP argued in its Transport Strategy that improving strategic connectivity is necessary to launch Norfolk and Suffolk as competitive clusters on the global markets. In the LEP's estimation, the INR scheme would help deliver a more reliable road network, helping to facilitate better connectivity to regional labour markets and key infrastructure.
Suffolk Coastal District Council (2019): Suffolk Coastal Local Plan	Describes current and future constraints given forecast growth occurs, arguing that cross boundary projects such as the INR necessary to improve strategic infrastructure, to enable long-term economic growth, and to increase the quality of life in Suffolk. It also expresses the district council's support in working with Suffolk County Council to develop the scheme further.

Suffolk County Council (2011): Local Transport Plan	Detailed account of the current transport issues in Suffolk and Ipswich, identifying the need for traffic mitigation in the northern part of Ipswich, which has been identified as an important area for economic and housing growth over the current planning period. The transport plan estimates the scheme will have both localised and wider regional effects: it will help enable housing growth in Ipswich and in Suffolk Coastal on the eastern fringe of Ipswich, and, as part of an integrated transport plan, it will relieve demand pressures on radial route and help tackle localised air pollution.
Ipswich Borough Council (2017): Local Plan	Identifies the northern edge of the Ipswich urban area as land locked for development and argues that alternative capacity should be provided to accommodate new traffic. Expresses the council's support for the scheme in encouraging key partners to investigate the possibility of a northern route.
Ipswich Borough Council (2018): Economic Development Strategy	Details that the strategy will support HM Government's Industrial Strategy and New Anglia LEP's economic development priorities. Establishes that the Council will actively promote the Northern Route to provide strategic infrastructure for a growing Ipswich.

Scheme Impacts

The scheme will introduce a new dual carriageway between the A12 and A14 trunk road to the north of Ipswich. The extra capacity is expected to relieve pressure on the orbital and radial routes around the town and make it easier for through traffic to enter and clear the road network around Ipswich. The expected capacity benefits will translate to time savings for all road users with the expected benefits per road user class described below.

Commuters Trips

Suffolk County Council's Local Transport Plan identified three key employment sites in the wider Ipswich area: the Port of Felixstowe, Martlesham Heath business campus, and Ransomes Europark[21]. All three employment sites are situated along the already congested A12-A14 corridor, which currently makes commuting to and from these areas susceptible to travel time uncertainties. The proposed Northern Relief Road would create extra orbital capacity, making east-west and north-south movements linking regional labour markets easier, as well as shortening commuting trips and making them more predictable. Although decreased travel times will lower the cost of travel, thus allowing commuters to maximise consumer welfare, the new road is also likely to create additional demand. Currently, east-west trips to the north of Ipswich are likely to pass through the town centre or the radial routes and experience travel time delays. By allowing quicker orbital journeys, the INR will make east-west travel faster and more reliable for existing road users.

Business Trips

Business users are also likely to benefit from the scheme: the extra road capacity provided is likely to result in shorter journey times to key employment sites situated along the trunk road network, while Ipswich-bound business trips are likely to have easier radial access to the town centre due to lower traffic levels on local roads currently used to make through trips. Additionally, the INR will also make it easier to reach nearby regional urban areas and business hubs in Norwich and Cambridge, providing a more efficient connection between the A12 and A14 trunk roads. Lower journey times for business users will have a positive effect on the production function of firms who rely on the trunk road network around Ipswich. Distribution / transport costs will fall and the productive efficiency of other inputs (mostly labour) will increase due to the decreasing time costs, which would likely result in higher productivity.

Leisure/Tourism Trips

Tourism plays an important role in the regional economy. There is a wide variety of popular locations in Suffolk, which makes the area attractive to visitors, as well as making tourism one of the pillars of Suffolk's rural economy. Traffic generated by tourism can lead to localised congestion, exacerbating local noise and air pollution. This is a particular problem for the Suffolk Coastal area where many of the region's most frequently visited sites are[22]. Congestion on major routes discourages people from travelling to the area and this has an adverse knock-on impact on the local economy. Given that tourism is an important sector in Suffolk's economy, if visitors choose not to visit the area as a result of continued delays on the A12 and A14, this will have a damaging, long-term impact on local businesses reliant on the visitor economy. It is understood that the proposed northern road link will help tourism traffic from western Suffolk reach the east coast in much shorter journey times.

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[21] Suffolk County Council (2011), Suffolk Local Transport Plan 2011-2031 Part 1 – Transport Strategy

[22] Suffolk County Council (2011), Suffolk Local Transport Plan 2011-2031 Part 1 – Transport Strategy

Wider Economic Impacts

It is estimated that the East of England economy will grow at 1.9% per annum between 2018 and 2028, which is the second highest growth rate among the English Nomenclature of Territorial Units for Statistics (NUTS) 1 statistical regions behind London[23]. This growth will be driven by existing economic activity and the expanding green energy markets on the east coast of England. By providing
extra capacity on the SRN and by providing easier access to regional employment clusters, the INR scheme will have an important role in enabling the projected growth of the regional economy.

Continued economic development is dependent on attracting new businesses and increasing the productivity of existing firms. It has been recognised by regional and local governing bodies that the current state of major transport links in the Norfolk-Suffolk area and, more specifically, in the Greater Ipswich area is a constraint to development.

These constraints result in delayed journeys and higher generalised cost for road users. High generalised costs in turn result in inefficient markets – with lower accessibility or agglomeration benefits (achieved from clustering), as well as a suboptimal formation of clusters in the region, as relative distance between firms and employment areas increases. By providing extra capacity on the SRN and allowing it to operate with higher resilience and reliability, the INR scheme is likely to help increase productivity and facilitate economic growth.

Overall, the scheme's most pronounced effects are estimated to be in the Greater Ipswich region, where the new road will relieve congestion on the A12-A14 corridor in the town's vicinity, allowing some of the traffic from congested radial routes leading to the town centre to reroute, aiding residential development in the town.

Due to the reduced congestion and quicker, more reliable journeys, the scheme will likely provide easier access to key employment sites in Suffolk and Norfolk, as well as further afield in Cambridgeshire and Greater London. Lower overall traffic levels will also allow strategically important hubs – such as the Port of Felixstowe, the East of England Energy Zone, research parks and universities – to expand whilst also facilitating increases in productivity.

It is likely that firms in the Ipswich Economic Area will not only benefit from clustering, higher density, and higher economies of scale, but also from unlocking of new land for development, residential and commercial, either at existing or new sites.

Changing existing land use to more productive uses will enable businesses to expand their operations and local labour markets to be more concentrated spatially, decreasing the distance between employees and employers. The INR would therefore increase the economic value of the land in the vicinity of the scheme and is likely to induce new interactions between consumers and firms, resulting in changes in the level and location of economic activity in the IEA – this means that transport user benefits will not fully capture all welfare effects in secondary markets, and an estimation of wider economic impacts is therefore necessary.

Environmental and Social Impacts

Road transport is a significant source of NO2 and particulate pollution in Norfolk and Suffolk: Air Quality Annual Status Reports by district councils in the region indicate that rural areas have generally good air quality, while urban areas and areas near roads are negatively affected by vehicle emissions. Based on information available from the National Atmospheric Emissions Inventory, the majority of Ipswich town centre and the road network around Greater Ipswich experience high levels of particulate pollution. The highest emission levels are recorded around pinch points on the A12-A14 corridor to the south of Ipswich and on the A14 to the west of Ipswich.

It is recognised by Ipswich Borough Council that existing traffic patterns and the resulting poor air quality in the town are closely linked to highway capacity issues, as flow constraints and poor traffic management result in congestion,

[23] House of Commons Library (2019), Briefing Paper Regional and country economic indicators Nr. 06294

which may have an adverse effect on people's health[24]. Alternative transport measures – such as traffic management, public transport network development, and addressing road capacity issues – are necessary to reduce pollutant levels, and it is expected that the INR will help address some of the underlying issues affecting air quality in the Ipswich region.

However, a new northern link will not only add extra capacity to the SRN, but it will also induce new car traffic created by the new housing development in the road's vicinity on the northern and eastern fringes of Ipswich. Expected population growth coupled with the current lack of orbital public transport options to the north of the town means that if no public transport measures are implemented, new residents will likely rely on cars which will result in a large number of new trips. Pollution levels where the new relief road is likely to be are low compared to Ipswich-wide levels, and the INR, when operational, will increase the concentration of harmful gases and particulates in the vicinity of the scheme.

The scheme is expected to have a number of other environmental and social impacts and will include mitigation to limit the negative impacts of the road scheme on the surrounding environment and communities.

[24] Ipswich Borough Council (2018), Local Plan

Economic Appraisal Methodology

The appraisal process will be undertaken in accordance with DfT's TAG Unit A1.1 'Cost-benefit analysis' (May 2018) and Value for Money Framework (July, 2017).

The estimated impacts of the scheme identified in the previous section will be appraised using quantitative and qualitative methodologies, based on the established methods in DfT's three levels of analysis.

The three levels are differentiated on the basis of their maturity and analytical techniques:

a. Level 1 includes impacts that assume fixed land use, excluding wider economic impacts.

b. Level 2 includes wider economic impacts that assume fixed land use (connectivity impacts) or do not require land use change to be explicitly quantified.

c. Level 3 includes analysis in which either land use change is explicitly quantified (structural impacts) or supplementary economic modelling has been conducted.

At the Strategic Outline level of business case development, Level 1 and limited Level 2 analysis will be conducted. To capture the full extent of expected economic benefits, including wider economic impacts, additional economic modelling will be necessary. Table 2 identifies the expected economic impacts of the scheme and the methods used to capture them. A more detailed explanation of the methodology can be found in the Appraisal Specification Report which follows the guidance set out in the DfT's Transport Appraisal Guidance (TAG), which outlines how appraisal should be undertaken.

Table 2: Proposed appraisal methodology and rationale

Analysis level	Scheme Impacts	Selected appraisal method	Rationale
Level 1- Initial BCR	**Journey times and vehicle operating costs**	*Monetised* – Transport Users Benefit Appraisal ("TUBA") software applied to results of Strategic Transport Model.	TUBA is an established method of calculating user benefits for transport schemes based on economic welfare analysis
	Greenhouse gas emissions	*Monetised* – WebTAG Unit A3 method applied to results of Strategic Transport Model	WebTAG specifies an established method to estimate changes in greenhouse gasses
	Government tax revenues	*Monetised* – Transport Users Benefit Appraisal ("TUBA") software applied to results of Strategic Transport Model.	TUBA is an established method of estimating tax revenue changes for transport schemes based on economic welfare analysis
Level 2 - Adjusted BCR	**Output change in imperfectly competitive markets**	*Monetised – A 10% uplift will be applied on top of business user benefits*	WebTAG specifies this an established method of capturing the welfare impacts of output change for a scheme
Level 3 – Non-monetised impacts	**Environmental and social impacts felt by local communities**	*Qualitative* – Qualitative WebTAG A3 method undertaken for the following impacts: air quality, noise, townscape, historic environment; biodiversity; water environment; physical activity; journey quality; security; affordability; severance; option and non-use values	This initial qualitative assessment will be enhanced at OBC stage of the business case

An Appraisal Summary Table and a Value for Money (VfM) statement will be prepared in accordance with WebTAG requirements. These will provide concise summaries of the economic, social, environmental and public account impacts that the proposed transport interventions may have, determining a concluding Benefit Cost Ratio (BCR).

Impacts not covered during SOBC appraisal

SAFETY BENEFITS

We are not proposing to undertake safety benefit analysis (using COBALT) at this stage (SOBC).

JOURNEY TIME RELIABILITY

Reliability impact will not be appraised at SOBC stage, but will be appraised at OBC and FBC stages. This impact will be appraised in line with WebTAG Unit A1.3, Section 6.3 (Reliability – urban roads) based on the calculation of the standard deviation of journey times from journey time and distance for each O-D (origin-destination) pair.

WIDER ECONOMIC IMPACTS

The proposed methodology for the SOBC includes the estimation of some wider economic impacts in the form of output change in imperfectly competitive markets. However, a full wider economic impact appraisal will not be undertaken at the SOBC stage. It will be undertaken at the OBC stage and is likely to use Wider Impacts in Transport Appraisal ("WITA") software using outputs from the scheme Transport Model. The following wider economic impacts may be relevant at the OBC stage:

- Agglomeration impacts;
- Labour supply impacts (given the proposed scale of development);
- Dependent development; and
- Move to more / less productive jobs.

It is acknowledged that exclusion of these wider impacts will reduce the potential benefits which can be captured at the SOBC stage and this is why it is proposed to undertake the full analysis at a later stage of the project (OBC).

ADDITIONALITY MODELS / LAND VALUE UPLIFT

Depending on the option shortlisted for development, INR will support the Ipswich Garden Suburb project, and thus it could enable housing delivery in Greater Ipswich and a major northward extension of the Ipswich urban core. As land is put to more productive use at the sites with new development, a boost to consumer welfare is expected. To estimate the marginal welfare gains generated by the changing land use, land value uplift will be calculated; for this purpose, MHCLG's Ready Reckoner Tool will be used at the SOBC stage. If the business case development progresses further to the OBC stage, a bespoke model will be developed to estimate the extent of land value uplift and additionality, enabling a more detailed analysis of the INR scheme's effect on welfare gains.

The rationale to land value uplift analysis is provided by existing market distortions in Ipswich. In the period after the adoption of the 2011 Local Plan, Ipswich has not built enough new housing to match annual requirements, resulting in an inefficiently low level of new developments[25]. Transport investment north of the town would enable new sites to be developed; since significant differential exists between the price of developed and un-developed land in the local area, it is expected that additional welfare benefits will arise due to land use change when the impact of transport improvements are transmitted to the wider economy. Therefore, the calculation of land value uplift is necessary to capture the full extent of benefits generated by the scheme.

At the current SOBC stage, the impacts of dependent development will be presented as indicative monetised impacts in conjunction with other wider economic impacts, such as output change in imperfectly competitive markets. This reflects the proportionality requirements at the strategic outline stage of business case development. Later, if variable land use is expected, output change in imperfect markets will not be included in the economic analysis to avoid double-counting benefits stemming from land use change.

[25] Ipswich Borough Council (2018), Authority Monitoring Report 13, 2016/17