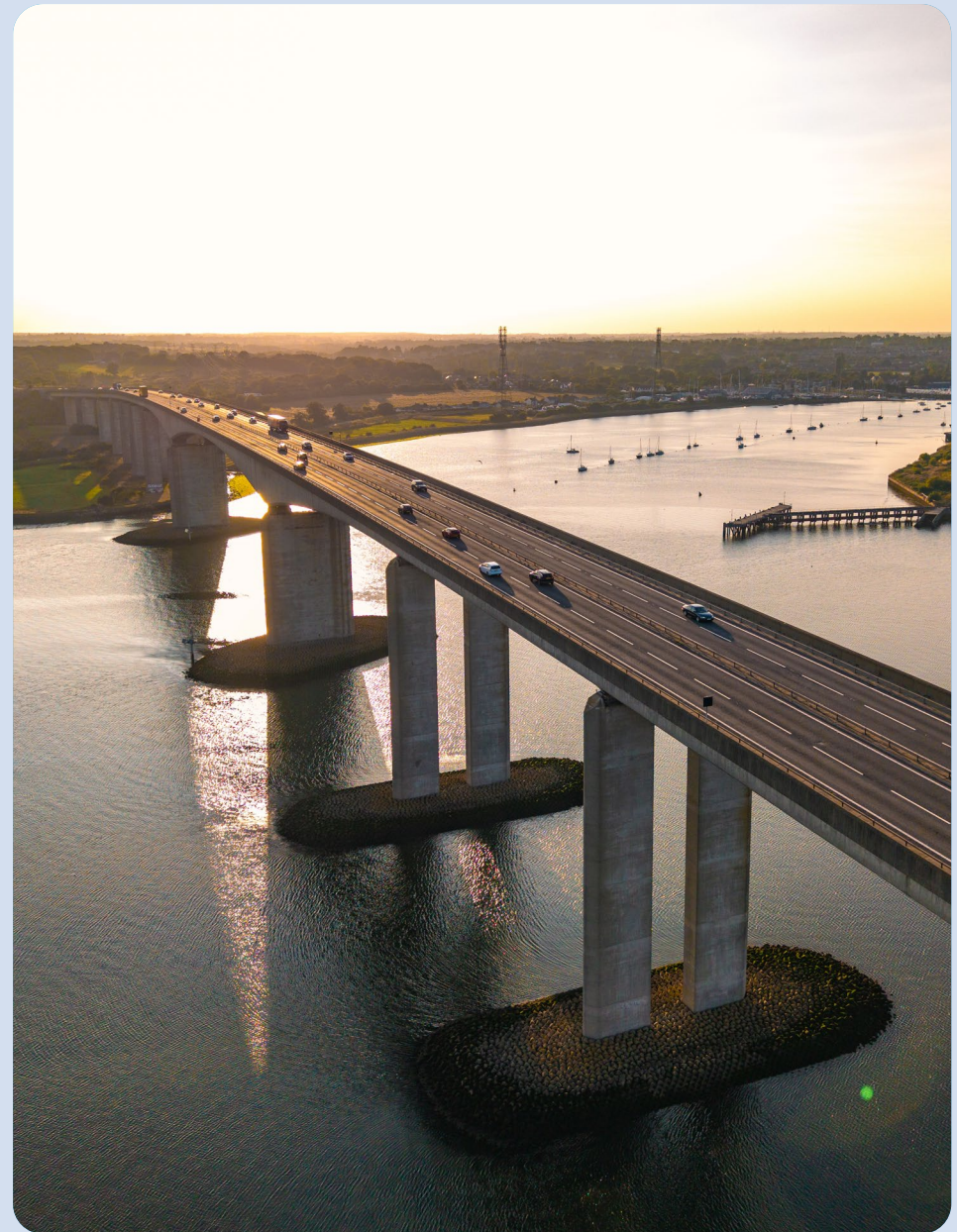


A14 Orwell Bridge and Ipswich Transport Resilience

Strategic Position Paper

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1 Introduction

1.1 Executive Proposition

- 1.1.1** This report follows Suffolk County Council's Full Council resolution; 'To commission or support a comprehensive strategic feasibility assessment examining all realistic long-term Orwell crossing and freight resilience solutions...'
- 1.1.2** It is proposed that a defined, evidence-led Pre-Strategic Outline Business Case stage for A14 Orwell Bridge and Ipswich transport resilience is developed. This would refresh the evidence base, clarify objectives, test a proportionate shortlist of option families, assess affordability and delivery routes, and support early engagement with Government and National Highways. Cabinet is not being asked to select, reopen or endorse any single scheme at this stage.
- 1.1.3** The recommended approach is therefore one of evidence, partnership and next-stage investigation, rather than scheme promotion. The purpose of the next stage is to determine whether there is a credible route to a full Strategic Outline Business Case, and if so, which option families or packages merit further development.
- 1.1.4** This Technical Report sets out the background to these issues, the work done to date and next steps to develop the work set out in the Cabinet Paper.



1.2 Purpose and Scope

- 1.2.1** The purpose of this report is to set out Suffolk County Council's strategic position on the A14 Orwell Bridge and wider Ipswich transport resilience issues, and to identify the evidence, partnership and business case work required before any preferred intervention or package of interventions could be promoted.

1.3 Scope of the Paper

- 1.3.1** The scope of the paper covers two key issues, firstly; the A14 corridor transport issues, from Felixstowe to the Midlands, but specifically around Ipswich. The secondary issue is the wider resilience of the Ipswich transport network, and its ability to deal with normal daily traffic, and the extraordinary shocks that result from incidents on the A14 around Ipswich.

- 1.3.2** These two issues are separate in terms of scale and scope, but have complex interactions.
- 1.3.3** This report includes road-based options, and also measures to affect the demand side of travel, such as railway improvements to get more freight off the roads and onto rail. It will also consider the internalisation of trips in Ipswich, and the ability to provide residents with attractive alternative options to the private car, to aid traffic flow in the town centre and on strategic routes around the town.
- 1.3.4** This report is explicitly not a decision paper on a single scheme. Its purpose is to establish the case for refreshing the evidence base, defining agreed objectives, testing a credible range of options and engaging Government on the appropriate route for any nationally significant intervention.
- 1.3.5** The paper is structured around a clear decision logic: define the problem, set objectives, identify broad option families, expose the evidence gaps, test affordability and deliverability constraints, and then recommend a proportionate Pre-Strategic Outline Business Case commission. This is intended to align lightly with the five-case model without turning this paper into a full business case.

1.4 Audience and Status

- 1.4.1** The key audience is Suffolk County Council, with the report intended to support a decision on the next stage of work rather than the selection of a preferred scheme. It should also provide a basis for structured engagement with Government, National Highways, Transport East, local planning authorities, MPs and wider stakeholders once the evidence refresh has progressed.

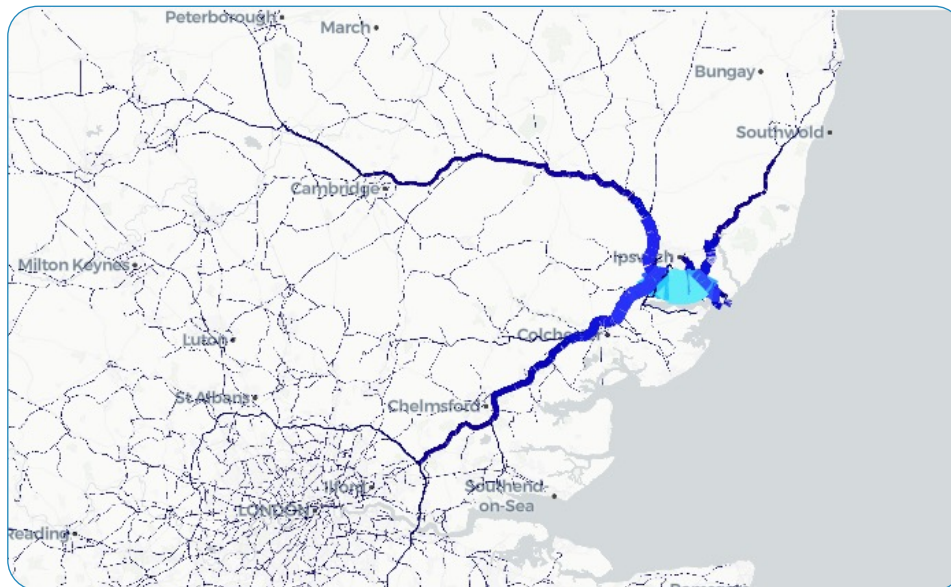
- 1.4.2** The key partner for this project would be the Department for Transport and other departments of the National Government. The options are likely to include ones that are far beyond the scale of scheme that could be delivered by local authorities, including Suffolk County Council, the potential future Unitary Authorities and Mayor of Norfolk and Suffolk.
- 1.4.3** As the A14 and Orwell Bridge are managed by National Highways, they will be a key partner, and likely lead delivery partner for the options that primarily relate to Strategic Road Network resilience.
- 1.4.4** Transport East is the Sub-national Transport Body for the region and works with partners to develop evidence, identify strategic transport priorities and advocate for investment that supports economic growth, decarbonisation and improved connections. The partnership would have a key role in supporting the evidence building, regional and national case-making and government engagement on the preferred options..
- 1.4.5** Freeport East are the Freeport responsible for Felixstowe Port and Gateway 14 at Stowmarket. Both sites are heavily dependent on the A14 corridor and ensuring reliable and efficient transport to key destinations.
- 1.4.6** Suffolk Chamber of Commerce represents the business voice for Suffolk, they have a long history of advocating for transport investment and campaigning for the national importance of Felixstowe and the A14 corridor. The Chamber of Commerce also provide primary research data and case studies as to the impacts of the current road network on business activity and confidence.

2 Strategic Context



2.1 National Economic Role of the A14

2.1.1 Analysis from the Transport East Select Link tool, as modelled by National Highway's Regional Traffic Model, shows the complexity of movements over the Orwell Bridge.



Key

- The Pale Blue section of the A14 is the link chosen for the Select Link Analysis (A14 Orwell Bridge Westbound Carriageway)
- The darker blue lines show the traffic origins and destinations using this link
- The thicker the line, the more of the traffic making this movement



2.1.2 As can be seen, by highlighting the Orwell Bridge link, very strong traffic flows head along the A14 towards Cambridge, but also along the A12 (T) southbound though Essex to the M25 in both clockwise and anticlockwise directions. There is an obvious substantial movement from Felixstowe, continuing on the A14, but also a noticeable flow on the A12 MRN from the Saxmundham direction.

2.1.3 The trip distance tool also shows a large number of trips are 150 kms or longer. This emphasises the strategic nature of the Orwell Bridge and its national importance to supply chains and specifically the Port of Felixstowe.

2.1.4 The high proportion of trips over the Orwell Bridge that travel south along the A12 through Essex shows the critical interactions with the RIS Pipeline Copdock scheme on the A14/A12 junction and the need to deliver that improvement in parallel with any wider A14 schemes.

2.2 Role of the Orwell Bridge

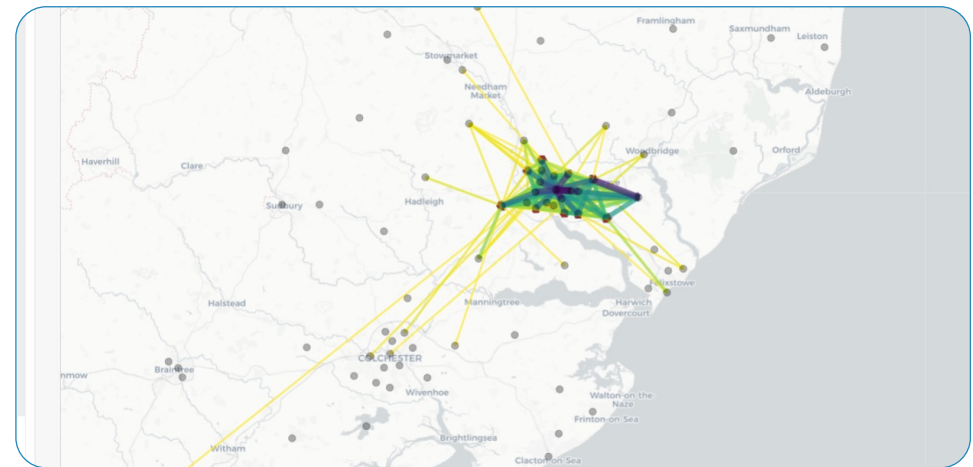
2.2.1 The Orwell Bridge was built in the early 1980s as part of the upgrade of the A45, which was later redesignated as the current A14. The bridge was built to remove strategic traffic from the centre of Ipswich, which became more important as Felixstowe Port expanded significantly over the last 40 years, to become a busiest container terminal in the UK, with nearly 50% of the UK's containerised traffic, with nearly 4.2 million Twenty-Foot Equivalent Units (TEUs) capacity, and one of the busiest in Europe. When the bridge was built it was the largest prestressed concrete span in the UK. The bridge was built with a design life of over 100 years, so it has many more decades of life left in it, but as structures age, they require increasing levels of maintenance. The Orwell Bridge is part of the Strategic Road Network, as is the whole A14 route, so it is the responsibility of National Highways.

2.2.2 Ipswich is uniquely dependant on the A14 Orwell Bridge, due to its location, alongside the wide Orwell Estuary and the lack of any other strategic routes in the area. Both trunk roads in the area converge at the A14/A12 Copdock, which is very close to the bridge, with no suitable alternatives.

2.2.3 Prior to the construction of the bridge in the early 80s all strategic traffic travelled through the centre of Ipswich. But that is analogous to saying that prior to the construction of the M25 and QE2 bridge all traffic passing by London had to travel through London, using Tower Bridge, among other inner city crossings.

2.3 Regional and Local Context

2.3.1 Ipswich is the County Town of Suffolk, by far the largest conurbation in the county and one of the largest settlements in East Anglia. The Suffolk County Council Ipswich Area Plan (2024) estimates the effective population of the town is 175,000 residents, as much of the conurbation is outside of the narrow Ipswich Borough Council border, in Kesgrave, Rushmere St Andrew, Pinewood and Martlesham. This area is one integrated population centre, partially encircled by the A14 and A12 MRN roads.



Key

- This shows the key origins and destination pairs within the segments that represent Ipswich and its immediate surroundings
- The thicker the line the larger the movement between sectors, with the pale yellow lines being the least common and the darker blue lines are the strongest movements.
- This is AM commuting (Home to Work) patterns.

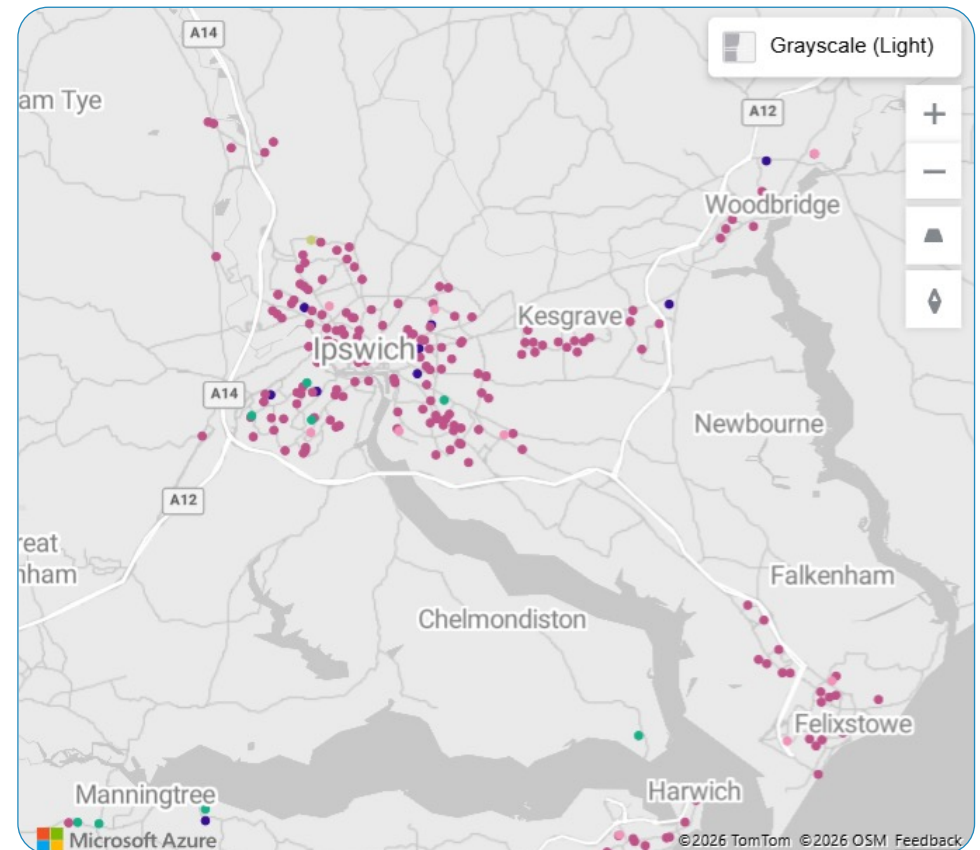
2.3.2 Analysis from the Transport East BT Mobile Phone data shows that, while Ipswich has a key role as a generator of out commuting trips to other key regional destinations, and a similar role as a trip attractor, a lot of the trips are internalised within the town. Evidence from Transport East's regional model BERTIE indicates that two thirds of trips are within Ipswich and it's immediate surroundings.

2.4 Transport hub

2.4.1 Ipswich also has a role as a key transport hub. Alongside the links to the Strategic Road Network and Major Road Network it is also on the main Norwich to London rail route and on the east – west rail route between Ipswich and Cambridge / Peterborough, with connections on to the Midlands and the North. It is also the terminus for the local lines to Felixstowe and Lowestoft.

2.4.2 Ipswich also has the most extensive bus network of any town in Suffolk, with First and Ipswich buses operating key routes.

2.4.3 Transport East's BERTIE model considers the travel behaviour of individual 'agents' (representative of people) across their entire daily transport needs. The Viable Alternative Mode Selector analysis in Transport East's Connectivity Study shows that many agents in the model could have chosen bus as an alternative to a car journey, but did not. This suggests that these agents are served by bus services but that things like low frequency, particularly out of peak hours or longer journey times, made bus less appealing:



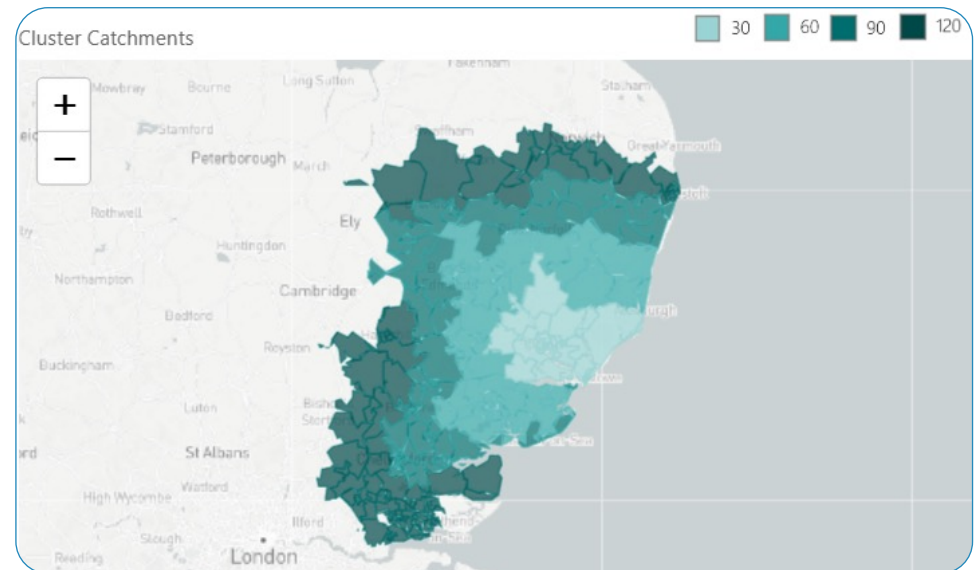
Key Points:

- The dots represent agents in the Transport East BERTIE (agent based) model that had a viable alternative to a car journey for their trip, that would have still got them to their destination on time, but chose not to take it, and drove instead.
- The most common alternative mode was bus, although some could have walked or cycled their trip.

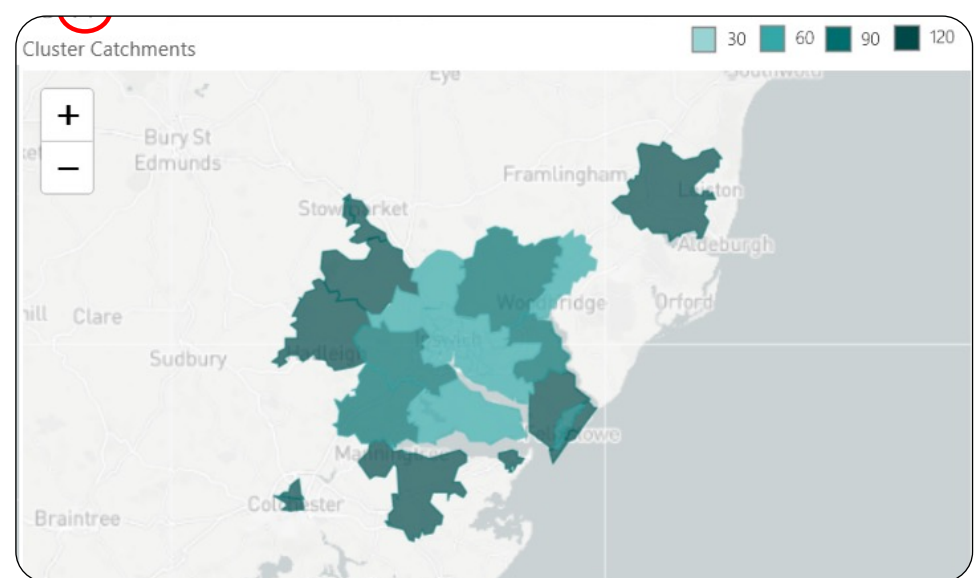
- Multi-modal means they would have needed to have used a combination of modes to complete their trip. We know that modal interchange adds considerable 'friction' to these trips, with each interchange adding additional cost, both in money terms and time terms.

2.4.4 However, when you consider the relative catchment of a bus journey compared to a car journey, by travel time, the more strategic travel options are much more limited for bus modes, when compared to car:

Distance vs Travel Time by Car



Distance vs Travel Time by Bus



3 The Strategic Context in relation to:



3.1 A14 corridor

- 3.1.1** The A14 is the key Strategic Road link through Suffolk. It links the county with the key economic areas in the Midlands and provides connectivity to the main north / south arteries such as the M1, M6 and A1(M). In Suffolk the route starts at the Dock Gate for Felixstowe Port and runs in a westerly direction past many of the largest towns in Suffolk, including Ipswich, Bury St Edmunds, Stowmarket and Felixstowe. In Suffolk it passes into Cambridgeshire at Newmarket.
- 3.1.2** Much of the A14 was built in the 1970s and 1980s to design standards of the day. The section through Bury St Edmunds is particularly challenging in terms of the horizontal and vertical alignment as the road threads its way through the historic town centre. The last major upgrade, after the Orwell Bridge, was the Haughley Bends bypass in the 2000s, which removed a longstanding safety and capacity constraint by straightening out the bends and returning the speed limit to National (70 mph) after the road was reduced to 50 mph, in response to the number of crashes on the bends.
- 3.1.3** The A14 runs parallel to the East – West rail line, linking Ipswich with Cambridge and Peterborough. The section beyond Cambridge is currently being upgraded improve connectivity to the rest of the UK. This has the potential to improve the attractiveness and convenience of rail as an alternative mode of travel for commuters and other users of the A14.

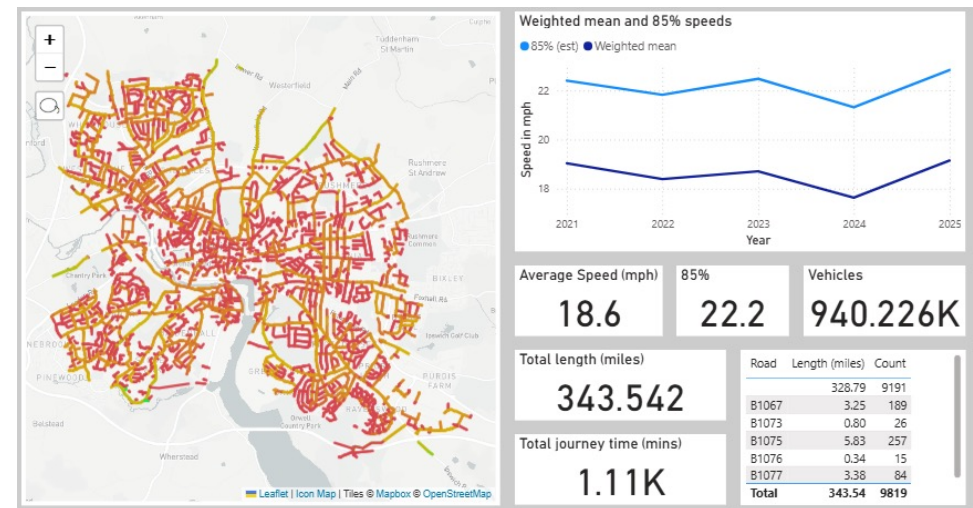
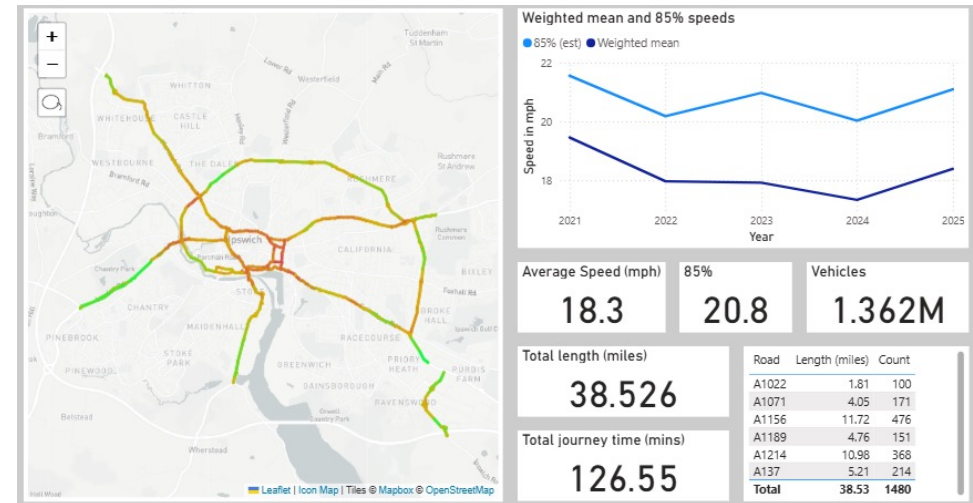
3.2 Local road network

- 3.2.1** Ipswich has been a key bridging point on the river Gipping / Orwell since the Saxon period and is one of the oldest towns in Britain. As such Ipswich has a large number of historic buildings, like Christchurch Mansion, and has inherited a largely medieval street plan in the central core. Many roads retain their historic names and are on alignments dictated by the old town walls and various gates. For this reason, many of the town's roads are narrow and unsuitable for modern traffic, and can't be widened due to the presence of historic buildings and numerous parks and greenspaces, which are the envy of most towns and cities of this size.
- 3.2.2** The town had many periods of expansion, but the major boom period was in the late Victorian period when the town became a centre for agricultural engineering and other allied activities. Many of the town's roads were laid out in the 1880s, to house the new workers. These roads were built pre-car and are narrow and lack suitable parking spaces, restricting their efficiency as through routes. Further expansion occurred in the early years of the 20th Century, and this period coincided with the introduction of the private car, so the infrastructure is more suitable for modern travel patterns. At this time the original ring road – Valley Road and Colchester Road – were built, providing some initial relief for the dock area and central town routes. In addition, Ipswich still had a thriving port sector, so many of the river crossings in the centre of the town would have been busy with these activities.

3.2.3 Growth since has been more organic, but large developments such as Ipswich Garden Suburb, to the north of the town, still create additional transport challenges.

3.2.4 Even without A14 issue congestion in Ipswich is regionally significant. Analysis of GPS traffic speeds for towns and cities in East Anglia shows that only Norwich has slower average speeds:

Town/City	Average AM GPS speed (mph) A roads	Average AM GPS speed (mph) All other roads
Norwich	17.4	14.9
Ipswich	18.3	18.6
Southend on sea	19.7	19.4
Inner Colchester	20.0	24.5
Kings Lynn	22.5	27.7
Harlow	22.9	22.3
Chelmsford	24.8	27.4
Great Yarmouth	26.4	24.4
Basildon	35.2	23.3



3.2.5 This is because many of the towns and cities in East Anglia experienced a boom in population in the decades where building inter-urban higher speed roads was more common. Urban Ipswich doesn't have many roads, other than the A14 on the periphery, with speed limits other than 20 mph or 30 mph.

3.3 Strategic rail routes

3.3.1 Suffolk County Council and Transport East, the Sub-National Transport Body, recognise that transport is far wider than roads alone, and we've consistently campaigned for parallel investment in rail, to take more of the freight from Felixstowe, removing significant numbers of HGVs off the roads, including the A14 and Orwell Bridge. This capacity improvement is predicated on the Ely and Haughley junction schemes, which are both also vital to the UK economy as a whole.

3.3.2 This report sets out some of the history to these issues and what the possible next steps would be.



3.4 Growth Drivers

3.4.1 Suffolk Local Planning Authorities are also wrestling with some significant annual uplifts in housing deliver requirements, as set out below:

Dec 2024	Current Method	Proposed Method	Uplift	Average completions (last 3 years)	Shortfall if using average annual
Babergh, Mid Suffolk	906	1515	609	598 + 920 = 1518	+3
East Suffolk	905	1696	791	814	-882
Ipswich	466	755	289	186	-569
West Suffolk	765	1200	435	909	-291

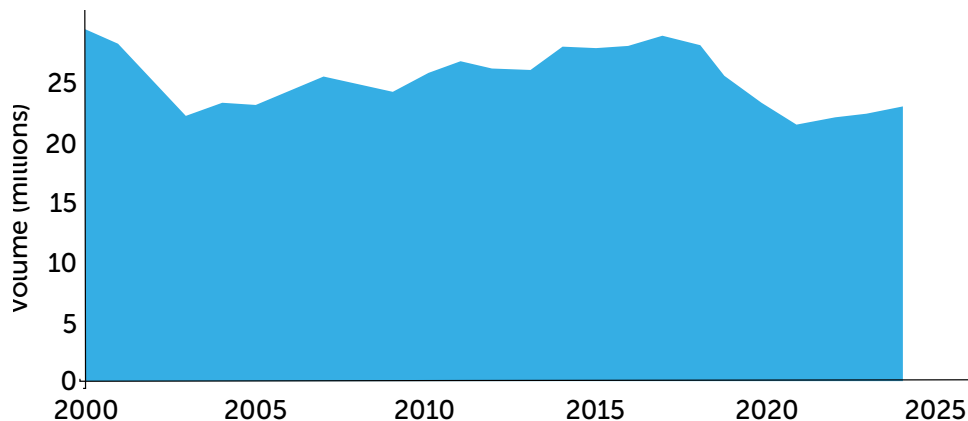
3.4.2 This would be a 2124 home uplift from current Local Plan figures annually, or 42,480 over the life of the new plans, to 2045.

3.4.3 Additionally, Suffolk Local Planning Authorities are planning for significant jobs to support the additional homes. As a key growth area of the Suffolk economy, it is likely that many of these jobs will be in freight and logistics sectors, increasing HGV traffic further.

3.4.4 Freight volumes at Felixstowe fluctuate annually, but have shown steady increases over the last few decades. Felixstowe is the UK's largest container port, taking nearly 50% of all containerised traffic, and the volumes of containerised freight have increased as a result of global trade and the rise in China's global reach.

Historical Growth and Milestones

- Pre-2000s: The port experienced rapid expansion, hitting 1 million TEUs annually as early as 1987.
- 2000–2010s: Total inward and outward sea freight grew significantly to accommodate the rise of ultra-large container vessels. Felixstowe handled a near-record 3.85 million TEUs in 2017.
- The 2020s: Volumes initially dipped due to the Covid-19 pandemic and Brexit-related disruptions. Post-pandemic, volumes hovered around 3.5 to 3.7 million TEUs in the 2023-2024 period.



3.4.5 In recent years one of Felixstowe's largest partners Maersk moved from Felixstowe to Thames Gateway, which resulted in a significant reduction in tonnage. However much of this deficit has been replaced by other smaller shipping companies, over the last year. Maersk had a strong reliance on rail freight out of Felixstowe, which has not been carried on by the subsequent companies, so currently the proportion of containers moved by rail vs. road has declined recently, although this may balance back to the previous modal split, over time.

3.4.6 The fundamentals of Felixstowe remain strong, it is the deepest channel approach, and can therefore take the world's largest ships, which are likely to increase in size and number as shipping companies chase efficiency and margins. There is no reason to assume that tonnage and container numbers will not grow in line with recent history, providing infrastructure and resilience interventions are delivered.

3.4.7 In the short- and medium-term Suffolk will be a major centre for National Infrastructure projects, including Sizewell C nuclear power station, which will be one of the largest construction projects in Europe. Several offshore cables feeding power from offshore wind turbines are due to make landfall in East Suffolk and several additional lines of pylons are proposed to link power generation sites with where the power is needed. These projects are already generating considerable HGV movements, which will increase further in future years, and will also result in extensive traffic management and road closures, reducing the overall network availability and resilience.

3.4.8 There are other key drivers of growth in the region, such as tourism. This includes Stanstead Airport which is predicting an 8 million per year passenger uplift, as well the new Universal Studios Theme Park in Bedfordshire. This is on top of the traditional Suffolk tourism offer, which remains very strong.

4 The Resilience Challenge

4.1 Problem Definition

4.1.1 The resilience challenge should be understood as a set of related but distinct problems. These overlap, but different interventions may perform very differently depending on which problem is being prioritised. The next stage should therefore test options against the following problem statements rather than assuming that one intervention can resolve all issues equally well.

- Long-term resilience of the A14 Orwell Bridge, including planned maintenance, unplanned closures and eventual end-of-life replacement risk.
- Resilience and journey reliability on the A14 strategic corridor between Felixstowe, Ipswich, the A12 and the wider Midlands route.
- Day-to-day performance of the Ipswich local road network, including the impact of congestion, diverted traffic and limited crossing capacity.
- Ability of the transport network to support future housing, employment, freight and port-related growth without unacceptable impacts.
- Scope to reduce pressure on the road network through rail freight, passenger transport, active travel, demand management and operational measures.

4.2 Single Point of Failure

4.2.1 For the reasons set out previously Ipswich is especially vulnerable to disruption on the A14, and especially on the Orwell Bridge, as the town is surrounded by the A14 and A12 routes and has no other strategic river crossing.

4.3 Nature of Disruption

4.3.1 In 2025 one set of expansion joints required replacement and at some point, in the next few years, the joints on the other carriageway will need replacing. It is likely that at some point in the next 5 years the bearings at the top of the bridge supports will also require some maintenance. However, the new joints have a much greater service life than the original components, so these maintenance activities will extend the time between significant maintenance interventions. The bridge is now taking much more traffic, with a higher proportion of heavy vehicles, due to Felixstowe Port, so this has resulted in more routine and scheduled maintenance being needed to preserve the functionality of the bridge, long term.

4.3.2 Due to the orientation and height of the bridge, in the landscape, the bridge has always been very vulnerable to high winds. This is especially acute due to the high volume of large high sided vehicles on the bridge. At many times over the years, it has been necessary for National highways and Suffolk Police to close the bridge to all traffic. In 2021 National Highways introduced a variable speed limit, to enable the speed limit to be lowered from the 60 mph default limit, this allows the bridge to operate in a much wider range of wind conditions and has resulted in a dramatic reduction in wind affected bridge closures.

- 4.3.3** However, as well as planned maintenance operations and semi-planned wind closures, the bridge is also subject to infrequent but impactful unplanned closures of one or both carriageways, as a result of collisions and incidents. Collisions are generally as a result of a variety of factors but as they often involve heavy vehicles, as they make up a high proportion of the total traffic, they often result in significant damage to the bridge, either the barriers or due to extensive fuel spills.
- 4.3.4** While the Orwell Bridge is the most obvious challenge, the A14 route is often subject to disruption on other sections close to Ipswich. Collisions occur throughout the route and cause traffic to be diverted onto unsuitable roads through other towns and villages alongside the A14.
- 4.3.5** There are also occasions when the bridge has to be closed because a person is in crisis and may be at risk of serious self-harm. In these circumstances, the Police may need to close the bridge at short notice to protect the individual, manage the incident safely and enable appropriate support to be provided.
- 4.3.6** Due to the number of incidents in recent years, both planned and unplanned, the considerable effect on traffic within Ipswich and in the wider area is a major concern for the residents of the wider area, and Suffolk County Council.
- 4.3.7** One issue is that no one organisation has accurate records of the total number of closures and incidents on the A14 and Orwell Bridge specifically. National Highways have records of planned / semi-planned closures and Suffolk Police will have records of crashes and incidents attended by them, but it has proved difficult to come up with a definitive picture of all incidents and resulting length of disruption.

4.4 Maintenance Liabilities

- 4.4.1** The most recent major project on the Orwell Bridge was the replacement of the expansion joints on one carriageway in 2025. There has also been major resurfacing of the A14 around Claydon in recent years, which also required lane and full carriageway closures, along with extensive traffic management.
- 4.4.2** It is anticipated that the other carriageway expansion joints will be replaced in the current Roads Investment Strategy (RIS) period, between 2026-2031. The structure bearings are also due to be replaced during the same period, although the traffic management arrangement for this project are not known. This project is likely to be at the latter end of the current RIS period.
- 4.4.3** As the structure continues to age there will be an increasing requirement for inspections and planned maintenance. However, each maintenance intervention has increased the service life of the components replaced as design and material technology has improved considerably since the 1980s.

5 Impact of Disruption



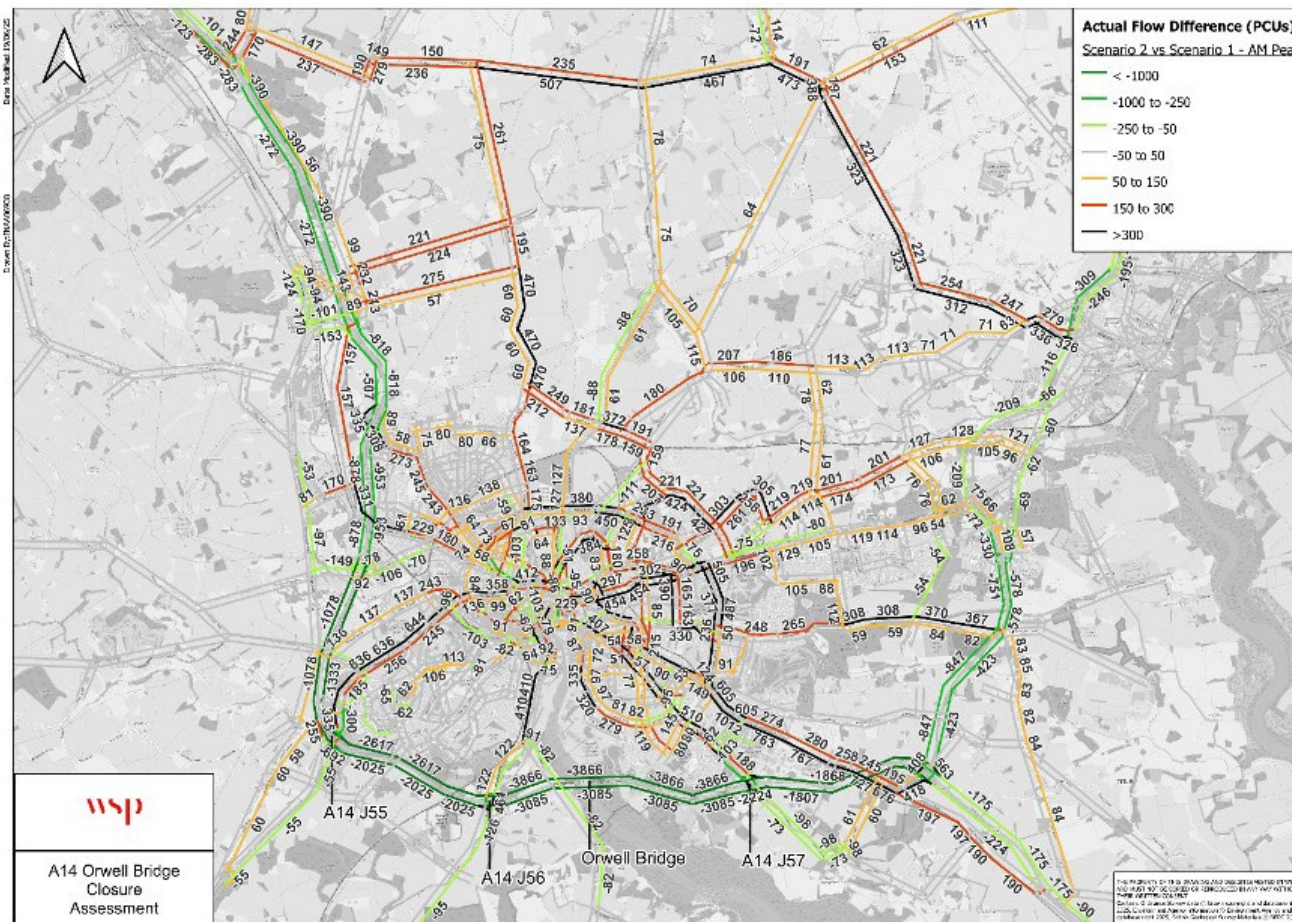
5.1 Network impacts

5.1.1 Regardless of the causes, the impacts of A14 closures and disruption around Ipswich are immediate and severe. The advent of connected satellite navigation systems means that drivers are quickly given real-time information on incidents and divert off the A14, often not using the official diversion routes.

5.1.2 This can be managed more effectively by National Highways and Suffolk County Council for the planned closures, but the unplanned are very difficult to mitigate.

5.1.3 Using the Suffolk County Transport Model, we simulated the traffic impacts associated with eastbound, westbound and full closures of the Orwell Bridge. The following map illustrates the modelled traffic impacts of a full bridge closure.

Note: Due to the bridge closure, traffic flows on the A14 and its feeder roads are reduced and are therefore shown in green.



Key:

- The green roads are where traffic flows decrease
- The red / black roads are where traffic increases a lot
- The yellow roads are more limited increases
- The grey roads are ones with very little change

- 5.1.4** Above is a typical flow difference plot between the bridge being open (baseline condition) and the Orwell Bridge being totally closed in the AM peak (8 – 9AM).
- 5.1.5** The impacts are felt in three key ways, main arterial routes into and out of the town see significant increases in traffic, including on the official diversion route from Copdock A14 J55 to Martlesham Park and Ride on the A12, via the A1214.
- 5.1.6** Traffic increases on all main east -west routes, including the Dock Gyratory and Crown Street.
- 5.1.7** Some of the highest increases are on rural roads to the north of Ipswich, including the B1078 and B1079 from Coddensham to Woodbridge.
- 5.1.8** The overall impacts are felt across the entire area of Ipswich and its surrounding parishes.

5.2 Economic impacts

- 5.2.1** Due to the proximity to Felixstowe, and its national importance as a container port the most noticeable impact of the closures is that HGV traffic has to travel through the centre of Ipswich. The HGVs tend to stick to the official diversion route as many of the more minor roads are restricted by low bridges and environmental restrictions.
- 5.2.2** The impacts are multi layered, on an individual level shipments are late and customers are left unhappy. But at a business level organisations will find transport in the area unreliable and could look for alternatives, and at a large scale this will damage the long-term growth potential of Felixstowe Port.
- 5.2.3** At all scales of business activity, these productivity reductions and cost increases related to congestion have serious negative impacts. Concern about congestion can also result in a reduction in footfall and economic activity in the town centre.
- 5.2.4** Suffolk Chamber of Commerce have played a leading role in collecting qualitative and quantitative evidence of the business impacts, caused by A14 issues. These were set out in the [2025 report 'Broken Down'](#).
- 5.2.5** Of a sample of 350 local firms 87% had identified negative business impacts related to the A14 in the last 12 months.

5.3 Community impacts

- 5.3.1** The impacts of the disruption are not only economic, but they are also environmental as well. Ipswich currently has three Air Quality Management Areas (AQMAs):
- 5.3.2** Ipswich air quality management area no. 2 – from the junction with Peel Street, extending along Crown Street, St Margarets Street and St Helens Street to the junction with Palmerston Road, and from St Margarets Street extending up Woodbridge Road to just beyond the junction with Argyle Street.
- 5.3.3** Ipswich air quality management area no. 3 – encompassing the land in and around College Street, Key Street, Salhouse Street, Fore Street, Star Lane, Neptune Square and Grimwade Street.
- 5.3.4** Ipswich air quality management area no. 5 – incorporating the land in or around St. Matthews Street / Norwich Road between the Civic Drive roundabout and Bramford Road.
- 5.3.5** These areas were all declared AQMAs in relation to the likely exceedance of the annual mean nitrogen dioxide objective, which is generally related to transport-based emissions.
- 5.3.6** All of these areas are negatively affected by incidents on the A14 causing additional traffic to divert through Ipswich, meaning that air quality in these sensitive areas will get worse during periods of disruption on the A14.
- 5.3.7** Associated with air quality impacts are also the negative



health impacts related to excessive traffic noise. The profile of these occurrences will correlate with the air quality impacts as the more exposed areas are where homes are very close to the road edge on busy streets.

- 5.3.8** The congestion issues also cause wide social issues such as the inability to access healthcare and wider social services, travel for education and training, and difficulties in providing support for older and vulnerable people.
- 5.3.9** As well as the direct health impacts related to excessive traffic there are also wider impacts on residential streets and rural lanes blighted by additional traffic when drivers seek out alternative routes as the main roads have become congested. It is unlikely that air quality and noise impacts will be as acute in these areas as traffic flows are not as great on these roads as on the principal diversion routes through the town centre. However, they do cause distress and concern to residents that are unused to seeing excessive traffic and road safety issues on roads that are not designed to take these volumes of vehicles.
- 5.3.10** In urban areas this can result in severance issues where residents cannot cross unusually busy roads, and no crossing facilities are usually needed. In rural areas very narrow single-track roads can become completely blocked with drivers seeking out alternative routes. In the Ipswich area roads such as Rede Lane and Mill Lane between Henley and Claydon and Church Road and Lower Road in Westerfield are particularly affected.

5.4 Future Risk Profile

- 5.4.1** It is likely that the risk profile of incidents having a severe impact on the Ipswich and the surrounding area will increase over time. Traffic demand is likely to increase, due to housing growth, jobs growth and increasing container volumes at Felixstowe Port. At the same time the infrastructure is ageing, meaning that significant maintenance will be required in the future, and the design loadings for the original structure are exceeded by daily traffic flow numbers and the percentage of vehicles that are heavier than the norms in the 1980s. This will give a compounding risk trend, with increasing numbers of critical incidents in the future, if nothing changes.
- 5.4.2** One positive trend is the likely adoption of connected and autonomous vehicle technology, which is currently in its infancy, but is likely to increase vehicle safety over time. Several current cars have high levels of autonomous control available, through braking and lane control assistance, combined with technology to make keeping within speed limits easier. As this technology is more widely adopted, and older vehicles are retired from active use, it is likely that vehicle on vehicle crashes will reduce as a percentage of total kilometres driven.
- 5.4.3** However, in the longer term the Orwell Bridge will start to approach its design life, and the challenge will move from episodic events to a more structural resilience issue, although that is not likely until the latter years of this century.

6 Evidence Base and Work to Date

6.1 Early Work (1993-4)

6.1.1 Following public inquiries, early plans for a Kesgrave bypass and a full Ipswich northern bypass were officially rejected by the Secretary of State and removed from the County Structure Plan.

6.2 Strategic Studies (2016–2020) Options Appraisal

6.2.1 The 2019 Strategic Outline Business Case included an Options Appraisal Report, which considered a long list of 32 options, see below:

	Option	Additional Transport Capacity to enable growth:	Reduce congestion in Ipswich Town Centre:	Positive impact on BRN & A14 / A12:	Mitigate Orwell Bridge related congestion:	Improve Sustainable Modes of Transport:	Improve Air Quality and Reduce Noise:	Economic growth in wider Ipswich:	Growth in Suffolk Energy Coast:	Objectives Achieved	Average Score	Aggregate scores of Positive Benefits
1	Radial Route - Norwich Road - former P&R	4	5	4	4	5	5	4	4	3	4.4	3
2	Radial Route - Henley Road	4	5	4	4	5	5	4	4	3	4.4	3
3	Radial Route - Westerfield Road	4	5	4	4	5	5	4	4	3	4.4	3
4	Radial Route - Tuddenham Road	4	5	4	4	5	5	4	4	3	4.4	3
5	Radial Route - Kesgrave Road	4	5	4	4	6	5	4	4	3	4.5	4
6	LRT Orbital	5	5	5	4	7	6	5	5	7	5.3	10
7	Rus Rapid Transit Orbit	5	5	5	4	7	6	5	5	7	5.3	10
8	Increased Frequency of service	5	4	4	4	6	5	5	5	5	4.8	6
9	New rail station at Ot Blakenham	5	4	4	4	6	5	5	4	4	4.8	5
10	New rail station at Martlesham	5	4	4	4	6	5	5	4	4	4.8	5
11	Capacity improvements on Felixstowe branch line	5	4	5	4	6	4	4	5	4	4.6	5
12	Improved Connectivity at existing stations	5	4	4	4	6	4	5	4	3	4.5	4
13	Non-Strategic Eastern relief road	5	4	4	4	4	4	5	4	2	4.3	2
14	Non-Strategic Northern relief road	5	5	4	4	4	4	5	4	3	4.4	3
15	Non-Strategic Northern fringe relief road	6	6	5	5	4	5	6	5	7	5.3	10
16	A14 Junction 53 capacity improvements	4	4	5	4	4	5	4	4	2	4.3	2
17	A12 / A1214 Main Road / Kesgrave improvements	5	4	5	4	4	5	4	4	3	4.4	3
18	Outer Highway Route - Single carriageway	6	5	5	5	4	4	6	6	6	5.1	9
19	Outer Highway Route - Dual carriageway	7	5	6	6	4	4	7	7	6	5.8	14
20	Mid Highway Route - Single carriageway	6	6	6	6	5	5	6	6	8	5.8	14
21	Mid Highway Route - Dual carriageway	7	6	7	7	5	5	7	7	8	6.4	19
22	Inner Highway Route - Single carriageway	6	6	6	6	6	5	6	6	8	5.9	15
23	Inner Highway Route - Dual carriageway	7	7	7	7	6	5	7	7	8	6.6	21
24	New River Orwell Bridge Crossing	4	5	5	7	4	3	5	5	5	4.8	6
25	Tunnel of River Orwell	4	5	5	7	4	4	5	5	5	4.9	7
26	Smart Parking	4	5	4	4	4	5	4	4	2	4.3	2
27	Integrated Smart Public Transport	4	5	4	4	5	4	4	4	2	4.3	2
28	Wide scale traffic signal upgrades	5	6	4	5	5	4	4	4	4	4.6	5
29	Improved Public Transport RTP1	4	4	4	4	5	5	4	4	2	4.3	2
30	Car Parking levy	4	6	5	5	6	5	4	4	5	4.9	7
31	Congestion charging in Ipswich centre	4	6	5	5	6	5	4	4	5	4.9	7
32	Do Nothing	1	1	2	2	1	1	2	2	0	1.5	-20

Option Assessment against Objectives Summary of Results

- 6.2.2** Many of the options would be partially effective as part of a package of improvements, but would not tackle the core issues, in isolation.
- 6.2.3** Options 1- 5 (improving the radial routes in and out of Ipswich) fall into this category, while useful overall they do not tackle the underlying issues.
- 6.2.4** Likewise, Options 6 – 12 aimed at getting more passenger transport connectivity, either on bus, rapid transit, or rail. While increasing rail and bus patronage would reduce car dependency in Ipswich, given the largely rural catchment area of the town, it is unlikely this would provide sufficient additional capacity to tackle the reliance on the A14 capacity.
- 6.2.5** Options 26 – 31 are also part of a wider conversation about traffic management in Ipswich, as could offer some advantages, but would also, in some cases, come with significant disbenefits. Changes to parking arrangements, through increasing parking charges, reducing capacity, or a workplace parking levy, could be impactful in terms of discouraging car use in the town, but unless these trips can be conveniently be replaced by bus, walking, cycling or other modes, they would result in an overall reduction in town centre activity, reducing the vitality of the town centre businesses. Likewise, a Congestion Charge or Road Pricing initiative. It is likely that measures such as this would need to be introduced nationally, to avoid damaging the viability of Ipswich, compared to other towns and cities in the region.
- 6.2.6** The residual options around a new northern road to provide additional east – west traffic capacity, on three different alignments and dual or single carriageway were considered in detail in the Strategic Outline Business Case.
- 6.2.7** The other options (24 and 25) of a new Orwell Bridge and a tunnel under the river Orwell were discounted on grounds of cost and complexity.
- 6.2.8** Options 13 to 15 were also road-based schemes, but less strategic in nature and aimed at addressing specific pinch points on the network. In the interim period a similar scheme has been completed at Europa Way between Sproughton Road and Bramford Road, to address a significant pinch point at the junction of Sproughton Road and Bramford Road, under a low railway bridge. It is possible that this type of smaller scheme, or a series of similar interventions could deliver more east – west traffic capacity, to provide more resilience over time, although it would not have the same impact as a northern bypass, but the costs would be much lower, and could be secured on any development proposals, north of Ipswich.
- 6.2.9** Option 16 related to junction 53 on the A14, which is the Norwich Road junction, some minor improvements have been carried out here in the past. However, it is more likely that this was intended to be a reference to Junction 55 (Copdock) which is the most serious single junction pinch point on the A14 corridor and the terminus of the A12 trunk road.
- 6.2.10** Option 17 related to additional Park & Ride facilities for the town, which has long been touted by Ipswich Borough Council as part of the likely solutions. Currently Ipswich has two Park & Ride facilities, at Copdock and Martlesham. Both are well used but require considerable annual subsidies. There is a further site at Junction 53 that is owned by Ipswich Borough Council and was mothballed to reduce the annual operational costs. Ipswich Borough Council currently lease the site to a car dealership.

6.2.11 Although not formally included in the list of options one key rail project are the improvements to Haughley Junction and Ely Junction in Cambridgeshire. These are nationally supported projects and remain the one way of unlocking significant additional capacity on the East-West railway line, which could in turn remove a large number of heavy vehicles from the A14, travelling from Felixstowe Port to the Midlands. Any improvement to the Felixstowe branch line, such as electrification, would be welcomed, but they would not deliver significant additional rail capacity without Haughley / Ely coming forward too.

6.2.12 At the end of the options appraisal stage the best scoring schemes were the three routes of the Ipswich Northern Routes with both single carriageway and dual carriageway options for each route. It was decided to take these options through to the next stages.

6.3 Ipswich Northern Route (2017-20)

6.3.1 Following the options appraisal above, Suffolk Public Sector Leaders Group allocated £550,000 to develop a Strategic Outline Business Case (SOBC) to formally investigate the new bypass, called Ipswich Northern Route. This further considered the deliverability of the three routes, inner, middle and outer, and the pros and cons of the single carriageway and dual carriageway versions of each alignment.

6.3.2 These options were taken forward to public consultations with a very high level of engagement from both sides of the argument voicing their support or concern about the project very forcefully. A large number of village hall engagement

sessions were held, with a variety of issues being raised. Overall, over 4,500 responses were received, from the public and other stakeholders. The greatest objections were received from the communities just to the north of Ipswich who felt that the new road would be detrimental to their lives, both during the construction period and during its operation. Different communities had different views on the impacts of the three route options, but overall the feedback from the rural areas was negative.

6.3.3 The Strategic Outline Business Case highlighted that costs would be in the order of £500m depending on the option chosen. There was no obvious funding option for the scheme identified, other than the Department for Transport 'Large Local Majors' fund, but it was acknowledged that this funding is very oversubscribed with the then existing committed schemes. The proposals were also not supported by all relevant District and Borough Councils.

6.3.4 In February 2020, in the light of these challenges, Suffolk County Council Cabinet took the decision to cancel the project.

6.3.5 In the analysis the relative merits of each route were set out as follows:

- **Outer Route** – this is the most northern option and connects the A14 near Coddensham via the A140 to the A12 at Woods Lane. The outer route was longer, and had the worst projected Value for Money score, in the range 'low'. Generally, all routes were 'moderately adverse' for landscape impact, but the outer route was 'large adverse' for the impact on the historic environment. The key advantage of the outer route is that it would tie into the Major Road Network, A140 and A12, at both ends, and would not require a junction onto the A14 or complex changes to existing junctions on the A14. For this reason the overall construction cost would likely be relatively cheaper than the other two options.
- **Middle Route** – this option is south of the outer route and connects the A14 near Claydon to the A12 at Woodbridge. The middle route had a projected Value for Money score of 'Medium'. The western tie in point for the middle route, which was also shared with the inner route, was very complex, with a small distance between A14 junction 53 and junction 52 at Claydon.
- **Inner Route** – this option is the closest to Ipswich and connects the A14 near Claydon to the A12 near Martlesham. The inner route had a projected Value for Money score of 'High', as it was the most direct route from the A14 west of Ipswich to the A14 east of Ipswich. However, this route had the highest level of engineering difficulty with the need to bridge over the East Suffolk Railway Line. It would also likely need grade separated junctions at either end of the route.



6.4 Upper Orwell Crossings (2015-6)

- 6.4.1** Prior to the Ipswich Northern Routes project, the solution to Ipswich transport resilience was likely to be an inner town crossing of the Orwell estuary, between the Landseer Road and Wherstead Road corridors. The Upper Orwell Crossings project was launched, proposing three new bridges in Ipswich (including a main crossing over the River Orwell) with an initial estimated cost of £96.6 million.
- 6.4.2** This bridge would need to be articulated, to allow for shipping, but was designed to be high enough to allow for some smaller craft to pass under. The project was actually three bridges, with one strategic road bridge and two smaller bridges at lower level to connect to the Island Site in the middle of the river, which was identified in the Ipswich Local Plan for a housing allocation. One bridge from the island to Wherstead Road would have been for all users, motor vehicles and sustainable access, the other would have either involved opening up the existing Prince Philip Local Bridge (which has been retained as a project) or replicating it for pedestrians and cyclists with an adjacent bridge. The scheme was fully funded, mainly by the Department for Transport (£77M), with a local contribution from Suffolk County Council, likely to have been supplemented with any developer receipts from housing growth facilitated by the infrastructure.
- 6.4.3** The project traffic modelling and analysis showed very high levels of improvement for the Ipswich dock and town centre areas, with minor disbenefits on some local roads, such as Cliff Lane. The strategic bridge would have provided a far more resilient routes for A14 traffic, via Wherstead Road

and Landseer / Nacton Road, in the eventuality that the A14 Orwell Bridge was closed.

- 6.4.4** The principal challenge facing the Upper Orwell Crossing project was financial. Delivering and managing a major new bridge scheme represented a significant commitment for the authority, particularly at a time when it was actively working to progress two large bridge projects simultaneously. In contrast to the strong partnership backing that later helped secure the delivery of the Lowestoft crossing, support for the Upper Orwell Crossing weakened over time. While the project initially benefited from the backing of the then Ipswich MP, this support was lost following the 2017 General Election. Their successor did not support the scheme and instead argued that the Ipswich Northern Route should be a higher priority. Although the Department for Transport funding was ringfenced to the Upper Orwell Crossing and could not be transferred to an alternative scheme, the combination of increasing financial challenges, limited partner support, and local objections along affected routes ultimately led Suffolk County Council to cancel the project.
- 6.4.5** Throughout the design process, which was led by the world-renowned architectural practice, Foster and Partners, it was clear that the costs were likely to exceed the original budget, and be well over £100M. However, the project, even at today's costs, would be likely to offer a more cost-effective targeted solution to the Ipswich transport challenges and provide more east – west transport resilience for the A14 than a Northern Bypass.
- 6.4.6** The Upper Orwell Crossing wasn't considered as an option within the original Options Appraisal stage as it was, at the time, a committed scheme. The high-level traffic modelling included the impacts of the Upper Orwell Crossing, when considering the other options.

6.5 Other Relevant Schemes

6.5.1 Other than the Orwell Bridge, the key issue around Ipswich on the Strategic Road Network is the A14 Junction 55 at Copdock, it is also the end point of the A12 as a trunk road, with the section between Seven Hill and Lowestoft being detrunked in the early 2000s and maintained by Suffolk County Council ever since.

6.5.2 Junction 55 was last upgraded in 2011, with funding from Felixstowe Port as part of their expansion. However this was very much an interim scheme, and the junction still suffers from heavy congestion in peak times, with long delays on the A12 northbound approach to the roundabout and congestion on the Ipswich side, on the A1214.

6.5.3 A more substantial improvement was proposed in 2021, as a Roads Investment Strategy pipeline scheme for RIS3. However, it was subsequently confirmed that this project would be slid forward into the RIS4 pipeline, with the earliest work done in the period 2031-36, if it was to be included in the RIS4 programme. The 2021 scheme options process settled on two options, one a limited widening of the approaches and changes to the traffic signal operation. The other option was more transformative, with grade separated slip roads between the A12 and A14 eastern arms, better linking London traffic with Felixstowe and allowing these strategic movements to avoid the roundabout circulatory carriageway.

6.5.4 The scheme has been set for a value for money reassessment in late 2026 / early 2027, and Suffolk County Council have requested that we are part of this review process, to ensure all of the benefits of the scheme are captured.

6.5.5 A key part of the discussion about transport resilience on the A14 is the high volume of HGVs using the road, related to Felixstowe Port and the need to get goods to the Midlands and beyond. The East – West railway line runs broadly parallel with the A14, and a significant freight volume from Felixstowe does use rail to travel through Suffolk. However, there is a lack of capacity on the line, which is single track in parts, and significant constraints at Haughley Junction, where the east – west line splits from the Great Eastern mainline, and at Ely where many of the lines through the region intersect.

6.5.6 The project to upgrade the Ely junction has been under investigation for many years. While the scheme has a very good benefit to cost ratio, at 4.89:1, much higher than many other similar schemes it has been overlooked for funding in several railway funding periods. Transport East has been active on the project for many years, and has worked with the neighbouring Sub-National Transport body, England's Economic Heartland, on the advocacy paper '[Keeping Trade on Track](#)'.

6.5.7 This report sets out the headline advantages of the scheme, to support wider freight and passenger capacity and boost economic and network connectivity outcomes across the region.

- 6.5.8** Specifically for the Orwell Bridge; it would allow 2,900 extra freight services to and from Felixstowe every year, which would remove 98,000 lorry journeys off the roads every year, which in turn would reduce road congestion by 5.6 million hours per year. The latest estimates for the scheme were £466M, but costs are likely to increase over time, the long it takes to commit to the scheme.
- 6.5.9** The Haughley junction is much smaller than Ely, at £20-30M, but it adds a lot of value to the combined project and collectively these will allow for more capacity, which can be used to deliver the additional freight paths. These projects remain under active discussion with regional partners, Great British Railways Anglia and National Government.

6.6 Key Conclusion

- 6.6.1** A substantial evidence base exists, but key elements are now dated and need to be refreshed before any robust decision can be made. Previous work demonstrates the scale of the resilience problem and the strategic importance of the A14 Orwell Bridge, but it did not produce a settled consensus on a preferred intervention. The next stage must therefore distinguish clearly between established evidence, professional judgement and assumptions requiring further testing.

7 Current Strategic Position

7.1 Problem Clarity

- 7.1.1** Amongst the key stakeholders and the general public in the Ipswich area there is a broad consensus on the nature of the issues with the Orwell Bridge and the A14 more generally. There is also consensus on the scale of the impacts, both in terms of the general levels of congestion in Ipswich on a daily basis and the acute issues whenever there is a problem on the Strategic Road Network around Ipswich.
- 7.1.2** Lack of Agreed Intervention
- 7.1.3** Based on the work done to date and previous public consultations there is no one 'silver bullet' solution that all partners and stakeholders could get behind and fully support. Understandably, different partners have competing priorities and perspectives, and they would influence their support or objection to a given potential solution.

7.2 Role of Different Agencies

- 7.2.1** The project will depend on all relevant organisations working closely together, if it is to make any progress on the key issues.
- 7.2.2** The first key organisation is National Highways, who are the responsible body for the Strategic Road Network, including the A14 and the asset owner for the Orwell Bridge. Any Strategic Road scheme would be promoted by National Highways through the Road Investment Strategy (RIS) process. The programme for the current RIS period, number 3 (2026 to 2031) is already fixed, and the programme for period 4 (2031 to 2036) is under development, with two schemes in

Suffolk, Copdock and the A11 Fiveways, in the RIS4 pipeline. Therefore, any new schemes would need to be fitted into the following RIS period (RIS5) with construction during the period 2036 to 2041 at the earliest. However funding is extremely tight, and the indications from Central Government are that the future RIS programmes will be more geared up to maintenance and renewals, than large capital improvement schemes. A number of schemes have already been cancelled from the RIS programme.

- 7.2.3** The next key organisation is Suffolk County Council, as Local Highway Authority for the local roads not managed by National Highways. Any local roads solutions would be promoted by Suffolk County Council, as would any relief roads where funding would be sought from National Government, through the Large Local Majors programme or similar. Suffolk County Council are already promoting a substantial improvement to the A12 Major Road Network between the A14 at Seven Hills and Woods Lane in Melton.
- 7.2.4** Suffolk County Council is responsible for managing the Local Road Network and ensuring additional growth, both housing and jobs, can be accommodated through its role as a statutory consultee on planning applications. The Local Planning Authorities in the area; Ipswich Borough Council, Mid Suffolk District Council, Babergh District Council and East Suffolk Council, are responsible for determining planning applications for housing and employment sites and have to give due regard to the comments raised by the Highway Authorities, National Highways and Suffolk County Council. On some occasions the Highway Authorities may recommend refusal, to the Local Planning Authority, if the cumulative impacts of development are projected to be severe, or there would be likely unacceptable impacts on highway safety.

- 7.2.5** Other key organisations are Transport East, as the Sub-National Transport Body for Suffolk, who have a key role in regional data and analytics, and advocating for transport investment in the East. Freeport East represents Felixstowe Port, Harwich Port and Gateway 14 in Stowmarket and also contribute valuable data and advocacy work for schemes on the A14. Suffolk Chamber of Commerce has taken an active role over many years on these issues, convening stakeholders, commissioning evidence and advocating for key investment decisions.
- 7.2.6** The final key organisations are the most important, the Department for Transport and the National Government. Ultimately all funding for major infrastructure needs to be supported by central government as the sums involved are way beyond what a local authority could fund, or could be substantially funding through developer contributions. In most cases where funding is granted, the government funds up to 85%, with the remainder being needed to be found locally. For the most expensive options this could be a very large sum, even where a majority of funding is external.
- 7.2.7** Overall, the critical gap is not simply technical evidence, but the absence of agreed objectives, a settled delivery pathway and a realistic funding proposition. Without those elements, any move directly to a preferred scheme would risk appearing premature and would be unlikely to command the national, local and stakeholder support required for delivery.
- 7.2.8** Overall, there is a significant lack of agreed objectives for the project and a lack of a clear pathway forward to delivery.

8 Policy and Funding Context

8.1 National Policy Alignment

- 8.1.1** National governments of all parties have concentrated on boosting productivity and economic growth in the UK economy. The Transport East region is a net contributor to the UK economy, unlike many other regions, freight and logistics is one of the biggest sectors of the Suffolk economy.
- 8.1.2** The government recognise the importance of the freight and logistics sector and have introduced policies through the Department for Transport and National Highways to support this sector.
- 8.1.3** The UK has binding Carbon Assessment targets for new infrastructure, and the carbon impacts of construction, operation and end-of-life decommissioning would need to be assessed as part of the business case for any scheme taken forward. The issue of decarbonisation is a very broad one, and the assessment would be complex. The additional journey times and stationary traffic emissions of the 'do nothing' scenario would have negative carbon impacts, and these could be offset against the impacts of building a project. The wider environmental aspects of any scheme taken forward.
- 8.1.4** National Highways set out a Felixstowe to Midland Route Strategy for the A14 corridor as part of the previous Roads Investment Strategy period (RIS2) and this work will be updated in the current period. This report highlighted many of the challenges that specifically blight the Ipswich areas, such as road safety, network performance and the need to support a growing economy.

8.2 Regional Policy Alignment

- 8.2.1** The key regional policy is the Transport East Strategy, which includes relevant strategic priorities for this report, including; Connecting Growing Towns and Cities and Unlocking Global Gateways. The A14 is referenced as part of the key East – West regional movement corridor. It also makes it clear that the A14 Orwell Bridge resilience is a matter of regional significance.

8.3 Local Policy Alignment

- 8.3.1** Resilience and capacity issues are highlighted in the recently adopted LTP4, and it would be consistent with policy objectives to; facilitate plan-led growth, reduce the impact of HGVs on unsuitable rural and urban roads, benefit the Suffolk economy. By removing strategic traffic from road in and around Ipswich, it might help to facilitate other active travel and passenger transport projects in the town. However, a specific scheme is not identified.
- 8.3.2** The Freeport East Transport Masterplan, developed with Transport East, highlights the dependence of the Freeport on the Strategic Road Network, including the A14 and A12, and specifically highlights the need for investment in the A14/A12 junction at Copdock.
- 8.3.3** Most SCC funding is already ringfenced to dedicated Active Travel and Passenger Transport schemes. The residual Integrated Transport Block / Local Transport Grant is intended for small scale improvements, not contributions to major schemes. This budget is spread across the larger towns in Suffolk, including Bury St Edmunds and Lowestoft. Allocating

significant funding to the project would result in far less money being available to spend in these towns, and other similar communities outside of the greater Ipswich area.

8.3.4 As set out above, Suffolk Local Planning Authorities have demanding targets to meet for housing delivery, and this is even more acute around Ipswich, as IBC are unlikely to be able to cover their internal demand, due to boundary constraints and a lack of suitable sites, and therefore neighbouring authorities will be required to account for their shortfall.

8.3.5 For a scheme to benefit from 'dependent development', the local plans would need to identify any new transport infrastructure as critical infrastructure, i.e. infrastructure that unlocks the housing. This is risky as if the infrastructure doesn't come forward, there is still a requirement to deliver the same number of housing (e.g. A12 widening scheme in Essex).

8.4 Funding Context

8.4.1 While RIS promoted schemes would not necessarily require a local contribution, it is unlikely future schemes would be supported without significant supporting funding.

8.4.2 Funding sources for such a scheme would depend on the scheme promoter. If promoted by a local authority, the most likely funding option for an Orwell Bridge resilience route, to the north of Ipswich linking the A14 around Claydon with the A12 MRN network at Martlesham or Woodbridge would be the Department for Transport Large Local Majors (LLM) Fund. This fund does not have an upper limit for schemes, but would require a substantial local contribution, from enabling development or local government. It would also be unprecedented for a single scheme of this scale to be funded through the programme.

8.4.3 If promoted by Government through National Highways, funding would come through the Roads Investment Strategy (RIS). However, it is unlikely National Highways would take on such a scheme, unless it were to be a direct replacement or alternative for the A14 south of Ipswich. This is because the northern route would not connect two parts of the Strategic Road Network. The focus of the RIS3 is on maintenance and renewals rather than major new roads is also a relevant consideration as to the likelihood of such funding.

8.4.4 Typically, a minimum 15% local contribution is required for locally promoted schemes after approval of the Strategic Outline Business Case, with the development costs up to the point of submitting an Outline Business Case falling on Suffolk (or Suffolk / Norfolk MCA) authorities. It is likely that these Strategic Outline Business Case costs would be in the region of £500K. This work was last done in 2019 and therefore, all of the survey data would need to be refreshed, and the cost estimates would need uplift to take account of inflation, and cost benefit analysis would need to be updated.

8.4.5 East Suffolk Council and Babergh Mid Suffolk Council have Community Infrastructure Levy, but Ipswich Borough Council do not. Additionally, the MCA may introduce a Mayoral Community Infrastructure Levy for big infrastructure projects.

8.4.6 The costs for Ipswich Northern Route in 2019/20 ranged from £342m to £385m. Given the cost of inflation for major infrastructure since then, costs for the same project now would likely be in the region of £500m to £1bn.

8.4.7 A local contribution to such a scheme would therefore be in the region of £75m to £150m. This order sum would need to be identified to take forward the development aspects alone of a scheme of this size. By way of example this would equate to £5,000 to £10,000 roof tax against new houses. This

would likely be challenging in terms of viability. The recent West Suffolk Local Plan considered various per unit figures for the total costs of infrastructure within a range of £13-16K, although that was for all infrastructure, including open space requirements and education contributions, as well as highways and transportation considerations.

8.4.8 To be fully funded by local housing development of 15,000 homes this would need to be £33,000 to £66,000 cost per dwelling. Against 30,000 homes this would be £16,000 to £33,000 per dwelling.

8.4.9 Land value capture could be another opportunity for providing funding. This is a mechanism to recover some of the increase in land value that occurs due to public investment, like new infrastructure or granting planning permission. Instead of landowners benefiting solely from these increases, a portion of the uplift is captured by the public sector to fund infrastructure. An example of this is CIL, but other mechanisms exist, such as Land Value Tax.

8.4.10 The overall implication is that any major intervention will need a strong strategic narrative, a credible evidence base and a realistic delivery and funding pathway. Suffolk County Council can lead the early evidence refresh, local problem definition, option framing and partnership work, but any nationally significant Strategic Road Network intervention would require Government recognition, National Highways involvement and a credible funding route. The next stage must therefore test not only whether options work in transport terms, but also whether they have a plausible promoter, funding source, local contribution strategy and delivery mechanism.

Option family	Likely promoter	Potential funding route	Key affordability / delivery issue
Replacement / Alternative bridge or tunnel	National Highways / Government	Roads Investment Strategy or equivalent national programme	Very high cost, complex delivery, and long programme dependency
Northern route or new strategic link	Suffolk County Council / future mayoral authority, with Government support	Large Local Majors or successor fund, plus local contribution	Substantial local contribution, public acceptability, planning and land risks
Upper Orwell-style crossing	Suffolk County Council, with local partners	Major local transport funding, regeneration funding and potential development contributions	Need to demonstrate affordability, local support and regeneration benefits
Tactical resilience package	Suffolk County Council / National Highways	Local transport funding, operational budgets and National Highways maintenance / operations	Lower cost and deliverable sooner, but unlikely to address long-term replacement need alone.
Demand and mode shift package	Suffolk County Council, Transport East, rail industry and operators	Rail, bus, active travel and local transport funding routes	Complementary rather than a direct substitute for strategic resilience capacity.

8.5 Implications

- 8.5.1** The overall implication of this work is that there needs to be a very strong strategic narrative for any scheme taken forward and the justification for the project needs to be framed at the national level. Therefore, it is clear that a project of this scale would be a national priority, and could therefore only be promoted and delivered by National Highways, or a successor body.

9 Strategic Intervention Categories and Option Families

An abstract graphic of a bridge structure. It features a series of vertical supports of varying heights on the left, transitioning into a single, larger support on the right. A curved line representing the bridge deck arches over the supports. The entire graphic is rendered in shades of blue against a solid blue background.

9.1 Option Families

9.1.1 The options should be treated as broad option families at this stage, not developed schemes. They are not all direct alternatives: some are long-term strategic interventions, some are nearer-term tactical resilience measures, and others are complementary measures that could form part of a wider package.

- Long-term strategic interventions: replacement bridge or tunnel, northern route, direct A12 link, Upper Orwell-style crossing or other major new capacity.
- Shorter-term tactical resilience measures: junction improvements, UTMCI, smart diversion management, incident response, maintenance planning and National Highways operational measures.
- Complementary demand and mode-shift measures: rail freight, passenger rail, bus, active travel, park and ride and demand management.

9.2 Additional Network Capacity

9.2.1 In terms of the broad category of additional network capacity, they will fall into the subcategory of new roads and bypass type solutions. However, it will also be necessary to consider combinations of smaller interventions, comprising localised widening schemes and junction improvement to address the existing pinch points on the alternative routes around

Ipswich. Some of the existing routes could provide a more resilient network, but their usability is limited by sections of narrow carriageway or other capacity constraints.

9.3 Demand and Network Management

9.3.1 The other options will be based on making better use of the existing network, through traffic management solutions. Some of these could be around better incident detection and more targeted network responses, such as changing traffic signal cycles to prioritise the free-flow of traffic on the official A14 diversion routes. This could be automatic or semi-automatic, if the traffic sensors in Ipswich had the functionality to communicate with the Ipswich Urban Traffic Management Control (UTMC) system which has the capability to talk to all of the existing traffic signals remotely.

9.3.2 Any traffic signal changes would need to also ensure that bus corridors and active travel routes still continued to function, as these modes are capable of moving people at higher densities, in constrained road corridors, than single occupancy motor vehicles. Therefore, any scheme would need to balance a number of competing factors.

9.3.3 There is also a longer-term trend for residents to think more carefully about their travel patterns, and reduce their dependency on motor vehicles, to save money. Ipswich has the lowest levels of car ownership in Suffolk, at 22 % of Ipswich households do not own a vehicle, and many younger residents are reevaluating their travel behaviour, given the cost of car ownership.

9.4 Rail-Based Interventions

- 9.4.1** Another way of relieving pressure on the A14 would be to get more of the freight from Felixstowe to travel by rail, rather than road. The A14 already has a higher proportion of HGVs than most similar roads on the Strategic Road Network and HGVs tend to increase the wear and tear on the infrastructure due to their weight.
- 9.4.2** The east – west railway line runs parallel to the A14 and is a viable alternative, although the number of freight paths available is constrained by several infrastructure challenges. Large sections of the route were downgraded from twin track to single track operation in the Beeching Era railway cutbacks in the 1960s, which severely restricts the overall capacity on this line, and introduces delays and inefficiencies to both passenger and freight movements.
- 9.4.3** The key infrastructure constraints on the railway line are at Haughley Junction in Suffolk and Ely junction in Cambridgeshire. The Ely Junction scheme is one of the most high profile pieces of rail infrastructure in the UK and has previously demonstrated excellent cost to benefit factors and has a high level of support from the industry nationwide. The Haughley scheme is smaller, but adds considerable value to the Ely scheme in terms of providing more capacity for additional rail paths, which could be allocated to passenger services, to increase frequency to Cambridge and Peterborough or additional freight capacity. Increasing passenger services to Cambridge and Peterborough, where you can access a lot of destinations in the Midlands and north, would make rail more attractive for longer distance commuter trips and would also relieve some of the pressure on the A14 as well.

9.5 Integrated Approach

- 9.5.1** The core principle is that the problems are complex and a combination of interventions will be required to come up with a comprehensive response to these challenges. It is important to not jump too early to a single scheme, without having first gone through a robust process.

10 Constraints, Risks and Uncertainties

10.1 Cost

- 10.1.1** At a very high level it is likely that most of the more complex road-based interventions will be in an order of magnitude in the range of £500M to £5B, making them nationally significant pieces of infrastructure, beyond the ability of Local Government of all levels to deliver alone.

10.2 Timescales

- 10.2.1** Any business case for a northern route, or alternative scheme would require a multi-stage business case to be developed. This process is set out by the Department for Transport and Suffolk County Council would have no control over it. This includes Strategic Outline Business Case. Outline Business Case and Full Business Case stages, before final approval. The scheme would need to pass through each stage, with public consultation required, followed by a detailed Department for Transport review, before commencing the next stage of the process.
- 10.2.2** Generally, the business case stages are iterative, with clarifications sought by the Department for Transport and more work being required to address issues and concerns. For this reason, it is difficult to give firm timescales and estimates for design costs. However, development costs can typically be considered to be in the region of 10% of total scheme costs.
- 10.2.3** Major infrastructure schemes typically take 7-10 years from initial assessment through to opening (e.g. the Gull Wing Outline Business Case was submitted in 2015, and opened in 2024, Norwich Northern Distributor Road got programme entry in 2009 and opened in 2018).
- 10.2.4** For Ipswich Northern Routes, all of the survey information and traffic and financial modelling would need to be refreshed. Given constraints on when surveys can be carried out, this could take up to 12 months. The Department for Transport would need 3-6 months to review, before passing onto the OBC stage. It is important to note that the LLM has a defined programme of schemes, and is acknowledged to be considerable oversubscribed. Therefore, the Department for Transport may decide not to commit any resources to reviewing a new Strategic Outline Business Case for a scheme not included in their pipeline.
- 10.2.5** If the Strategic Outline Business Case stage was passed the Outline Business Case stage would take a further 18-24 months, with a similar review period. Full Business Case would require any land negotiations to be completed and full planning permission, which could take 18-24 months, but the actual Full Business Case process would be carried out concurrently with these stages.
- 10.2.6** On Full Business Case approval the scheme would be tendered, and contractors mobilised which would take 6 months.
- 10.2.7** A RIS promoted scheme would be a similar overall timeframe. However, it would be dependent on a commitment from Government to enable National Highways to develop a scheme. Given Copdock and Fiveways schemes have already been pushed into RIS4, and A12 widening in Essex has been cancelled for RIS3, it is unlikely new schemes would be brought into the programme in the short-medium term.
- 10.2.8** Construction is likely to be around 3-5 years. By comparison, the Black Cat to Caxton Gibbet works, 10-mile dual carriageway improvement began in 2023 and is expected to be complete in 2027.

10.3 Deliverability Risks

- 10.3.1** The key deliverability risks will depend on the specific engineering solutions taken forward to the next stages, but some risks are common to all options.
- 10.3.2** Environmental constraints will need to be accommodated, some of the areas around Ipswich, like the Suffolk Coasts and Heaths National Landscape and the Fynn Valley will have areas of special protection, including areas like Ancient Woodland that will need to be avoided. Alongside these areas there will be specific habitats and areas with protected species that will need to be taken into account in the design of any schemes and interventions.
- 10.3.3** Any highway scheme that goes beyond the current highway boundary will need Planning Permission, and very large schemes would be within the bounds of an Environmental Impact Assessment application, which is a more complex planning process.
- 10.3.4** Similarly, any schemes outside of the current highway boundary will require additional land, which will need to be acquired through agreement with the landowners or through a compulsory purchase process. Given the amount of housing growth likely to be proposed in the wider Ipswich area, any land requirements for new infrastructure are likely to have some 'hope value' for the owners therefore the costs involved are likely to be far in excess of the basic agricultural value of the land, if agreement is sought through negotiation.

10.4 Political and Public Risk

- 10.4.1** The greatest public risk is that the issues aired during the last consultation of these issues will still be in play. The debate is restarted in the local press every time that incidents impact on the A14 network around Ipswich. There is no agreement amongst the wider public as to the key issues and the most suitable solutions. Some members of the public are very vociferous in their views, on both sides of the debate, and these views will be difficult to reconcile, regardless of the solution chosen to take forward.
- 10.4.2** Under Devolution, if it proceeds, in 2028 a new Mayor for Suffolk and Norfolk will be elected. The proposed mayor will have strategic transport responsibilities and a key relationship with National Highways and the Department for Transport. The mayor will be required to develop a Key Route Network, and the project is likely to either be Strategic Road Network, Major Road Network or Key Route Network. The mayor will have additional budget for developing new strategic projects and it is likely that they would have a key role in any decision to take the project forward.

10.5 Strategic Risk

- 10.5.1** The strategic risk is that a failure to act by all parties, at the correct time, will result in worsening traffic congestion and significant economic costs, in terms of wasted time stuck in traffic for all residents and businesses in the Ipswich area.

11 Objectives for Intervention

11.1 Primary Objective

- 11.1.1** The primary objective of this project is to improve the transport network resilience within and around Ipswich, with particular priority given to long-term resilience of the A14 Orwell Bridge and the strategic corridor it supports.

11.2 Secondary Objectives

- 11.2.1** As well as the principal objectives of the scheme, there are several secondary objectives which would support any business case and provide additional value to the wider community.
- 11.2.2** Firstly, more resilience to the A14 corridor around Ipswich would support economic growth in the area and help preserve the key role of Felixstowe Port as a key engine of the UK economy. Freight volumes have grown over time, as the port has expanded, and more traffic capacity in the widest sense, will be needed to carry on with this long-term trend.
- 11.2.3** Alongside economic growth the authorities around Ipswich also have very high housing targets from central government, and more capacity will be needed across the Ipswich area to facilitate this housing growth, without causing traffic delays to increase to unacceptable levels.
- 11.2.4** Both of these growth factors will have negative environmental outcomes, if not effectively mitigated. Traffic congestions will increase air pollution and traffic noise levels to the point they are detrimental to Ipswich residents' health outcomes. These impacts will also be felt in the rural areas around Ipswich, which will be detrimental to residents' quality

of life and an existential threat to the peace and quiet people crave when they live in rural areas.

- 11.2.5** The cumulative effect of all these issues is that we need to protect communities, be they urban or rural, from continual degradation of the transport network's resilience to deal with daily and exceptional traffic impacts.

11.3 Defining the Intervention Purpose

- 11.3.1** The overall purpose of the interventions proposed will need to be addressed explicitly. There are three basic issues, resilience of the Ipswich transport network, futureproofing the A14 corridor to deal with proposed growth in the area, and a future replacement of the A14 Orwell Bridge. Although there are inter-relationships between these issues the solutions might be subtly different.
- 11.3.2** Therefore, a key aspect of this stage of the process is to gain clarity on these points, before progressing any further down a specific pathway.
- 11.3.3** The next stage should confirm whether these objectives should be weighted equally. If long-term Orwell Bridge resilience is given additional weight, the rationale should be stated explicitly so that any subsequent scoring is transparent and does not appear to drive a predetermined conclusion.

12 Next Steps and Recommended Approach

A stylized graphic of a bridge with multiple pillars supporting a curved roadway, rendered in shades of blue against a solid blue background.

12.1 Evidence Refresh

- 12.1.1** An opportunity to gain new insights into the A14 and Orwell Bridge issues will be presented by the new Suffolk Transport Model, which is now available. This replaces the 2016 build model and will better reflect changes in travel patterns over the intervening period, including the societal changes brought about by the pandemic. Supporting this workstream would be an early use case for the model, in parallel with the workstreams supporting the new Local Plans across Suffolk. The two projects will be closely linked, so it would make sense to align the input data. This would provide an opportunity to test various options at a high-level.
- 12.1.2** There is also the opportunity to make more use of the Transport East data and analytical packages to bolster the insights available from the Suffolk Transport Model, specifically around the multi-modal elements of the challenge.

12.2 Define Strategic Objectives

- 12.2.1** The strategic objectives of the scheme need to be fully defined. At this stage the objectives for the project are as follows, although these objectives will be reassessed throughout the project:

Objective 1:

Provide a viable alternative route to the A14 Orwell Bridge, whenever it is closed for short- or medium-term work, or needs full replacement at the end of its service life (likely to be beyond 2100)

Objective 2:

More reliable Strategic Road Network journeys around Ipswich

Objective 3:

Planning the network resilience to cope with projected future housing and jobs growth (current time horizon 2045)

Objective 4:

Improve the resilience of the road network in Ipswich to cope with future demand and unplanned events.

12.3 High Level Scheme Options

- 12.3.1** A series of high-level scheme options have been developed, with pros and cons of each option, an order of cost, and an assessment of how they would align with the four key objectives identified earlier. Some of the options are similar to those developed in 2016, and some are new or updated.
- 12.3.2** The score of the options is qualitative and subjective at this stage of the process, but if further assessment was carried out this would be backed up by traffic modelling using the Suffolk County Transport Model to test the effectiveness of the broad range of infrastructure options.
- 12.3.3** The next stage should convert this initial sift into a transparent Multi-Criteria Appraisal Framework, lightly aligned to the five-case model. That framework should assess strategic fit, expected economic performance, affordability, commercial deliverability, management and governance requirements, and key risks consistently across each option family.
- 12.3.4** The scoring should be treated as an initial strategic sift rather than a definitive option appraisal. Objective 1 has been given additional weight (this score is doubled in the tables below) to reflect the importance of long-term Orwell Bridge resilience, but the weighting, rationale and sensitivity of the results should be made explicit in the next stage, so the process remains transparent, auditable and not pre-determined.

Alternative Options

High Level option	Detailed Proposal	Pros	Cons	Risks	Order of Cost	Obj 1 (x2)	Obj 2	Obj 3	Obj 4	Total
Northern Route	Inner Route (single)	Some additional East - West traffic capacity	Financial Cost, Environmental Cost	Land Acquisition Required, Public Objections	Very High (£0.5 - 1B)	2	3	4	4	15
Northern Route	Inner Route (dual)	Substantial additional East - West traffic capacity	Financial Cost, Environmental Cost	Land Acquisition Required, Public Objections	Very High (£0.5 - 1B)	2	3	4	4	15
Northern Route	Mid Route (single)	Some additional East - West traffic capacity	Financial Cost, Environmental Cost	Land Acquisition Required, Public Objections	Very High (£0.5 - 1B)	2	3	4	4	15
Northern Route	Mid Route (dual)	Substantial additional East - West traffic capacity	Financial Cost, Environmental Cost	Land Acquisition Required, Public Objections	Very High (£0.5 - 1B)	2	3	4	4	15
Northern Route	Outer Route (single)	Some additional East - West traffic capacity	Financial Cost, Environmental Cost	Land Acquisition Required, Public Objections	Very High (£0.5 - 1B)	2	3	4	4	15
Northern Route	Outer Route (dual)	Substantial additional East - West traffic capacity	Financial Cost, Environmental Cost	Land Acquisition Required, Public Objections	Very High (£0.5 - 1B)	2	3	4	4	15
Bridge	Replacement Bridge	Substantial additional East - West traffic capacity	Financial Cost, Environmental Cost, Difficult to find suitable tie-in points on the A14, due to junction spacing	Land Acquisition Required, Public Objections	Very High (£0.5 - 1B)	5	3	3	2	18
Bridge	Outer Route (dual)	Substantial additional East - West traffic capacity	Financial Cost, Environmental Cost, Difficult to find suitable route to the A12	Land Acquisition Required, Public Objections	Very High (£1 - 5B)	5	4	3	2	19

Tunnel	Tunnel crossing River Orwell, from A12 avoiding Copdock.	Substantial additional capacity to Essex	Financial Cost, Environmental Cost, Engineering Complexity, Route may be unviable.	Land Acquisition Required, Public Objections.	Very High (£0.5 - 1B)	5	4	3	2	19
Tunnel	Tunnel crossing River Orwell / Stour, from Felixstowe to Harwich	Substantial additional capacity to Essex	Financial Cost, Environmental Cost, Engineering Complexity, Route may be unviable. A120 also has capacity issues that would need to be addressed through project	Land Acquisition Required, Public Objections, Part outside Suffolk.	Very High (£1 - 5B)	4	3	2	1	14

Resilience Options

High Level option	Detailed Proposal	Pros	Cons	Risks	Order of Cost	Obj 1 (x2)	Obj 2	Obj 3	Obj 4	Total
Strategic Road Network Improvements	Upgrade to Copdock A12 / A14 junction	Addresses serious pinch point on the A12 / A14	Financial Cost, Environmental Cost	National Highways may only fund a reduced scheme, or no scheme at all, Land Acquisition Required, Public Objections	High (£250 - 500M)	2	3	3	2	12
Local Road Improvements	Junction Improvements and short bypasses on the B1078 / B1079 route	Makes use of existing roads to provide more East - West traffic capacity, Addresses existing pinch points on the local road network	Would induce more traffic on existing routes, and through existing communities	Land Acquisition Required, Public Objections	Medium (£100 - 250M)	2	2	3	2	11
Local Road Improvements	Junction Improvements and short bypasses in Claydon / Henley / Westerfield	Makes use of existing roads to provide more East - West traffic capacity, Addresses existing pinch points on the local road network	Would induce more traffic on existing routes, and through existing communities	Land Acquisition Required, Public Objections	Medium (£100 - 250M)	2	2	3	3	12

Ipswich Network Resilience	Updated Ipswich UTMC system	Makes better use of existing traffic capacity in Ipswich	Would only provide limited benefit in the most congested areas and times of A14 disruption	May increase delay on minor routes and for some users.	Low (£2 - 5M)	1	1	2	2	7
Upper Orwell Crossing	A new bridge(s) linking Landseer Road with Wherstead Road	Provides a new strategic river crossing within Ipswich, and additional capacity to deal with traffic diverted off the A14 into Ipswich	Would not provide additional capacity in rural areas, that could unlock further housing or jobs growth. The capacity for Ipswich to deliver growth is limited by lack of availability of suitable land	Land Acquisition Required, Public Objections. Although there will be less land required and far fewer likely objections than for a rural bypass scheme.	Medium (£100 - 250M)	3	2	3	4	15
Lower Speed Limit on A14	Extend the variable speed limit along the whole A14 around Ipswich	Reduces the risk from collisions and other incidents on the A14, and should reduce the frequency of disruptive incidents.	Would extend travel times in free-flow conditions. Would not provide additional capacity or resilience	Only a partial solution and may not have widespread public support	Low (£2 - 5M)	1	2	1	1	6
Incident Control	National Highways Traffic Officers based in Suffolk to deal with incidents quicker	Reduces the time taken to deal with incidents	Would not provide additional capacity or resilience, although may reduce the duration of some incidents, reducing disruption overall.	Traffic Management Officers may still be needed elsewhere on the network, reducing the time spent in Suffolk.	Low (£2 - 5M)	1	1	0	0	3
Smart Traffic Management	Improved division route management measures using VMS	Enables the best use of the full network, in an incident, to reduce the level of disruption overall. Drivers would be given accurate and reliable information on their best route option, based on live traffic data.	Would not provide additional capacity or resilience, although may reduce the traffic impact of some incidents, reducing disruption overall.	Only a partial solution.	Low (£2 - 5M)	1	2	0	3	7

Higher Bridge Parapets	Increase the height of the existing bridge parapets.	Would increase wind shielding, and allow for higher wind speed operation, may reduce the opportunity for suicide attempts from the bridge deck	The number of wind closures is less significant since the variable speed limit was introduced. The bridge structure might not be suitable for bolt on solutions.	The proposal might not be technically feasible and may only be moderately successful.	Low (2-5M)	0	1	1	1	3
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Mitigation Options

High Level option	Detailed Proposal	Pros	Cons	Risks	Order of Cost	Obj 1 (x2)	Obj 2	Obj 3	Obj 4	Total
Increasing the proportion of freight on rail	Ely Junction	Would reduce freight volumes on the A14, reducing the frequency of incidents and reducing the numbers of vehicles affected by any closures.	The potential for modal shift to rail for freight is modest, given the volumes travelling on the A14 and A12 everyday.	Would address wider rail connectivity in the UK, but would only be of modest benefit to this specific issue	High (£250 - 500M)	1	2	2	2	8
Increasing the proportion of freight on rail	Haughley Junction	Adds additional value to the Ely scheme	The potential for modal shift to rail for freight is modest, given the volumes travelling on the A14 and A12 everyday.	Would address wider rail connectivity in the UK, but would only be of modest benefit to this specific issue	Medium (£30 - 50M)	1	2	2	2	8
Increasing the proportion of freight on rail	Felixstowe Line improvements, including electrification	Would improve the rail freight travel times between Ipswich and Felixstowe, but this is only of marginal benefit, given the overall journey times. May provide additional capacity, but the main constraints are at Ely / Haughley. Would enable efficiencies for running under electrical power on the branch line	Would be an expensive scheme in isolation and only a marginal benefits to this issue in isolation. Bi-mode trains are already able to run straight through on diesel and electrical propulsion.	Would address wider rail connectivity in the UK, but would only be of modest benefit to this specific issue	High (£250 - 500M)	1	2	2	2	8

Increasing rail passenger numbers	Felixstowe Line improvements, including electrification	Increasing passenger numbers on the Felixstowe branch would reduce car traffic on the A14	Would be an expensive scheme in isolation and only a marginal benefits to this issue in isolation.	Would address wider rail connectivity in the UK, but would only be of modest benefit to this specific issue	High (£250 - 500M)	1	2	2	2	8
Increasing rail passenger numbers	East - West Line improvements, to allow for greater frequency	Increasing passenger numbers on the east - west rail line would reduce car traffic on the A14. There would be co-benefits with rail improvements to both freight and passenger services.	Would be an expensive scheme in isolation and only a marginal benefits to this issue in isolation.	Would address wider rail connectivity in Suffolk, but would only be of modest benefit to this specific issue	High (£250 - 500M)	1	2	2	2	8
Increasing rail passenger numbers	East Suffolk Line improvements, to allow for greater frequency	Increasing passenger numbers on the East Suffolk rail line would reduce car traffic on the A12 MRN and in Ipswich. There would be co-benefits with rail improvements to both freight and passenger services.	Would be an expensive scheme in isolation and only a marginal benefits to this issue in isolation.	Would address wider rail connectivity in Suffolk, but would only be of modest benefit to this specific issue	High (£250 - 500M)	1	2	2	2	8
Active Travel	Walking and Cycling schemes in Ipswich to increase the proportion of short distance trips carried out by non-car modes	Even a modest increase in active travel could take some vehicles off the road in peak times	Lack of public support, some schemes might reduce vehicle capacity in the town centre	Public objections, Short term disruption during construction	Low (£2 - 5M)	0	0	2	2	4
Bus Improvements	Bus improvement schemes in Ipswich to increase the proportion of short distance trips carried out by non-car modes	Even a modest increase in bus travel could take some vehicles off the road in peak times	The most effective schemes, like bus lanes and gates remove capacity from private motor vehicles, making the problems worse, if projected modal shift does not occur.	Public objections, Short term disruption during construction	Low (£2 - 5M)	0	0	2	2	4

Bus Improvements	New Park and Ride facility	High frequency park and ride services have the capability of taking large numbers of private vehicles off the road in peak times, when combined with bus priority schemes and parking charge changes in central Ipswich	Would require other infrastructure to be effective, combined with increasing town centre parking charges which might be locally unpopular.	Land would be required on the edge of Ipswich.	Medium (£30 - 50M)	0	2	3	3	8
Car demand management measures	Congestion Charge or Workplace Parking Levy	Pay per trip or WPL schemes have a high impact on the numbers of short distance urban trips, especially when combined with alternatives such as bus and active travel improvements.	Lack of public support. Would need to be done after providing suitable alternative provision, such as active travel and bus priority schemes.	Lack of public support for scheme and associated works.	Low (£2 - 5M)	2	2	3	3	8

- 12.3.5** The scheme options fall into two distinct categories, Department for Transport / National Highways options for the Strategic Road Network around Ipswich and more localised solutions to improve the transport system in Ipswich.
- 12.3.6** Under the 'Alternative' theme heading, the direct like-for-like replacement options score the best. Therefore, a replacement bridge or tunnel, depending on the engineering challenges and cost, would perform the best as a direct alternative or replacement for the Orwell Bridge.
- 12.3.7** Given that much of the traffic is coming from the south west approach to Ipswich (A12 SRN) and has a destination in the south east of Ipswich, at Felixstowe Port, the northern routes are not a convenient alternative route, especially for the northern most 'outer' option, which would require this traffic to drive north from Copdock past Claydon to access the new road off the A140, and then drive south along the A12 MRN section to get back to the A14 at Seven Hills. While the A12 MRN is due to be upgraded this area is likely to come under increasing pressure from housing developments east of Ipswich, and any capacity created will mainly unlock additional growth and will not fundamentally change the nature of this busy semi-urban route. If a northern option was chosen it is likely that a further strategic bypass to the A12 at Martlesham would be needed to link the northern route to the A14 at Felixstowe more directly.
- 12.3.8** The most effective 'alternative' options would need to include a direct link into the A12 south of Copdock, to avoid this notorious pinch point on the Strategic Road Network.
- 12.3.9** The northern route options score much better in terms of Objectives 3 and 4, as they would provide a more resilient network for Ipswich and make it more likely to be able to cope with additional growth pressures.
- 12.3.10** Under the 'Resilience' heading the best scoring option would be an additional river crossing in central Ipswich, similar to the withdrawn Upper Orwell Crossing Project. This would provide a direct link from Landseer Road to Wherstead Road avoiding general traffic and HGVs having to drive through the dock gyratory and cross the river at Stoke Bridge. This would have spin off benefits from removing strategic traffic from the centre of Ipswich, around unlocking stalled brownfield growth sites and enabling public realm improvements in the area between Ipswich waterfront and the town centre shopping areas. This could act as a catalyst for wider regeneration in this part of Ipswich, which is not able to achieve its full potential, while blighted by excessive traffic.
- 12.3.11** Other smaller road interventions north of Ipswich score well. Small bypasses, a bit like the recently completed Europa Way scheme can provide a more resilient network at a much lower cost than a full northern bypass. Some of these schemes could be fully or partially delivered by housing growth in the area, if allocated in the upcoming Mid Suffolk and East Suffolk Local Plans.
- 12.3.12** Some of the low-cost options, such as deploying National Highways Traffic Officers, Improving the incident reporting and management, are not 'game changing' in and of themselves, but should be considered as a package of low cost 'quick win' interventions. This is particularly true when substantial National Highways maintenance interventions are planned for some time in the RIS3 period, and the more comprehensive solutions may take decades to come to fruition.
- 12.3.13** Consideration should also be given to improvements to the Orwell Bridge, such as higher parapets or wind screens to reduce the likelihood of wind related closures and to make it a less suitable site for potential suicides. In the

past this has been discounted by National Highways, but should be re-assessed as part of this wider review into the potential solutions.

12.3.14 For the 'Mitigation' options, none are very impactful for the Objective 1 of providing replacement / alternative capacity, these are all smaller lower impact solutions. However, some of the measures to boost passenger and freight numbers on the rail services would be beneficial to traffic flows on the A12 and A14 and would remove some traffic from the centre of Ipswich. Likewise active travel and bus improvement schemes. These could be considered as 'business as usual' activities, as Suffolk County Council already receives Department for Transport funding for these themes, as part of a long-term consolidated funding settlement, Bus Service Improvement Plan funding and Active Travel England funding. Therefore, the benefits arising from these programmes should be considered alongside more strategic interventions.

12.3.15 The most impactful measures for inducing modal shift away from private car use would probably be some form of road charging / pricing. However, this would be politically challenging in isolation and may impact on the commercial viability of Ipswich, when compared to other major settlements in East Anglia. Therefore, it is likely to be a national charging scheme, which is already being rolled out as part of pay-per-mile for Electric Vehicles as a way of replacing the lost revenue from petrol and diesel duties.

12.4 Partnership Working

12.4.1 One way to galvanise the local support for A14 resilience measures in Suffolk, and beyond, would be to follow the example of the A47 Alliance group, run by Norfolk

County Council. This is a multi-organisational grouping of stakeholders including MPs, Local Highway Authorities along the whole route, National Highways, District Councils and Chambers of Commerce. If this was replicated it would need to be decided how far along the A14 to extend the invitation, given the issues in the West Midlands are very different from those in Ipswich and Felixstowe.

12.4.2 It is likely the key issues from 2019 would still be in play, namely rural communities north of Ipswich do not support a major new route in the countryside where the benefits are mainly felt in urban Ipswich. This is reflected in the different approaches taken by both MPs, with Jack Abbott (LAB) strongly in support, and Patrick Spencer (IND) strongly against. For a scheme to be taken forward, it would be imperative there is relevant MP support for each stage of development.

12.4.3 The need for additional housing is more closely defined now. Previously the 15,000 homes figure was anticipated to be additional to those in the recently adopted local plans. It is now clear that the additional housing figures set by government are over 2,000 per year across the whole of Suffolk. Therefore, it is likely that an additional 15,000 homes across the wider Ipswich area will be required anyway.

12.4.4 Therefore, an infrastructure for homes argument will be more powerful. Especially if the Northern Route option is being considered. However, these communities will seek to block the road with more vigour, if they feel it is a way to try to hold back the tide or creeping urbanisation of the area north of Ipswich, and the associated housing.

12.4.5 Support would be needed from all tiers of government. The first external stage would be to sound out the Department for Transport's appetite for an addition to the LLM programme of schemes.

- 12.4.6** Local Planning Authorities would need to support allocating significant housing to the north of Ipswich, to unlock the wider benefits of the scheme, and provide the local funding contribution.
- 12.4.7** It would also be imperative that all tiers of government and stakeholder are aligned to form a strong argument for funding. If any one of the respective MPs or local council(s) are against the project, there is virtually no prospect of it being delivered as a local scheme.
- 12.4.8** There is also need for consensus over the relative priority of other transport infrastructure projects in Suffolk and the wider area. This needs to be seen in the context of other funding asks important to Suffolk such as Copdock, Ely and Haughley, as well as schemes across the region. While Copdock is not an alternative to a Northern Route, it is considered a pipeline scheme in the longer term RIS programme (final pipeline tbc), and would arguably be more deliverable, sooner. It would be questionable whether significant sums for all the proposed infrastructure would be available, so making one scheme a priority is likely to mean other schemes don't get funded.

12.5 Option Development Pathway

- 12.5.1** The first stage of the process will be to reassess the original high-level option testing from the previous studies and see if any further options are now available or if any of the original options are now fully off the table. This work would be included in a Pre-Strategic Outline Business Case report.

- 12.5.2** Once this option appraisal stage has been concluded and there is one preferred option or a package of measures that will require further assessment, the next stage will be to develop a Strategic Outline Business Case. As this will end up being an expensive and time-consuming process for Suffolk County Council, this will only be pursued if there is a high level of support nationally, and a high chance that the resulting Strategic Outline Business Case would be supported and taken forward to the next stages of business case development.
- 12.5.3** For the next stage, the modelling and appraisal should focus on a small number of representative options and packages, rather than reopening every historic alignment or variant in equal detail. This would keep the work proportionate and focused on the main strategic choices.
- 12.5.4** It is recommended that the next stage of the strategic traffic modelling for the project focuses on six broad solutions and assesses the efficacy of each solution against the objectives set above. These would be:

- A replacement or alternative crossing proxy, without determining at this stage whether this would be a bridge or tunnel.
- A replacement or alternative crossing proxy with a direct A12 link south of the A14 / A12 Copdock junction.
- A proxy northern route, using one representative alignment for modelling purposes rather than reopening all previous variants.
- An Upper Orwell-style town centre crossing proxy.
- A tactical resilience package, including local junction improvements, UTMC, incident management and operational measures.
- A demand management and mode-shift stress test, to understand the scale of modal shift that would be required to materially reduce future network pressure.

- 12.5.5** This traffic modelling will show which broad options achieve the best outcomes overall, and to what extent the answer changes depends on the exact question being asked. This is where the need to fully refine the objectives, during the next stage, will also factor into the process.

12.6 Government Engagement

- 12.6.1** Government engagement should be a key purpose of the next stage, but it should be based on a stronger evidence package than is available today. Suffolk County Council should avoid presenting the issue as solely for others to solve; instead, the Council should lead the local evidence refresh and partnership work while seeking Government recognition of the national significance and the appropriate delivery route.
- 12.6.2** The Pre-STRATEGIC OUTLINE BUSINESS CASE stage should provide Suffolk with a credible basis for asking Government three questions: whether the issue is recognised as nationally significant; what delivery route Government considers most appropriate; and what development funding or partnership support may be available for any future Strategic Outline Business Case.
- 12.6.3** Suffolk County Council appreciate that we will need to progress the early stages of any relevant business case, but even these costs are likely to be greater than can be funded from our constrained available funding. Therefore, we will be seeking support from central government for the development funding of the early stages of any business case. We will also seek from central government the recognition that this project aligns fully with national policy objectives.

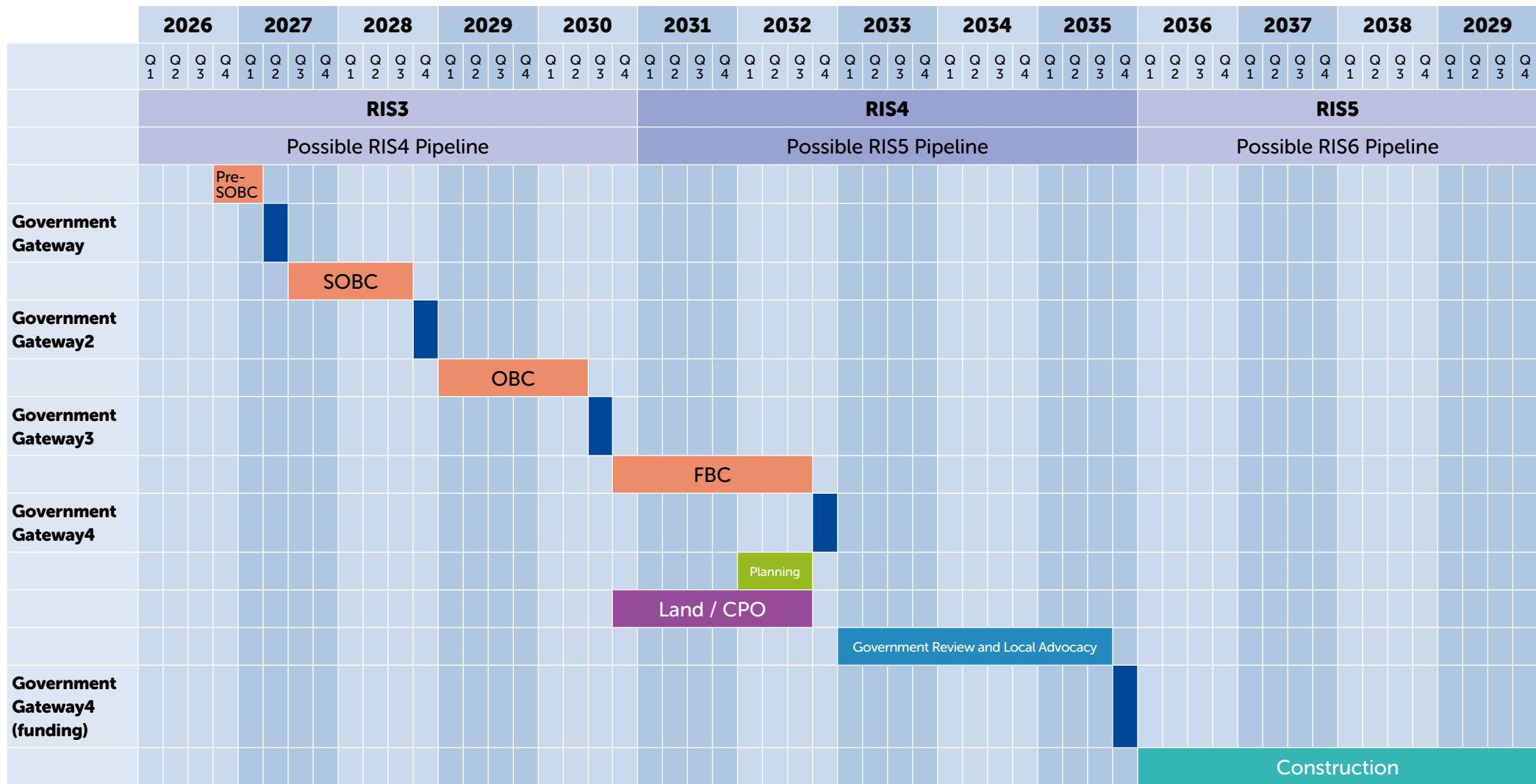
- 12.6.4** It is likely that the Pre-Strategic Outline Business Case will need to be completed by Suffolk County Council, prior to any meaningful engagement with the Department for Transport or National Highways. Therefore, these initial costs would need to be found solely, prior to seeking some support from national government for the development costs for a Strategic Outline Business Case.

- 12.6.5** Subject to the approval of Cabinet, the Pre-Strategic Outline Business Case, including updated evidence base, could be completed by Spring 2027.

- 12.6.6** Once the Pre-Strategic Outline Business Case has been discussed with Central Government, and if funding is available, the project could move to Strategic Outline Business Case stage. However, assuming that a Nationally funded project could not be considered prior to Roads Investment Strategy 5 period (2036 to 2041) there would not be much point in starting the detailed design of a scheme, regardless of the option chosen too early, as this work would be premature and would undoubtedly need to be rerun in the mid 2030s. Therefore, a Strategic Outline Business Case is probably as far as the project could proceed, in this decade.

- 12.6.7** However, this does not mean that no progress would be made on the addressing some of the fundamental issues. As set out in the proceeding section there are a range of lower cost tactical interventions and mitigation schemes and initiatives that could be developed for Ipswich, ahead of a 'replacement / alternative' style major project.

Indicative development timeline – Major 'Replacement / Alternative' project



13 Conclusion and Strategic Position

13.1 Summary of Case

- 13.1.1** It is clear that the A14 Orwell Bridge is a critical piece of nationally important infrastructure, and there is a growing risk that it will become unavailable for more frequent and more lengthy periods, due to ongoing maintenance.
- 13.1.2** This will have very significant national and local consequences.

13.2 Clear Position

- 13.2.1** Suffolk County Council should not promote a single solution at this stage. The issues are complex and fall into two connected but distinct areas: resilience of the A14 corridor and Orwell Bridge, and the wider management of traffic and growth pressures in Ipswich. The Council's position should be to lead the evidence refresh, define clear objectives, test a credible range of interventions and seek Government recognition that the most significant solutions are national in scale and cannot be delivered locally alone.
- 13.2.2** Suffolk County Council supports an evidence-led, multi-modal and partnership-based approach. This should combine long-term strategic options with lower-cost tactical measures that can improve network management and resilience in the nearer term, while avoiding any implication that a major scheme has already been selected.

13.3 Next Steps

- 13.3.1** The recommended next step is to commission a defined Pre-Strategic Outline Business Case evidence and options package. This should not be full scheme development or route selection; it should be a structured investigation to determine which option families are credible, what the refreshed evidence shows, and whether there is a realistic funding and delivery pathway.

- Review and refresh the evidence base, including traffic modelling, closure and incident data, growth assumptions, environmental constraints, costs and deliverability risks.
- Define the strategic objectives and confirm how they should be weighted, including the distinction between long-term Orwell Bridge resilience, A14 corridor performance, Ipswich network resilience and growth mitigation.
- Prepare a five-case Multi-Criteria Appraisal Framework covering strategic fit, value for money, affordability, commercial deliverability, management arrangements and governance.
- Test a proportionate shortlist of representative strategic options and packages, including tactical and demand-side measures.
- Prepare a funding and affordability paper covering likely promoter, funding route, local contribution challenge, development funding requirement and key dependencies.
- Engage Government, National Highways, Transport East, local planning authorities, MPs and business stakeholders on the national significance of the issue and the appropriate delivery route.
- Produce a short Pre-Strategic Outline Business Case evidence and options report by Spring 2027, setting out whether there is a credible route to a full Strategic Outline Business Case.

Version	Date	Summary of Changes
1.0	15 Sept 2026	Cabinet approved version
1.1	12 Oct 2026	Minor factual corrections and formatting amendments. No changes to policy position or recommendations.

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